

Drilling composite parts and structures is a unique challenge - requiring different considerations and approaches. YG-1 tech team is available to help overcome all composite holemaking issues by identifying and selecting the right tool for the right application.

YG-1 CFRP drills for Composites are specifically designed with innovative point geometry specifically dedicated to CFRP characteristics. The double angle point combined with guidance margins and open flutes will allow the tool to drill the hole without any jamming due to dust or pressure overload.













YG-1 CVD coating increases the abrasion resistance from the fibrous materials and extend the tool life by a minimum factor of 5 to 10.



DRILLS

COMPOSITE DRILLING TOOLS INDEX

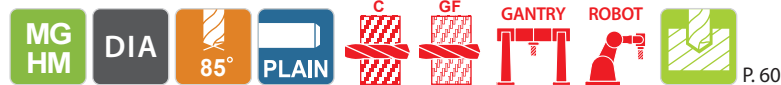
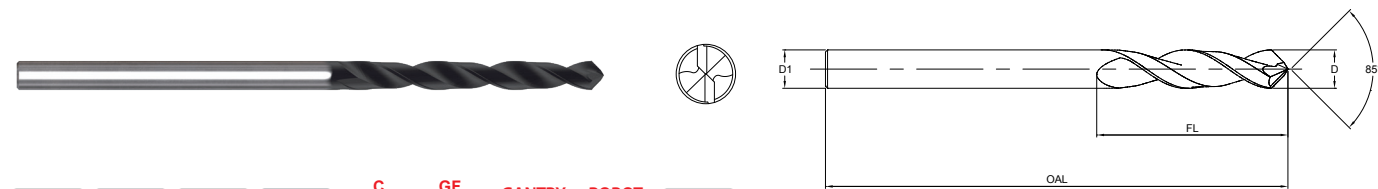
◎ : Excellent ○ : Good

INCH METRIC	MODEL	DESCRIPTION	SIZE		PAGE
			INCH	METRIC	
UDR5P1AA UDR5P2AA		Solid Carbide, Drills with CVD coating for CFRP	1/8 ~ 3/4	3.0 ~ 20.0	32
UDR5A1AB UDR5A2AB		Solid Carbide, Drills for CFRP / AL	1/8 ~ 3/4	3.0 ~ 20.0	33
UDR5A1AC UDR5A2AC		Solid Carbide, Drills for CFRP / Ti	1/8 ~ 3/4	3.0 ~ 20.0	34
UDC5P1AA UDC5P2AA		Solid Carbide, Drills / Countersinks with CVD coating for CFRP	5/32 ~ 5/8	4.0 ~ 16.0	35
UDC5A1AB UDC5A2AB		Solid Carbide, Drills / Countersinks for CFRP / AL	5/32 ~ 5/8	4.0 ~ 16.0	36
UDC5A1AC UDC5A2AC		Solid Carbide, Drills / Countersinks for CFRP / Ti	5/32 ~ 5/8	4.0 ~ 16.0	37
UPD5P1AA UPD5P2AA		Solid Carbide, Powerfeed Drills with CVD coating for CFRP	3/16 ~ 5/8	4.0 ~ 16.0	38
UPD5A1AB UPD5A2AB		Solid Carbide, Powerfeed Drills for CFRP / AL	3/16 ~ 5/8	4.0 ~ 16.0	39
UPD5A1AC UPD5A2AC		Solid Carbide, Powerfeed Drills for CFRP / Ti	3/16 ~ 5/8	4.0 ~ 16.0	40
UDM5A1AA UDM5A2AA		Solid Carbide, Hand Drill Reamers for CFRP and Stacks with Pilot holes	1/8 ~ 1/2	3.0 ~ 12.0	41
UDM5P1AB UDM5P2AB		Solid Carbide, Hand Drill Reamers with CVD coating for CFRP - Straight Flutes	1/8 ~ 1/2	3.0 ~ 12.0	42
UDM5P1AC UDM5P2AC		Solid Carbide, Hand Drill Reamers with CVD coating for CFRP - Helical Flutes	1/8 ~ 1/2	3.0 ~ 12.0	43

Working Material				Machine Type			
CFRP	CFRP/AL	CFRP/Ti	GFRP	ADU	Gantry	Robot	Hand-Held
◎			◎		◎	◎	
	◎		◎		◎	◎	
		◎	◎		◎	◎	
◎			◎		◎	◎	
	◎		◎		◎	◎	
		◎	◎		◎	◎	
◎			◎	◎			
	◎		◎	◎			
		◎	◎	◎			
◎	◎	◎	◎				◎
◎			◎				◎
◎			◎				◎

SOLID CARBIDE, DRILLS FOR CFRP

A combination of perfect carbide choice with innovative design and adapted CVD coating make YG-1 CFRP drills a good choice for Composite drilling



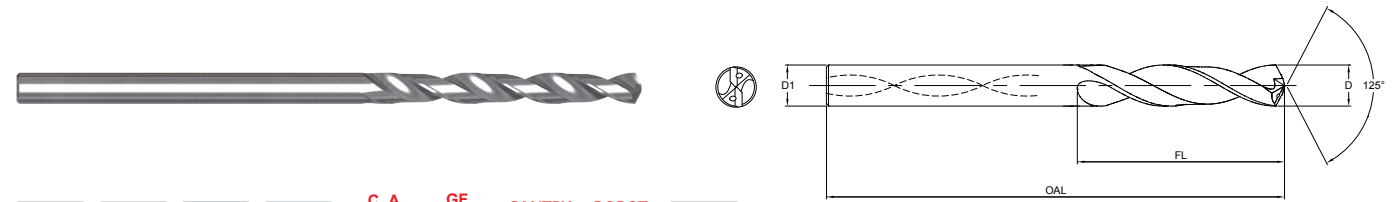
INCH / METRIC SIZES

EDP No. (INCH)	EDP No. (METRIC)	Drill Diameter			Shank Diameter	Flute Length	Overall Length	No. of Flutes				
		D (Inch)							D (mm)	D1 (mm)	FL (mm)	OAL (mm)
		Fractional	Wire Gage	Decimal								
-	UDR5P2AA0300	-	-	-	3.00	6	28	66	2			
UDR5P1AA0125	-	1/8	-	.1250	3.18	6	28	66	2			
UDR5P1AA0129	-	-	#30	.1285	3.26	6	28	66	2			
UDR5P1AA0156	-	5/32	-	.1562	3.97	6	36	74	2			
-	UDR5P2AA0400	-	-	-	4.00	6	36	74	2			
UDR5P1AA0159	-	-	#21	.1590	4.04	6	36	74	2			
UDR5P1AA0188	-	3/16	-	.1875	4.76	6	36	74	2			
UDR5P1AA0189	-	-	#12	.1890	4.80	6	44	82	2			
UDR5P1AA0191	-	-	#11	.1910	4.85	6	44	82	2			
-	UDR5P2AA0500	-	-	-	5.00	6	44	82	2			
UDR5P1AA0201	-	-	#7	.2010	5.11	6	44	82	2			
UDR5P1AA0203	-	13/64	-	.2031	5.16	6	44	82	2			
UDR5P1AA0219	-	7/32	-	.2188	5.56	6	44	82	2			
UDR5P1AA0234	-	15/64	-	.2344	5.95	6	44	82	2			
-	UDR5P2AA0600	-	-	-	6.00	6	44	82	2			
UDR5P1AA0250	-	1/4	-	.2500	6.35	8	53	91	2			
UDR5P1AA0313	-	5/16	-	.3125	7.94	8	53	91	2			
-	UDR5P2AA0800	-	-	-	8.00	8	53	91	2			
UDR5P1AA0375	-	3/8	-	.3750	9.53	10	61	103	2			
-	UDR5P2AA1000	-	-	-	10.00	10	61	103	2			
UDR5P1AA0438	-	7/16	-	.4375	11.11	12	71	118	2			
-	UDR5P2AA1200	-	-	-	12.00	12	71	118	2			
UDR5P1AA0500	-	1/2	-	.5000	12.70	14	77	124	2			
-	UDR5P2AA1400	-	-	-	14.00	14	77	124	2			
UDR5P1AA0563	-	9/16	-	.5625	14.29	16	83	133	2			
UDR5P1AA0625	-	5/8	-	.6250	15.88	16	83	133	2			
-	UDR5P2AA1600	-	-	-	16.00	16	83	133	2			
UDR5P1AA0688	-	11/16	-	.6875	17.46	18	93	143	2			
UDR5P1AA0750	-	3/4	-	.7500	19.05	20	101	153	2			
-	UDR5P2AA2000	-	-	-	20.00	20	101	153	2			

► Available as made to order

SOLID CARBIDE, DRILLS FOR CFRP / AL

Special geometry for dry or MQL drilling of CFRP / AL stacks YG-1 special CVD coating and other coatings available for extended tool life and better abrasion resistance



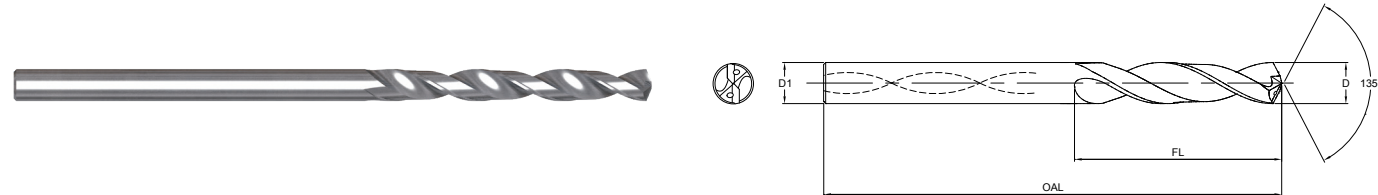
INCH / METRIC SIZES

EDP No. (INCH)	EDP No. (METRIC)	Drill Diameter			Shank Diameter	Flute Length	Overall Length	No. of Flutes				
		D (Inch)							D (mm)	D1 (mm)	FL (mm)	OAL (mm)
		Fractional	Wire Gage	Decimal								
-	UDR5A2AB0300	-	-	-	3.00	6	28	66	2			
UDR5A1AB0125	-	1/8	-	.1250	3.18	6	28	66	2			
UDR5A1AB0129	-	-	#30	.1285	3.26	6	28	66	2			
UDR5A1AB0156	-	5/32	-	.1562	3.97	6	36	74	2			
-	UDR5A2AB0400	-	-	-	4.00	6	36	74	2			
UDR5A1AB0159	-	-	#21	.1590	4.04	6	36	74	2			
UDR5A1AB0188	-	3/16	-	.1875	4.76	6	36	74	2			
UDR5A1AB0189	-	-	#12	.1890	4.80	6	44	82	2			
UDR5A1AB0191	-	-	#11	.1910	4.85	6	44	82	2			
-	UDR5A2AB0500	-	-	-	5.00	6	44	82	2			
UDR5A1AB0201	-	-	#7	.2010	5.11	6	44	82	2			
UDR5A1AB0203	-	13/64	-	.2031	5.16	6	44	82	2			
UDR5A1AB0219	-	7/32	-	.2188	5.56	6	44	82	2			
UDR5A1AB0234	-	15/64	-	.2344	5.95	6	44	82	2			
-	UDR5A2AB0600	-	-	-	6.00	6	44	82	2			
UDR5A1AB0250	-	1/4	-	.2500	6.35	8	53	91	2			
UDR5A1AB0313	-	5/16	-	.3125	7.94	8	53	91	2			
-	UDR5A2AB0800	-	-	-	8.00	8	53	91	2			
UDR5A1AB0375	-	3/8	-	.3750	9.53	10	61	103	2			
-	UDR5A2AB1000	-	-	-	10.00	10	61	103	2			
UDR5A1AB0438	-	7/16	-	.4375	11.11	12	71	118	2			
-	UDR5A2AB1200	-	-	-	12.00	12	71	118	2			
UDR5A1AB0500	-	1/2	-	.5000	12.70	14	77	124	2			
-	UDR5A2AB1400	-	-	-	14.00	14	77	124	2			
UDR5A1AB0563	-	9/16	-	.5625	14.29	16	83	133	2			
UDR5A1AB0625	-	5/8	-	.6250	15.88	16	83	133	2			
-	UDR5A2AB1600	-	-	-	16.00	16	83	133	2			
UDR5A1AB0688	-	11/16	-	.6875	17.46	18	93	143	2			
UDR5A1AB0750	-	3/4	-	.7500	19.05	20	101	153	2			
-	UDR5A2AB2000	-	-	-	20.00	20	101	153	2			

► CVD Diamond Coating and other coatings are available on Customer Request
► Available as made to order

SOLID CARBIDE, DRILLS FOR CFRP / Ti

Excellent choice of Carbide with minimum micro-grain size made to handle all heat release from the hard metal YG-1 special CVD coating and other coatings available for extended tool life and better abrasion resistance



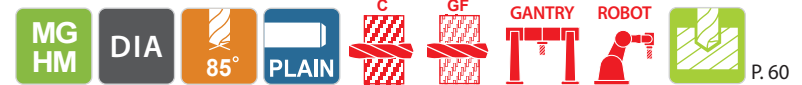
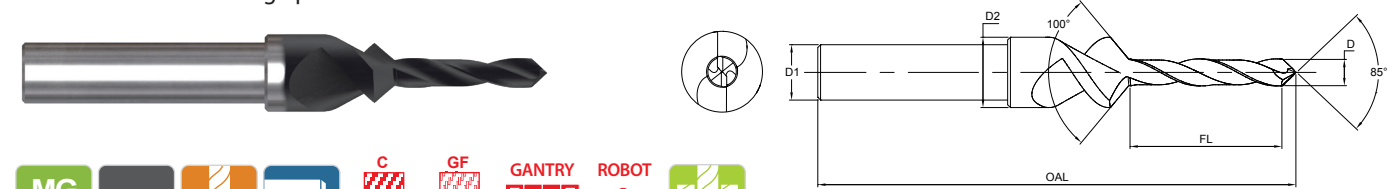
INCH / METRIC SIZES

EDP No. (INCH)	EDP No. (METRIC)	Drill Diameter			Shank Diameter	Flute Length	Overall Length	No. of Flutes	
		D (Inch)							D (mm)
		Fractional	Wire Gage	Decimal					
-	UDR5A2AC0300	-	-	-	3.00	6	28	66	2
UDR5A1AC0125	-	1/8	-	.1250	3.18	6	28	66	2
UDR5A1AC0129	-	-	#30	.1285	3.26	6	28	66	2
UDR5A1AC0156	-	5/32	-	.1562	3.97	6	36	74	2
-	UDR5A2AC0400	-	-	-	4.00	6	36	74	2
UDR5A1AC0159	-	-	#21	.1590	4.04	6	36	74	2
UDR5A1AC0188	-	3/16	-	.1875	4.76	6	36	74	2
UDR5A1AC0189	-	-	#12	.1890	4.80	6	44	82	2
UDR5A1AC0191	-	-	#11	.1910	4.85	6	44	82	2
-	UDR5A2AC0500	-	-	-	5.00	6	44	82	2
UDR5A1AC0201	-	-	#7	.2010	5.11	6	44	82	2
UDR5A1AC0203	-	13/64	-	.2031	5.16	6	44	82	2
UDR5A1AC0219	-	7/32	-	.2188	5.56	6	44	82	2
UDR5A1AC0234	-	15/64	-	.2344	5.95	6	44	82	2
-	UDR5A2AC0600	-	-	-	6.00	6	44	82	2
UDR5A1AC0250	-	1/4	-	.2500	6.35	8	53	91	2
UDR5A1AC0313	-	5/16	-	.3125	7.94	8	53	91	2
-	UDR5A2AC0800	-	-	-	8.00	8	53	91	2
UDR5A1AC0375	-	3/8	-	.3750	9.53	10	61	103	2
-	UDR5A2AC1000	-	-	-	10.00	10	61	103	2
UDR5A1AC0438	-	7/16	-	.4375	11.11	12	71	118	2
-	UDR5A2AC1200	-	-	-	12.00	12	71	118	2
UDR5A1AC0500	-	1/2	-	.5000	12.70	14	77	124	2
-	UDR5A2AC1400	-	-	-	14.00	14	77	124	2
UDR5A1AC0563	-	9/16	-	.5625	14.29	16	83	133	2
UDR5A1AC0625	-	5/8	-	.6250	15.88	16	83	133	2
-	UDR5A2AC1600	-	-	-	16.00	16	83	133	2
UDR5A1AC0688	-	11/16	-	.6875	17.46	18	93	143	2
UDR5A1AC0750	-	3/4	-	.7500	19.05	20	101	153	2
-	UDR5A2AC2000	-	-	-	20.00	20	101	153	2

- ▶ CVD Diamond Coating and other coatings are available on Customer Request
- ▶ Available as made to order

SOLID CARBIDE, DRILLS / COUNTERSINKS FOR CFRP

Optimized for drilling CFRP with excellent performance
Special geometry for superior performance and delamination-free drilling
YG-1 special CVD coating for extended tool life and better abrasion resistance
h6 shank tolerance for high precision tool holders



INCH SIZES

(Unit : inch)

EDP	Drill Diameter			C'Sink Diameter	Shank Diameter	Flute Length	Overall Length	No. of Flutes
	D							
	Fractional	Wire Gage	Decimal					
UDC5P1AA0156	5/32	-	.1562	7/16	3/8	1	3-1/2	2
UDC5P1AA0188	3/16	-	.1875	1/2	3/8	1	3-1/2	2
UDC5P1AA0191	-	#11	.1910	1/2	3/8	1	3-1/2	2
UDC5P1AA0250	1/4	-	.2500	9/16	3/8	1	3-1/2	2
UDC5P1AA0313	5/16	-	.3125	11/16	1/2	1	3-1/2	2
UDC5P1AA0375	3/8	-	.3750	3/4	1/2	1	3-1/2	2
UDC5P1AA0438	7/16	-	.4375	7/8	5/8	1-1/2	4	2
UDC5P1AA0500	1/2	-	.5000	7/8	5/8	1-1/2	4	2
UDC5P1AA0563	9/16	-	.5625	1	5/8	1-1/2	4	2
UDC5P1AA0625	5/8	-	.6250	1	5/8	1-1/2	4	2

METRIC SIZES

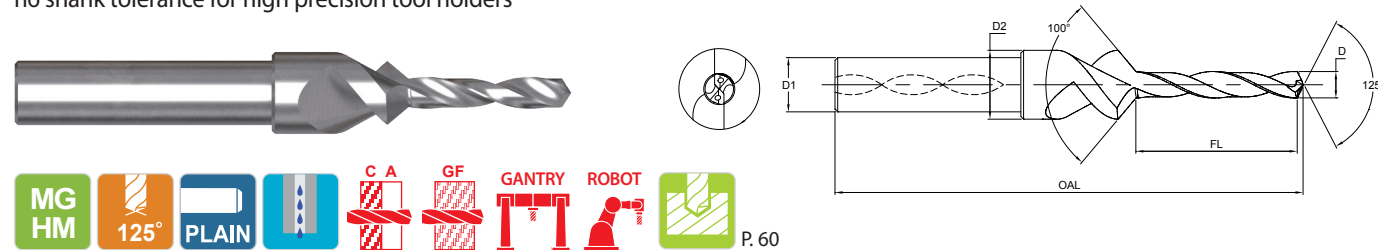
(Unit : mm)

EDP	Drill Diameter	C'Sink Diameter	Shank Diameter	Flute Length	Overall Length	No. of Flutes
	D					
UDC5P2AA0400	4	12	10	25	90	2
UDC5P2AA0600	6	14	10	25	90	2
UDC5P2AA0800	8	16	12	25	90	2
UDC5P2AA1000	10	20	12	25	90	2
UDC5P2AA1200	12	20	16	40	100	2
UDC5P2AA1400	14	25	16	40	100	2
UDC5P2AA1600	16	25	16	40	100	2

- ▶ Available as made to order

SOLID CARBIDE, DRILLS / COUNTERSINKS FOR CFRP / AL

Optimized for drilling composite/AL stacks with excellent performance
Special geometry for superior performance, delamination-free drilling and burrless operation
YG-1 special CVD coating and other coatings available for extended tool life and better abrasion resistance
h6 shank tolerance for high precision tool holders



INCH SIZES

(Unit : inch)

EDP	Drill Diameter			C'Sink Diameter D2	Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D							
	Fractional	Wire Gage	Decimal					
UDC5A1AB0156	5/32	-	.1562	7/16	3/8	1	3-1/2	2
UDC5A1AB0188	3/16	-	.1875	1/2	3/8	1	3-1/2	2
UDC5A1AB0191	-	#11	.1910	1/2	3/8	1	3-1/2	2
UDC5A1AB0250	1/4	-	.2500	9/16	3/8	1	3-1/2	2
UDC5A1AB0313	5/16	-	.3125	11/16	1/2	1	3-1/2	2
UDC5A1AB0375	3/8	-	.3750	3/4	1/2	1	3-1/2	2
UDC5A1AB0438	7/16	-	.4375	7/8	5/8	1-1/2	4	2
UDC5A1AB0500	1/2	-	.5000	7/8	5/8	1-1/2	4	2
UDC5A1AB0563	9/16	-	.5625	1	5/8	1-1/2	4	2
UDC5A1AB0625	5/8	-	.6250	1	5/8	1-1/2	4	2

METRIC SIZES

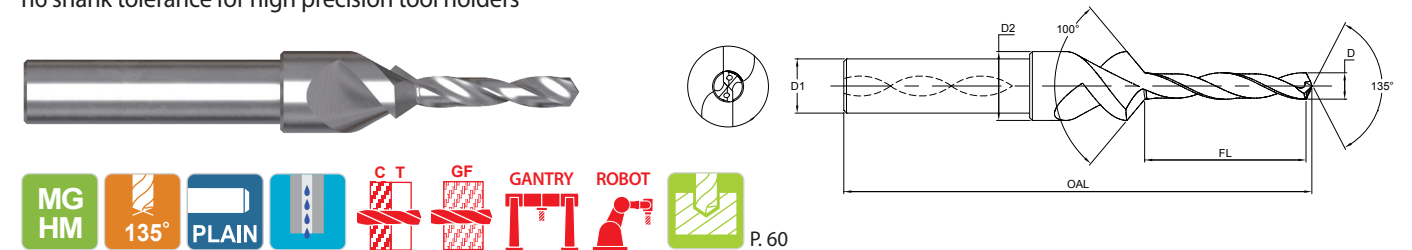
(Unit : mm)

EDP	Drill Diameter			C'Sink Diameter D2	Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D							
	Fractional	Wire Gage	Decimal					
UDC5A2AB0400	4	-	4	12	10	25	90	2
UDC5A2AB0600	6	-	6	14	10	25	90	2
UDC5A2AB0800	8	-	8	16	12	25	90	2
UDC5A2AB1000	10	-	10	20	12	25	90	2
UDC5A2AB1200	12	-	12	20	16	40	100	2
UDC5A2AB1400	14	-	14	25	16	40	100	2
UDC5A2AB1600	16	-	16	25	16	40	100	2

- ▶ CVD Diamond Coating and other coatings are available on Customer Request
- ▶ Available as made to order

SOLID CARBIDE, DRILLS / COUNTERSINKS FOR CFRP / Ti

Optimized for drilling composite/AL stacks with excellent performance
Special geometry for superior performance, delamination-free drilling and burrless operation
YG-1 special CVD coating and other coatings available for extended tool life and better abrasion resistance
h6 shank tolerance for high precision tool holders



INCH SIZES

(Unit : inch)

EDP	Drill Diameter			C'Sink Diameter D2	Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D							
	Fractional	Wire Gage	Decimal					
UDC5A1AC0156	5/32	-	.1562	7/16	3/8	1	3-1/2	2
UDC5A1AC0188	3/16	-	.1875	1/2	3/8	1	3-1/2	2
UDC5A1AC0191	-	#11	.1910	1/2	3/8	1	3-1/2	2
UDC5A1AC0250	1/4	-	.2500	9/16	3/8	1	3-1/2	2
UDC5A1AC0313	5/16	-	.3125	11/16	1/2	1	3-1/2	2
UDC5A1AC0375	3/8	-	.3750	3/4	1/2	1	3-1/2	2
UDC5A1AC0438	7/16	-	.4375	7/8	5/8	1-1/2	4	2
UDC5A1AC0500	1/2	-	.5000	7/8	5/8	1-1/2	4	2
UDC5A1AC0563	9/16	-	.5625	1	5/8	1-1/2	4	2
UDC5A1AC0625	5/8	-	.6250	1	5/8	1-1/2	4	2

METRIC SIZES

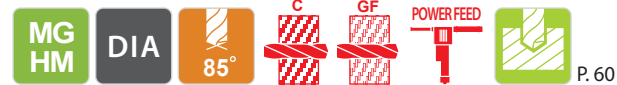
(Unit : mm)

EDP	Drill Diameter			C'Sink Diameter D2	Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D							
	Fractional	Wire Gage	Decimal					
UDC5A2AC0400	4	-	4	12	10	25	90	2
UDC5A2AC0600	6	-	6	14	10	25	90	2
UDC5A2AC0800	8	-	8	16	12	25	90	2
UDC5A2AC1000	10	-	10	20	12	25	90	2
UDC5A2AC1200	12	-	12	20	16	40	100	2
UDC5A2AC1400	14	-	14	25	16	40	100	2
UDC5A2AC1600	16	-	16	25	16	40	100	2

- ▶ CVD Diamond Coating and other coatings are available on Customer Request
- ▶ Available as made to order

SOLID CARBIDE, POWERFEED DRILLS FOR CFRP

Optimized for drilling CFRP with excellent performance
Special geometry for superior performance and delamination-free drilling
YG-1 special CVD coating for extended tool life and better abrasion resistance



INCH SIZES

(Unit : inch)

EDP	Drill Diameter		Flute Length FL	Overall Length OAL	No. of Flutes
	D				
	Fractional	Decimal			
UPD5P1AA0188	3/16	.1875	2	6	2
UPD5P1AA0250	1/4	.2500	2	6	2
UPD5P1AA0313	5/16	.3125	2	6	2
UPD5P1AA0375	3/8	.3750	2	6	2
UPD5P1AA0438	7/16	.4375	2	6	2
UPD5P1AA0500	1/2	.5000	2	6	2
UPD5P1AA0563	9/16	.5625	2	6	2
UPD5P1AA0625	5/8	.6250	2	6	2

METRIC SIZES

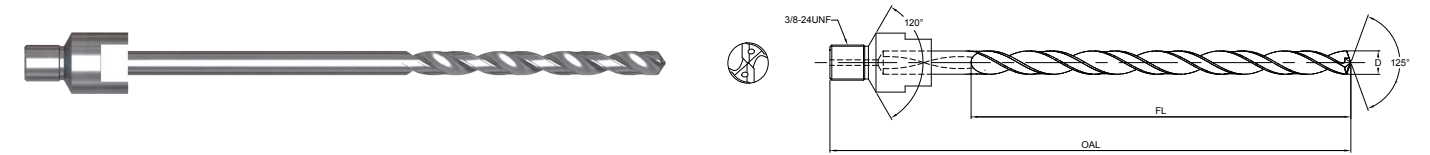
(Unit : mm)

EDP	Drill Diameter		Flute Length FL	Overall Length OAL	No. of Flutes
	D				
	Fractional	Decimal			
UPD5P2AA0400	4		50	150	2
UPD5P2AA0500	5		50	150	2
UPD5P2AA0600	6		50	150	2
UPD5P2AA0800	8		50	150	2
UPD5P2AA1000	10		50	150	2
UPD5P2AA1200	12		50	150	2
UPD5P2AA1400	14		50	150	2
UPD5P2AA1600	16		50	150	2

▶ Available as made to order

SOLID CARBIDE, POWERFEED DRILLS FOR CFRP / AL

Optimized for drilling composite/AL stacks with excellent performance
Special geometry for superior performance, delamination-free drilling and burrless operation
YG-1 special CVD coating and other coatings available for extended tool life and better abrasion resistance



INCH SIZES

(Unit : inch)

EDP	Drill Diameter		Flute Length FL	Overall Length OAL	No. of Flutes
	D				
	Fractional	Decimal			
UPD5A1AB0188	3/16	.1875	2	6	2
UPD5A1AB0250	1/4	.2500	2	6	2
UPD5A1AB0313	5/16	.3125	2	6	2
UPD5A1AB0375	3/8	.3750	2	6	2
UPD5A1AB0438	7/16	.4375	2	6	2
UPD5A1AB0500	1/2	.5000	2	6	2
UPD5A1AB0563	9/16	.5625	2	6	2
UPD5A1AB0625	5/8	.6250	2	6	2

METRIC SIZES

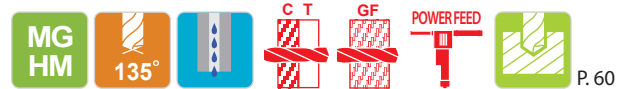
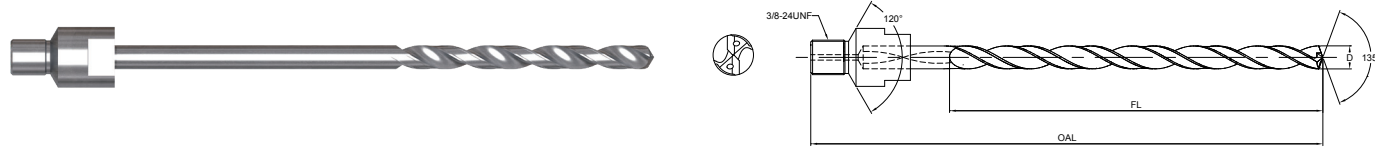
(Unit : mm)

EDP	Drill Diameter		Flute Length FL	Overall Length OAL	No. of Flutes
	D				
	Fractional	Decimal			
UPD5A2AB0400	4		50	150	2
UPD5A2AB0600	6		50	150	2
UPD5A2AB0800	8		50	150	2
UPD5A2AB1000	10		50	150	2
UPD5A2AB1200	12		50	150	2
UPD5A2AB1400	14		50	150	2
UPD5A2AB1600	16		50	150	2

▶ CVD Diamond Coating and other coatings are available on Customer Request
▶ Available as made to order

SOLID CARBIDE, POWERFEED DRILLS FOR CFRP / Ti

Optimized for drilling composite/Ti stacks with excellent performance
Special geometry for superior performance, delamination-free drilling and burrless operation
YG-1 special CVD coating and other coatings available for extended tool life and better abrasion resistance



INCH SIZES

(Unit : inch)

EDP	Drill Diameter		Flute Length FL	Overall Length OAL	No. of Flutes
	D				
	Fractional	Decimal			
UPD5A1AC0188	3/16	.1875	2	6	2
UPD5A1AC0250	1/4	.2500	2	6	2
UPD5A1AC0313	5/16	.3125	2	6	2
UPD5A1AC0375	3/8	.3750	2	6	2
UPD5A1AC0438	7/16	.4375	2	6	2
UPD5A1AC0500	1/2	.5000	2	6	2
UPD5A1AC0563	9/16	.5625	2	6	2
UPD5A1AC0625	5/8	.6250	2	6	2

METRIC SIZES

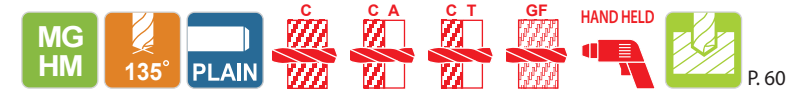
(Unit : mm)

EDP	Drill Diameter		Flute Length FL	Overall Length OAL	No. of Flutes
	D				
	Fractional	Decimal			
UPD5A2AC0400	4		50	150	2
UPD5A2AC0600	6		50	150	2
UPD5A2AC0800	8		50	150	2
UPD5A2AC1000	10		50	150	2
UPD5A2AC1200	12		50	150	2
UPD5A2AC1400	14		50	150	2
UPD5A2AC1600	16		50	150	2

- ▶ CVD Diamond Coating and other coatings are available on Customer Request
- ▶ Available as made to order

SOLID CARBIDE, HAND DRILL REAMERS FOR CFRP AND STACKS WITH PILOT HOLES

Optimized for drilling composite/metal stacks with pre-drilled pilot holes
Special geometry for superior performance, delamination-free drilling and burrless operation
YG-1 special CVD coating and other coatings available for extended tool life and better abrasion resistance



INCH SIZES

(Unit : inch)

EDP	Drill Diameter			Pilot Diameter D2	Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D (Inch)							
	Fractional	Wire Gage	Decimal					
UDM5A1AA0125	1/8	-	.1250	.0980	1/8	1	4	2
UDM5A1AA0129	-	#30	.1285	.0980	.1285	1	4	2
UDM5A1AA0156	5/32	-	.1562	.1285	5/32	1	4	2
UDM5A1AA0188	3/16	-	.1875	.1590	3/16	1	4	2
UDM5A1AA0189	-	#12	.1890	.1590	.1890	1-1/2	4	2
UDM5A1AA0191	-	#11	.1910	.1590	.1910	1-1/2	4	2
UDM5A1AA0250	1/4	-	.2500	.1935	1/4	1-1/2	6	2
UDM5A1AA0313	5/16	-	.3125	.2500	5/16	2	6	2
UDM5A1AA0375	3/8	-	.3750	.3125	3/8	2	6	2
UDM5A1AA0438	7/16	-	.4375	.3750	7/16	2	6	2
UDM5A1AA0500	1/2	-	.5000	.4375	1/2	2	6	2

METRIC SIZES

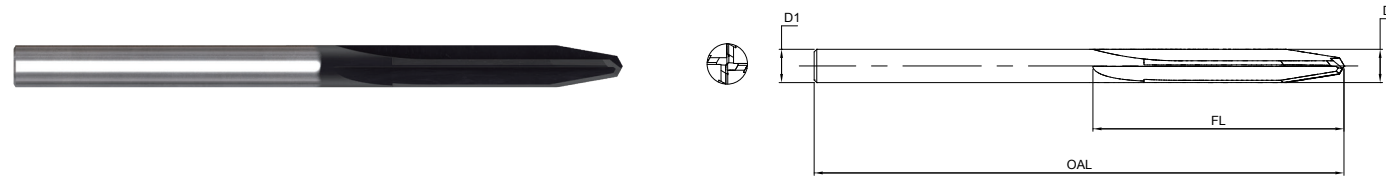
(Unit : mm)

EDP	Drill Diameter		Pilot Diameter D2	Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D (mm)						
	Fractional	Decimal					
UDM5A2AA0300	3		2.4	3	25	100	2
UDM5A2AA0400	4		3.2	4	25	100	2
UDM5A2AA0600	6		4.8	6	40	150	2
UDM5A2AA0800	8		6.4	8	50	150	2
UDM5A2AA1000	10		8.0	10	50	150	2
UDM5A2AA1200	12		9.6	12	50	150	2

- ▶ CVD Diamond Coating and other coatings are available on Customer Request
- ▶ Available as made to order

SOLID CARBIDE, HAND DRILL REAMERS - STRAIGHT FLUTES

Drill Ream process in one shot suitable for hand-held tools
Low pressure when feeding with the tool
h6 shank tolerance for high precision tool holders
YG-1 special CVD coating for extended tool life and better abrasion resistance



INCH SIZES

(Unit : inch)

EDP	Drill Diameter		Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D					
	Fractional	Decimal				
UDM5P1AB0125	1/8	-	1/8	1-1/2	4	4
UDM5P1AB0129	-	#30	.1285	1-1/2	4	4
UDM5P1AB0156	5/32	-	5/32	1-1/2	4	4
UDM5P1AB0188	3/16	-	3/16	1-1/2	4	4
UDM5P1AB0189	-	#12	.1890	1-1/2	4	4
UDM5P1AB0191	-	#11	.1910	1-1/2	4	4
UDM5P1AB0250	1/4	-	1/4	1-1/2	6	4
UDM5P1AB0313	5/16	-	5/16	2	6	4
UDM5P1AB0375	3/8	-	3/8	2	6	4
UDM5P1AB0438	7/16	-	7/16	2	6	4
UDM5P1AB0500	1/2	-	1/2	2	6	4

METRIC SIZES

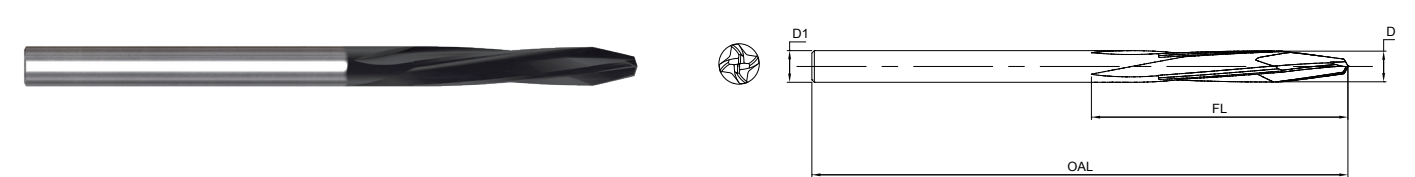
(Unit : mm)

EDP	Drill Diameter		Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D					
	Fractional	Decimal				
UDM5P2AB0300	3	-	3	40	100	4
UDM5P2AB0400	4	-	4	40	100	4
UDM5P2AB0600	6	-	6	40	150	4
UDM5P2AB0800	8	-	8	50	150	4
UDM5P2AB1000	10	-	10	50	150	4
UDM5P2AB1200	12	-	12	50	150	4

► Available as made to order

SOLID CARBIDE, HAND DRILL REAMERS - HELICAL FLUTES

Drill Ream process in one shot suitable for hand-held tools
Low pressure when feeding with the tool
h6 shank tolerance for high precision tool holders
YG-1 special CVD coating for extended tool life and better abrasion resistance



INCH SIZES

(Unit : inch)

EDP	Drill Diameter		Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D					
	Fractional	Decimal				
UDM5P1AC0125	1/8	-	1/8	1-1/2	4	4
UDM5P1AC0129	-	#30	.1285	1-1/2	4	4
UDM5P1AC0156	5/32	-	5/32	1-1/2	4	4
UDM5P1AC0188	3/16	-	3/16	1-1/2	4	4
UDM5P1AC0189	-	#12	.1890	1-1/2	4	4
UDM5P1AC0191	-	#11	.1910	1-1/2	4	4
UDM5P1AC0250	1/4	-	1/4	1-1/2	6	4
UDM5P1AC0313	5/16	-	5/16	2	6	4
UDM5P1AC0375	3/8	-	3/8	2	6	4
UDM5P1AC0438	7/16	-	7/16	2	6	4
UDM5P1AC0500	1/2	-	1/2	2	6	4

METRIC SIZES

(Unit : mm)

EDP	Drill Diameter		Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D					
	Fractional	Decimal				
UDM5P2AC0300	3	-	3	40	100	4
UDM5P2AC0400	4	-	4	40	100	4
UDM5P2AC0600	6	-	6	40	150	4
UDM5P2AC0800	8	-	8	50	150	4
UDM5P2AC1000	10	-	10	50	150	4
UDM5P2AC1200	12	-	12	50	150	4

► Available as made to order

CUTTING CONDITIONS LIST

MILLING

WORK MATERIAL	OPERATION	Tool Diameter in(mm)											
		1/8" (3.175mm)			1/4" (6.35mm)			3/8" (9.53mm)			1/2" (12.7mm)		
		RPM	FEED (IPM)	FEED (mm/min.)	RPM	FEED (IPM)	FEED (mm/min.)	RPM	FEED (IPM)	FEED (mm/min.)	RPM	FEED (IPM)	FEED (mm/min.)
CFRP	SLOTting	12000	30	762	6000	30	762	4500	30	762	4000	30	762
	SIDE MILLING (PROFILING)	15000	50	1270	8000	45	1143	5000	45	1143	4000	40	1016
GFRP	SLOTting	10000	25	635	5000	25	635	4000	25	635	3500	25	635
	SIDE MILLING (PROFILING)	12000	35	889	7000	35	889	5500	35	889	4500	35	889
HONEY COMB	SLOTting	25000	100	2540	20000	100	2540	18000	100	2540	15000	400	10160
	SIDE MILLING (PROFILING)	25000	100	2540	25000	100	2540	25000	100	2540	25000	400	10160

DRILLING

WORK MATERIAL	SPEED (SFM)	Tool Diameter (inch)			SPEED (m/min.)	Tool Diameter (mm)		
		1/4-3/8	3/8-1/2	1/2-1.00		6.35-9.525	9.525-12.7	12.7-25.4
		FEED (IPR)						FEED (mm/rev.)
CFRP, GFRP	300 - 400	.006 - .008	.008 - .015	.015 - .025	91.4 - 121.9	.1524 - .2032	.2032 - .381	.381 - 0.635
CFRP/AL	300 - 400	.006 - .008	.008 - .015	.015 - .025	91.4 - 121.9	.1524 - .2032	.2032 - .381	.381 - 0.635
CFRP/Ti	30 - 70	.006 - .010	.010 - .015	.015 - .020	9.1 - 21.3	.1524 - .254	.1524 - .381	.381 - 0.508

REAMERS

WORK MATERIAL	SPEED (SFM)	Tool Diameter (inch)			SPEED (m/min.)	Tool Diameter (mm)		
		1/4-3/8	3/8-1/2	1/2-1.00		6.35-9.525	9.525-12.7	12.7-25.4
		FEED (IPR)						FEED (mm/rev.)
CFRP, GFRP	300 - 400	.006 - .008	.008 - .015	.015 - .025	91.4 - 121.9	.1524 - .2032	.2032 - .381	.381 - 0.635
CFRP/AL	300 - 400	.006 - .008	.008 - .015	.015 - .025	91.4 - 121.9	.1524 - .2032	.2032 - .381	.381 - 0.635
CFRP/Ti	30 - 70	.006 - .010	.010 - .015	.015 - .020	9.1 - 21.3	.1524 - .254	.1524 - .381	.381 - 0.508

ICON GUIDE LIST

ICON	Contents	ICON	Contents
	Micro Grain Carbide		Cutting Condition
	Polycrystalline Diamond		CFRP (Carbon Fiber Reinforced Plastics)
	Diamond Coating		GFRP (Glass Fiber Reinforced Plastics)
	Point Angle		KFRP (Kevlar Fiber Reinforced Plastics)
	Number of Flutes		CFRP / Aluminum Stacks
	Type of Shank		CFRP / Titanium Stacks
	Helix Angle		Honeycomb
	Chamfer Angle		CNC Gantry Robot End-Effectors
	O.D. Tolerance of Reamer (DIN 1420 for H7)		Power Feed /
	Internal Coolant Holes		Hand Held / Hand Held (Micro-Stop)
			Type of End Teeth