

SGS[®]
Solid Carbide Tools

VALUE AT THE SPINDLE[®]

HYPERCARB[®]
HIGH PERFORMANCE CARBIDE DRILLS

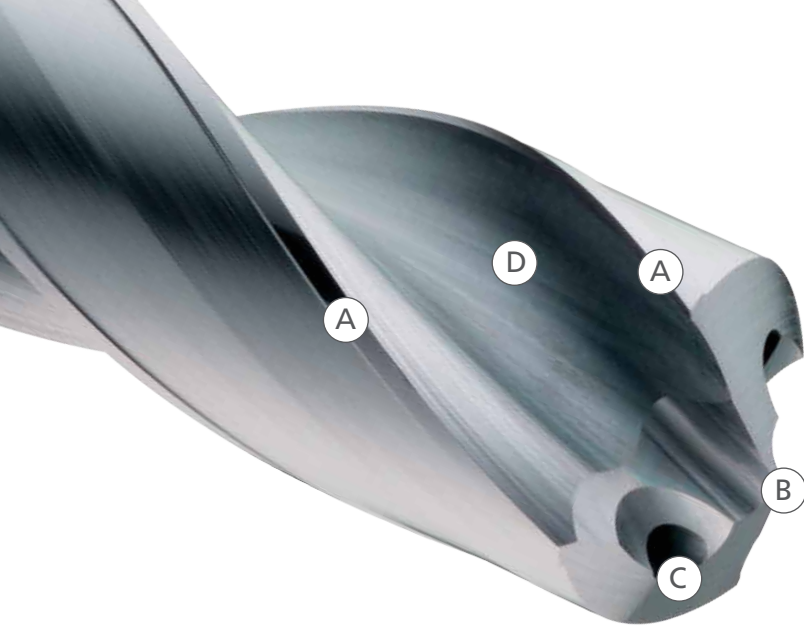
Series 142P
Coolant-Through Drills



 **KYOCERA**

www.kyocera-sgstool.com

ISO 9001:2015 Certified



SERIES 142P



HIGH PERFORMANCE CARBIDE DRILLS

The key features designed into the Hi-PerCarb® Series 142P Drill allow the product to offer application benefits not only beyond that of standard carbide drills, but also other High Performance drills. Each feature of the Hi-PerCarb® Series 142P Drill was uniquely engineered as a solution towards addressing the issues commonly encountered during high production drilling.

- (A) 4-MARGIN DESIGN**
 - additional margin contact improves hole straightness and roundness
 - provides improved stability for difficult applications like cross holes and when exiting on an angle
- (B) POINT**
 - point design stabilizes on entry for exceptional hole size and cylindricity
 - low thrust force reduces machine power requirement and extends tool life
 - easily resharpened
- (C) COOLANT THROUGH DESIGN**
 - improves coolant flow to extend tool life and aid in chip evacuation
- (D) CARBIDE AND COATING**
 - proprietary SGS Ti-NAMITE®-X coating and certified carbide provide exceptional wear resistance and toughness for demanding applications

PERFORMANCE. PRECISION. PASSION.
HI-PERCARB® SERIES 142P DRILLS

PERFORMANCE.

TESTING PARAMETERS

- 3/8" Diameter
- 8XD Length of Cut
- 4140 Alloy Steel
- 3360 rpm
- 30 ipm
- 3.0" axial depth – blind
- TSC – Water Sol 8.9%

HOLE FINISH TEST RESULTS

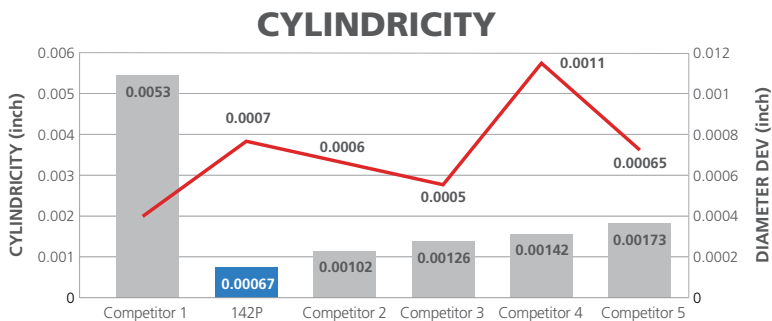
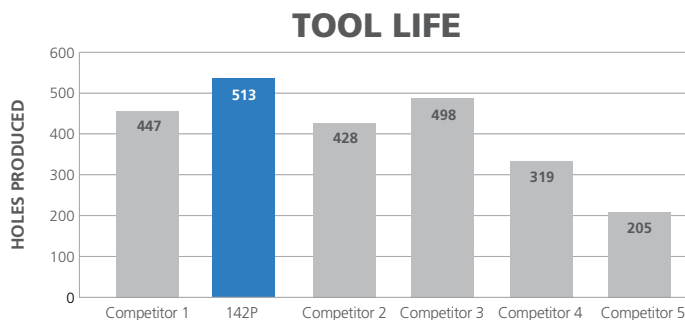
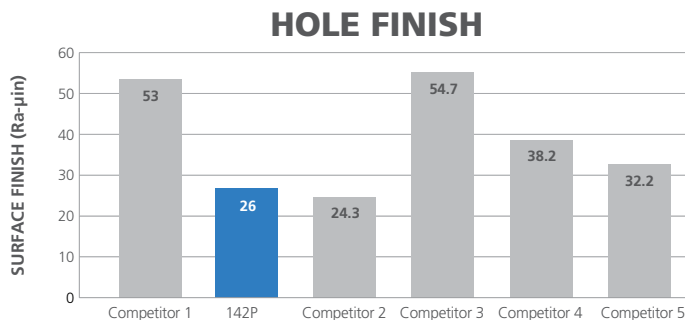
The lower numerical value shown in the chart demonstrates an improved surface finish in alloy steel versus other competitors tested.

TOOL LIFE

All tools were tested until catastrophic failure, and under these conditions, the HI-PERCARB® 142P produced the most holes versus the competition.

CYLINDRICITY

CMM measurements of 14 random holes per competitor indicate the 142P cylindricity is the best among those tested.



The structural design of Ti-NAMITE®-X is adapted to meet a diverse range of applications; everything from high- and low- alloy steels to hardened materials (up to 65 HRC core hardness). Ti-NAMITE®-X is suitable for operations which require high cutting speeds, high temperatures at the cutting edge, and high metal removal rates.

Hardness (HV): 3600

Oxidation Temperature: 1150°C – 2100°F

Coefficient of Friction: 0.45

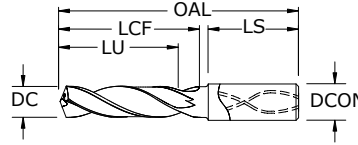
Thickness: 1 – 4 Microns (based on tool diameter)

FRACTIONAL & METRIC Series 142P



142P 3xD

FRACTIONAL & METRIC SERIES



Series 142P 3xD Fractional & Metric

- High-performance point design stabilizes on entry for exceptional hole size and cylindricity while also allowing for low thrust force and extended tool life
- Internal coolant hole improves coolant flow to extend tool life and aid in chip evacuation
- 4-margin design improves hole straightness and roundness while providing improved stability for difficult applications like cross holes and when exiting on angle
- Proprietary Ti-NAMITE[®]-X coating and industry leading carbide substrate provides exceptional wear resistance and toughness for demanding applications
- Recommended for materials ≤ 50HRc (475 Bhn)

		inch & mm							EDP NO.
DECIMAL DC	METRIC DC	FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS	Ti-NAMITE [®] -X (TX)	
0.1181	3,000 mm		6,0	62,0	20,0	15,0	36,0	66400	
0.1220	3,100 mm		6,0	62,0	20,0	15,0	36,0	66401	
0.1250	3,175 mm	1/8	6,0	62,0	20,0	15,0	36,0	56400	
0.1260	3,200 mm		6,0	62,0	20,0	15,0	36,0	66402	
0.1299	3,300 mm		6,0	62,0	20,0	15,0	36,0	66403	
0.1339	3,400 mm		6,0	62,0	20,0	15,0	36,0	66404	
0.1360	3,454 mm	#29	6,0	62,0	20,0	15,0	36,0	56401	
0.1378	3,500 mm		6,0	62,0	20,0	15,0	36,0	66405	
0.1406	3,571 mm	9/64	6,0	62,0	20,0	15,0	36,0	56402	
0.1417	3,600 mm		6,0	62,0	20,0	15,0	36,0	66406	
0.1457	3,700 mm		6,0	62,0	20,0	15,0	36,0	66407	
0.1496	3,800 mm		6,0	66,0	24,0	18,0	36,0	66408	
0.1535	3,900 mm		6,0	66,0	24,0	18,0	36,0	66409	
0.1562	3,967 mm	5/32	6,0	66,0	24,0	18,0	36,0	56403	
0.1575	4,000 mm		6,0	66,0	24,0	18,0	36,0	66410	
0.1590	4,039 mm	#21	6,0	66,0	24,0	18,0	36,0	56404	
0.1614	4,100 mm		6,0	66,0	24,0	18,0	36,0	66411	
0.1654	4,200 mm		6,0	66,0	24,0	18,0	36,0	66412	
0.1693	4,300 mm		6,0	66,0	24,0	18,0	36,0	66413	
0.1719	4,366 mm	11/64	6,0	66,0	24,0	17,0	36,0	56405	
0.1732	4,400 mm		6,0	66,0	24,0	17,0	36,0	66414	
0.1772	4,500 mm		6,0	66,0	24,0	17,0	36,0	66415	
0.1811	4,600 mm		6,0	66,0	24,0	17,0	36,0	66416	
0.1850	4,699 mm	#13	6,0	66,0	24,0	17,0	36,0	66417	
0.1875	4,763 mm	3/16	6,0	66,0	28,0	21,0	36,0	56406	
0.1890	4,801 mm	#12	6,0	66,0	28,0	21,0	36,0	66418	
0.1929	4,900 mm		6,0	66,0	28,0	21,0	36,0	66419	
0.1969	5,000 mm		6,0	66,0	28,0	20,0	36,0	66420	
0.2008	5,100 mm		6,0	66,0	28,0	20,0	36,0	66421	
0.2031	5,159 mm	13/64	6,0	66,0	28,0	20,0	36,0	56407	
0.2047	5,200 mm		6,0	66,0	28,0	20,0	36,0	66422	
0.2087	5,300 mm		6,0	66,0	28,0	20,0	36,0	66423	
0.2126	5,400 mm		6,0	66,0	28,0	20,0	36,0	66424	
0.2165	5,500 mm		6,0	66,0	28,0	20,0	36,0	66425	
0.2188	5,558 mm	7/32	6,0	66,0	28,0	20,0	36,0	56408	
0.2205	5,600 mm		6,0	66,0	28,0	20,0	36,0	66426	
0.2244	5,700 mm		6,0	66,0	28,0	19,0	36,0	66427	
0.2283	5,800 mm		6,0	66,0	28,0	19,0	36,0	66428	
0.2323	5,900 mm		6,0	66,0	28,0	19,0	36,0	66429	
0.2344	5,954 mm	15/64	6,0	66,0	28,0	19,0	36,0	56409	
0.2362	6,000 mm		6,0	66,0	28,0	19,0	36,0	66430	
0.2402	6,100 mm		8,0	79,0	34,0	25,0	36,0	66431	
0.2441	6,200 mm		8,0	79,0	34,0	25,0	36,0	66432	
0.2480	6,300 mm		8,0	79,0	34,0	25,0	36,0	66433	
0.2500	6,350 mm	1/4 E #0	8,0	79,0	34,0	24,0	36,0	56410	
0.2520	6,400 mm		8,0	79,0	34,0	24,0	36,0	66434	

TOLERANCES (inch)

≤.1181 DIAMETER

DC = +.0008/+0.0047
DCON = h₆

>.1181-.2362 DIAMETER

DC = +.00016/+0.00063
DCON = h₆

>.2362-.3937 DIAMETER

DC = +.00024/+0.00083
DCON = h₆

>.3937-.7087 DIAMETER

DC = +.00028/+0.00098
DCON = h₆

>.7087-1.1811 DIAMETER

DC = +.00031/+0.00114
DCON = h₆

TOLERANCES (mm)

≤3 DIAMETER

DC = +0,002/+0,012
DCON = h₆

>3-6 DIAMETER

DC = +0,004/+0,016
DCON = h₆

>6-10 DIAMETER

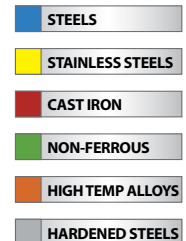
DC = +0,006/+0,021
DCON = h₆

>10-18 DIAMETER

DC = +0,007/+0,025
DCON = h₆

>18-30 DIAMETER

DC = +0,008/+0,029
DCON = h₆



For patent information visit www.kspatents.com

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FRACTIONAL & METRIC Series 142P

142P 3xD

FRACTIONAL & METRIC SERIES

DECIMAL DC	METRIC DC	inch & mm						EDP NO.
		FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS	Ti-NAMITE®-X (TX)
0.2559	6,500 mm		8,0	79,0	34,0	24,0	36,0	66435
0.2570	6,528 mm	F	8,0	79,0	34,0	24,0	36,0	56411
0.2598	6,600 mm		8,0	79,0	34,0	24,0	36,0	66436
0.2638	6,700 mm		8,0	79,0	34,0	24,0	36,0	66437
0.2656	6,746 mm	17/64	8,0	79,0	34,0	24,0	36,0	56412
0.2677	6,800 mm		8,0	79,0	34,0	24,0	36,0	66438
0.2717	6,900 mm		8,0	79,0	34,0	24,0	36,0	66439
0.2756	7,000 mm		8,0	79,0	34,0	24,0	36,0	66440
0.2795	7,100 mm		8,0	79,0	41,0	30,0	36,0	66441
0.2812	7,142 mm	9/32	8,0	79,0	41,0	30,0	36,0	56413
0.2835	7,200 mm		8,0	79,0	41,0	30,0	36,0	66442
0.2874	7,300 mm		8,0	79,0	41,0	30,0	36,0	66443
0.2913	7,400 mm		8,0	79,0	41,0	30,0	36,0	66444
0.2953	7,500 mm		8,0	79,0	41,0	30,0	36,0	66445
0.2969	7,541 mm	19/64	8,0	79,0	41,0	30,0	36,0	56414
0.2992	7,600 mm		8,0	79,0	41,0	30,0	36,0	66446
0.3031	7,700 mm		8,0	79,0	41,0	29,0	36,0	66447
0.3071	7,800 mm		8,0	79,0	41,0	29,0	36,0	66448
0.3110	7,900 mm		8,0	79,0	41,0	29,0	36,0	66449
0.3125	7,938 mm	5/16	8,0	79,0	41,0	29,0	36,0	56415
0.3150	8,000 mm		8,0	79,0	41,0	29,0	36,0	66450
0.3189	8,100 mm		10,0	89,0	47,0	35,0	40,0	66451
0.3228	8,200 mm		10,0	89,0	47,0	35,0	40,0	66452
0.3268	8,300 mm		10,0	89,0	47,0	35,0	40,0	66453
0.3281	8,334 mm	21/64	10,0	89,0	47,0	34,0	40,0	56416
0.3307	8,400 mm		10,0	89,0	47,0	34,0	40,0	66454
0.3320	8,433 mm	Q	10,0	89,0	47,0	34,0	40,0	56417
0.3346	8,500 mm		10,0	89,0	47,0	34,0	40,0	66455
0.3386	8,600 mm		10,0	89,0	47,0	34,0	40,0	66456
0.3425	8,700 mm		10,0	89,0	47,0	34,0	40,0	66457
0.3438	8,733 mm	11/32	10,0	89,0	47,0	34,0	40,0	56418
0.3465	8,800 mm		10,0	89,0	47,0	34,0	40,0	66458
0.3504	8,900 mm		10,0	89,0	47,0	34,0	40,0	66459
0.3543	9,000 mm		10,0	89,0	47,0	34,0	40,0	66460
0.3583	9,100 mm		10,0	89,0	47,0	33,0	40,0	66461
0.3594	9,129 mm	23/64	10,0	89,0	47,0	33,0	40,0	56419
0.3622	9,200 mm		10,0	89,0	47,0	33,0	40,0	66462
0.3661	9,300 mm		10,0	89,0	47,0	33,0	40,0	66463
0.3680	9,347 mm	U	10,0	89,0	47,0	33,0	40,0	56420
0.3701	9,400 mm		10,0	89,0	47,0	33,0	40,0	66464
0.3740	9,500 mm		10,0	89,0	47,0	33,0	40,0	66465
0.3750	9,525 mm	3/8	10,0	89,0	47,0	33,0	40,0	56421
0.3780	9,600 mm		10,0	89,0	47,0	33,0	40,0	66466
0.3819	9,700 mm		10,0	89,0	47,0	32,0	40,0	66467
0.3858	9,800 mm		10,0	89,0	47,0	32,0	40,0	66468
0.3898	9,900 mm		10,0	89,0	47,0	32,0	40,0	66469
0.3906	9,921 mm	25/64	10,0	89,0	47,0	32,0	40,0	56422
0.3937	10,000 mm		10,0	89,0	47,0	32,0	40,0	66470
0.3976	10,100 mm		12,0	102,0	55,0	40,0	45,0	66471
0.4016	10,200 mm		12,0	102,0	55,0	40,0	45,0	66472
0.4055	10,300 mm		12,0	102,0	55,0	40,0	45,0	66473
0.4062	10,317 mm	13/32	12,0	102,0	55,0	40,0	45,0	56423
0.4095	10,400 mm		12,0	102,0	55,0	39,0	45,0	66474
0.4134	10,500 mm		12,0	102,0	55,0	39,0	45,0	66475

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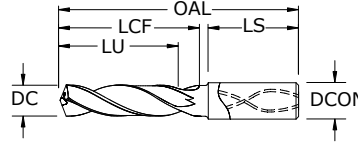
Series 142P 3xD Fractional & Metric

FRACTIONAL & METRIC Series 142P



142P 3xD

FRACTIONAL & METRIC SERIES



Series 142P 3xD Fractional & Metric

- High-performance point design stabilizes on entry for exceptional hole size and cylindricity while also allowing for low thrust force and extended tool life
- Internal coolant hole improves coolant flow to extend tool life and aid in chip evacuation
- 4-margin design improves hole straightness and roundness while providing improved stability for difficult applications like cross holes and when exiting on angle
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- Recommended for materials ≤ 50HRc (475 Bhn)

inch & mm									EDP NO.
DECIMAL DC	METRIC DC	FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS		Ti-NAMITE [®] -X (TX)
0.4173	10,600 mm		12,0	102,0	55,0	39,0	45,0		66476
0.4213	10,700 mm		12,0	102,0	55,0	39,0	45,0		66477
0.4219	10,716 mm	27/64	12,0	102,0	55,0	39,0	45,0		56424
0.4252	10,800 mm		12,0	102,0	55,0	39,0	45,0		66478
0.4291	10,900 mm		12,0	102,0	55,0	39,0	45,0		66479
0.4331	11,000 mm		12,0	102,0	55,0	39,0	45,0		66480
0.4370	11,100 mm		12,0	102,0	55,0	38,0	45,0		66481
0.4375	11,113 mm	7/16	12,0	102,0	55,0	38,0	45,0		56425
0.4409	11,200 mm		12,0	102,0	55,0	38,0	45,0		66482
0.4449	11,300 mm		12,0	102,0	55,0	38,0	45,0		66483
0.4488	11,400 mm		12,0	102,0	55,0	38,0	45,0		66484
0.4528	11,500 mm		12,0	102,0	55,0	38,0	45,0		66485
0.4567	11,600 mm		12,0	102,0	55,0	38,0	45,0		66486
0.4606	11,700 mm		12,0	102,0	55,0	37,0	45,0		66487
0.4646	11,800 mm		12,0	102,0	55,0	37,0	45,0		66488
0.4685	11,900 mm		12,0	102,0	55,0	37,0	45,0		66489
0.4688	11,908 mm	15/32	12,0	102,0	55,0	37,0	45,0		56426
0.4724	12,000 mm		12,0	102,0	55,0	37,0	45,0		66490
0.4844	12,304 mm	31/64	14,0	107,0	60,0	41,0	45,0		56427
0.4921	12,500 mm		14,0	107,0	60,0	41,0	45,0		66491
0.5000	12,700 mm	1/2	14,0	107,0	60,0	41,0	45,0		56428
0.5039	12,800 mm		14,0	107,0	60,0	41,0	45,0		66492
0.5118	13,000 mm		14,0	107,0	60,0	41,0	45,0		66493
0.5156	13,096 mm	33/64	14,0	107,0	60,0	40,0	45,0		56429
0.5315	13,500 mm		14,0	107,0	60,0	40,0	45,0		66494
0.5433	13,800 mm		14,0	107,0	60,0	39,0	45,0		66495
0.5512	14,000 mm		14,0	107,0	60,0	39,0	45,0		66496
0.5625	14,288 mm	9/16	16,0	115,0	65,0	43,0	48,0		56430
0.5709	14,500 mm		16,0	115,0	65,0	43,0	48,0		66497
0.5781	14,684 mm	37/64	16,0	115,0	65,0	43,0	48,0		56431
0.5827	14,800 mm		16,0	115,0	65,0	43,0	48,0		66498
0.5906	15,000 mm		16,0	115,0	65,0	42,0	48,0		66499
0.6102	15,500 mm		16,0	115,0	65,0	42,0	48,0		66500
0.6221	15,800 mm		16,0	115,0	65,0	41,0	48,0		66501
0.6250	15,875 mm	5/8	16,0	115,0	65,0	41,0	48,0		56432
0.6299	16,000 mm		16,0	115,0	65,0	41,0	48,0		66502
0.6562	16,667 mm	21/32	18,0	123,0	73,0	47,0	48,0		56433
0.6875	17,463 mm	11/16	18,0	123,0	73,0	47,0	48,0		56434
0.7500	19,050 mm	3/4	20,0	131,0	79,0	50,0	50,0		56435

TOLERANCES (inch)

≤.1181 DIAMETER

DC = +.0008/+0.0047
DCON = h₆

>.1181-.2362 DIAMETER

DC = +.00016/+0.00063
DCON = h₆

>.2362-.3937 DIAMETER

DC = +.00024/+0.00083
DCON = h₆

>.3937-.7087 DIAMETER

DC = +.00028/+0.00098
DCON = h₆

>.7087-1.1811 DIAMETER

DC = +.00031/+0.00114
DCON = h₆

TOLERANCES (mm)

≤3 DIAMETER

DC = +0,002/+0,012
DCON = h₆

>3-6 DIAMETER

DC = +0,004/+0,016
DCON = h₆

>6-10 DIAMETER

DC = +0,006/+0,021
DCON = h₆

>10-18 DIAMETER

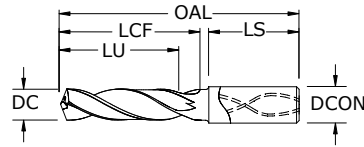
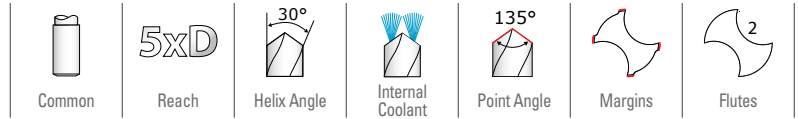
DC = +0,007/+0,025
DCON = h₆

>18-30 DIAMETER

DC = +0,008/+0,029
DCON = h₆

- STEELS
- STAINLESS STEELS
- CAST IRON
- NON-FERROUS
- HIGH TEMP ALLOYS
- HARDENED STEELS

For patent information visit www.ksptpatents.com



142P 5xD
FRACTIONAL & METRIC SERIES

TOLERANCES (inch)

- ≤.1181 DIAMETER**
DC = +.00008/+0.00047
DCON = h₆
- >.1181-.2362 DIAMETER**
DC = +.00016/+0.00063
DCON = h₆
- >.2362-.3937 DIAMETER**
DC = +.00024/+0.00083
DCON = h₆
- >.3937-.7087 DIAMETER**
DC = +.00028/+0.00098
DCON = h₆
- >.7087-1.1811 DIAMETER**
DC = +.00031/+0.00114
DCON = h₆

TOLERANCES (mm)

- ≤3 DIAMETER**
DC = +0,002/+0,012
DCON = h₆
- >3-6 DIAMETER**
DC = +0,004/+0,016
DCON = h₆
- >6-10 DIAMETER**
DC = +0,006/+0,021
DCON = h₆
- >10-18 DIAMETER**
DC = +0,007/+0,025
DCON = h₆
- >18-30 DIAMETER**
DC = +0,008/+0,029
DCON = h₆

- STEELS**
- STAINLESS STEELS**
- CAST IRON**
- NON-FERROUS**
- HIGH TEMP ALLOYS**
- HARDENED STEELS**

For patent information visit www.ksptpatents.com

inch & mm									EDP NO.
DECIMAL DC	METRIC DC	FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS	Ti-NAMITE®-X (TX)	
0.1181	3,000 mm		6,0	66,0	28,0	23,0	36,0	66503	
0.1220	3,100 mm		6,0	66,0	28,0	23,0	36,0	66504	
0.1250	3,175 mm	1/8	6,0	66,0	28,0	23,0	36,0	56436	
0.1260	3,200 mm		6,0	66,0	28,0	23,0	36,0	66505	
0.1299	3,300 mm		6,0	66,0	28,0	23,0	36,0	66506	
0.1339	3,400 mm		6,0	66,0	28,0	23,0	36,0	66507	
0.1360	3,454 mm	#29	6,0	66,0	28,0	23,0	36,0	56437	
0.1378	3,500 mm		6,0	66,0	28,0	23,0	36,0	66508	
0.1406	3,571 mm	9/64	6,0	66,0	28,0	23,0	36,0	56438	
0.1417	3,600 mm		6,0	66,0	28,0	23,0	36,0	66509	
0.1457	3,700 mm		6,0	66,0	28,0	23,0	36,0	66510	
0.1496	3,800 mm		6,0	74,0	36,0	29,0	36,0	66511	
0.1535	3,900 mm		6,0	74,0	36,0	29,0	36,0	66512	
0.1562	3,967 mm	5/32	6,0	74,0	36,0	29,0	36,0	56439	
0.1575	4,000 mm		6,0	74,0	36,0	29,0	36,0	66513	
0.1590	4,039 mm	#21	6,0	74,0	36,0	29,0	36,0	56440	
0.1614	4,100 mm		6,0	74,0	36,0	29,0	36,0	66514	
0.1654	4,200 mm		6,0	74,0	36,0	29,0	36,0	66515	
0.1693	4,300 mm		6,0	74,0	36,0	29,0	36,0	66516	
0.1719	4,366 mm	11/64	6,0	74,0	36,0	29,0	36,0	56441	
0.1732	4,400 mm		6,0	74,0	36,0	29,0	36,0	66517	
0.1772	4,500 mm		6,0	74,0	36,0	29,0	36,0	66518	
0.1811	4,600 mm		6,0	74,0	36,0	29,0	36,0	66519	
0.1850	4,699 mm	#13	6,0	74,0	36,0	29,0	36,0	66520	
0.1875	4,763 mm	3/16	6,0	82,0	44,0	37,0	36,0	56442	
0.1890	4,801 mm	#12	6,0	82,0	44,0	37,0	36,0	66521	
0.1929	4,900 mm		6,0	82,0	44,0	37,0	36,0	66522	
0.1969	5,000 mm		6,0	82,0	44,0	36,0	36,0	66523	
0.2008	5,100 mm		6,0	82,0	44,0	36,0	36,0	66524	
0.2031	5,159 mm	13/64	6,0	82,0	44,0	36,0	36,0	56443	
0.2047	5,200 mm		6,0	82,0	44,0	36,0	36,0	66525	
0.2087	5,300 mm		6,0	82,0	44,0	36,0	36,0	66526	
0.2126	5,400 mm		6,0	82,0	44,0	36,0	36,0	66527	
0.2165	5,500 mm		6,0	82,0	44,0	36,0	36,0	66528	
0.2188	5,558 mm	7/32	6,0	82,0	44,0	36,0	36,0	56444	
0.2205	5,600 mm		6,0	82,0	44,0	36,0	36,0	66529	
0.2244	5,700 mm		6,0	82,0	44,0	35,0	36,0	66530	
0.2283	5,800 mm		6,0	82,0	44,0	35,0	36,0	66531	
0.2323	5,900 mm		6,0	82,0	44,0	35,0	36,0	66532	
0.2344	5,954 mm	15/64	6,0	82,0	44,0	35,0	36,0	56445	
0.2362	6,000 mm		6,0	82,0	44,0	35,0	36,0	66533	
0.2402	6,100 mm		8,0	91,0	53,0	44,0	36,0	66534	
0.2441	6,200 mm		8,0	91,0	53,0	44,0	36,0	66535	
0.2480	6,300 mm		8,0	91,0	53,0	44,0	36,0	66536	

- High-performance point design stabilizes on entry for exceptional hole size and cylindricity while also allowing for low thrust force and extended tool life
- Internal coolant hole improves coolant flow to extend tool life and aid in chip evacuation
- 4-margin design improves hole straightness and roundness while providing improved stability for difficult applications like cross holes and when exiting on angle
- Proprietary Ti-NAMITE®-X coating and industry leading carbide substrate provides exceptional wear resistance and toughness for demanding applications
- Recommended for materials ≤ 50HRc (475 Bhn)

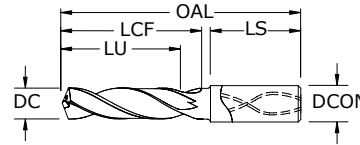
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FRACTIONAL & METRIC Series 142P



142P 5xD

FRACTIONAL & METRIC SERIES



Series 142P 5xD Fractional & Metric

- High-performance point design stabilizes on entry for exceptional hole size and cylindricity while also allowing for low thrust force and extended tool life
- Internal coolant hole improves coolant flow to extend tool life and aid in chip evacuation
- 4-margin design improves hole straightness and roundness while providing improved stability for difficult applications like cross holes and when exiting on angle
- Proprietary Ti-NAMITE[®]-X coating and industry leading carbide substrate provides exceptional wear resistance and toughness for demanding applications
- Recommended for materials ≤ 50HRc (475 Bhn)

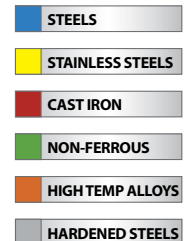
		inch & mm							EDP NO.
DECIMAL DC	METRIC DC	FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS	Ti-NAMITE [®] -X (TX)	
0.2500	6,350 mm	1/4 E #0	8,0	91,0	53,0	43,0	36,0	56446	
0.2520	6,400 mm		8,0	91,0	53,0	43,0	36,0	66537	
0.2559	6,500 mm		8,0	91,0	53,0	43,0	36,0	66538	
0.2570	6,528 mm	F	8,0	91,0	53,0	43,0	36,0	56447	
0.2598	6,600 mm		8,0	91,0	53,0	43,0	36,0	66539	
0.2638	6,700 mm		8,0	91,0	53,0	43,0	36,0	66540	
0.2656	6,746 mm	17/64	8,0	91,0	53,0	43,0	36,0	56448	
0.2677	6,800 mm		8,0	91,0	53,0	43,0	36,0	66541	
0.2717	6,900 mm		8,0	91,0	53,0	43,0	36,0	66542	
0.2756	7,000 mm		8,0	91,0	53,0	42,0	36,0	66543	
0.2795	7,100 mm		8,0	91,0	53,0	42,0	36,0	66544	
0.2812	7,142 mm	9/32	8,0	91,0	53,0	42,0	36,0	56449	
0.2835	7,200 mm		8,0	91,0	53,0	42,0	36,0	66545	
0.2874	7,300 mm		8,0	91,0	53,0	42,0	36,0	66546	
0.2913	7,400 mm		8,0	91,0	53,0	42,0	36,0	66547	
0.2953	7,500 mm		8,0	91,0	53,0	42,0	36,0	66548	
0.2969	7,541 mm	19/64	8,0	91,0	53,0	42,0	36,0	56450	
0.2992	7,600 mm		8,0	91,0	53,0	42,0	36,0	66549	
0.3031	7,700 mm		8,0	91,0	53,0	41,0	36,0	66550	
0.3071	7,800 mm		8,0	91,0	53,0	41,0	36,0	66551	
0.3110	7,900 mm		8,0	91,0	53,0	41,0	36,0	66552	
0.3125	7,938 mm	5/16	8,0	91,0	53,0	41,0	36,0	56451	
0.3150	8,000 mm		8,0	91,0	53,0	41,0	36,0	66553	
0.3189	8,100 mm		10,0	103,0	61,0	49,0	40,0	66554	
0.3228	8,200 mm		10,0	103,0	61,0	49,0	40,0	66555	
0.3268	8,300 mm		10,0	103,0	61,0	49,0	40,0	66556	
0.3281	8,334 mm	21/64	10,0	103,0	61,0	48,0	40,0	56452	
0.3307	8,400 mm		10,0	103,0	61,0	48,0	40,0	66557	
0.3320	8,433 mm	Q	10,0	103,0	61,0	48,0	40,0	56453	
0.3346	8,500 mm		10,0	103,0	61,0	48,0	40,0	66558	
0.3386	8,600 mm		10,0	103,0	61,0	48,0	40,0	66559	
0.3425	8,700 mm		10,0	103,0	61,0	48,0	40,0	66560	
0.3438	8,733 mm	11/32	10,0	103,0	61,0	48,0	40,0	56454	
0.3465	8,800 mm		10,0	103,0	61,0	48,0	40,0	66561	
0.3504	8,900 mm		10,0	103,0	61,0	48,0	40,0	66562	
0.3543	9,000 mm		10,0	103,0	61,0	48,0	40,0	66563	
0.3583	9,100 mm		10,0	103,0	61,0	47,0	40,0	66564	
0.3594	9,129 mm	23/64	10,0	103,0	61,0	47,0	40,0	56455	
0.3622	9,200 mm		10,0	103,0	61,0	47,0	40,0	66565	
0.3661	9,300 mm		10,0	103,0	61,0	47,0	40,0	66566	
0.3680	9,347 mm	U	10,0	103,0	61,0	47,0	40,0	56456	
0.3701	9,400 mm		10,0	103,0	61,0	47,0	40,0	66567	
0.3740	9,500 mm		10,0	103,0	61,0	47,0	40,0	66568	
0.3750	9,525 mm	3/8	10,0	103,0	61,0	47,0	40,0	56457	

TOLERANCES (inch)

- ≤.1181 DIAMETER
DC = +.0008/+0.0047
DCON = h₆
- >.1181-.2362 DIAMETER
DC = +.00016/+0.00063
DCON = h₆
- >.2362-.3937 DIAMETER
DC = +.00024/+0.00083
DCON = h₆
- >.3937-.7087 DIAMETER
DC = +.00028/+0.00098
DCON = h₆
- >.7087-1.1811 DIAMETER
DC = +.00031/+0.00114
DCON = h₆

TOLERANCES (mm)

- ≤3 DIAMETER
DC = +0,002/+0,012
DCON = h₆
- >3-6 DIAMETER
DC = +0,004/+0,016
DCON = h₆
- >6-10 DIAMETER
DC = +0,006/+0,021
DCON = h₆
- >10-18 DIAMETER
DC = +0,007/+0,025
DCON = h₆
- >18-30 DIAMETER
DC = +0,008/+0,029
DCON = h₆



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FRACTIONAL & METRIC Series 142P

142P 5xD

FRACTIONAL & METRIC SERIES

DECIMAL DC	METRIC DC	inch & mm						EDP NO.
		FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS	Ti-NAMITE [®] -X (TX)
0.3780	9,600 mm		10,0	103,0	61,0	47,0	40,0	66569
0.3819	9,700 mm		10,0	103,0	61,0	46,0	40,0	66570
0.3858	9,800 mm		10,0	103,0	61,0	46,0	40,0	66571
0.3898	9,900 mm		10,0	103,0	61,0	46,0	40,0	66572
0.3906	9,921 mm	25/64	10,0	103,0	61,0	46,0	40,0	56458
0.3937	10,000 mm		10,0	103,0	61,0	46,0	40,0	66573
0.3976	10,100 mm		12,0	118,0	71,0	56,0	45,0	66574
0.4016	10,200 mm		12,0	118,0	71,0	56,0	45,0	66575
0.4055	10,300 mm		12,0	118,0	71,0	56,0	45,0	66576
0.4062	10,317 mm	13/32	12,0	118,0	71,0	56,0	45,0	56459
0.4095	10,400 mm		12,0	118,0	71,0	55,0	45,0	66577
0.4134	10,500 mm		12,0	118,0	71,0	55,0	45,0	66578
0.4173	10,600 mm		12,0	118,0	71,0	55,0	45,0	66579
0.4213	10,700 mm		12,0	118,0	71,0	55,0	45,0	66580
0.4219	10,716 mm	27/64	12,0	118,0	71,0	55,0	45,0	56460
0.4252	10,800 mm		12,0	118,0	71,0	55,0	45,0	66581
0.4291	10,900 mm		12,0	118,0	71,0	55,0	45,0	66582
0.4331	11,000 mm		12,0	118,0	71,0	54,0	45,0	66583
0.4370	11,100 mm		12,0	118,0	71,0	54,0	45,0	66584
0.4375	11,113 mm	7/16	12,0	118,0	71,0	54,0	45,0	56461
0.4409	11,200 mm		12,0	118,0	71,0	54,0	45,0	66585
0.4449	11,300 mm		12,0	118,0	71,0	54,0	45,0	66586
0.4488	11,400 mm		12,0	118,0	71,0	54,0	45,0	66587
0.4528	11,500 mm		12,0	118,0	71,0	54,0	45,0	66588
0.4567	11,600 mm		12,0	118,0	71,0	54,0	45,0	66589
0.4606	11,700 mm		12,0	118,0	71,0	53,0	45,0	66590
0.4646	11,800 mm		12,0	118,0	71,0	53,0	45,0	66591
0.4685	11,900 mm		12,0	118,0	71,0	53,0	45,0	66592
0.4688	11,908 mm	15/32	12,0	118,0	71,0	53,0	45,0	56462
0.4724	12,000 mm		12,0	118,0	71,0	53,0	45,0	66593
0.4844	12,304 mm	31/64	14,0	124,0	77,0	58,0	45,0	56463
0.4921	12,500 mm		14,0	124,0	77,0	58,0	45,0	66594
0.5000	12,700 mm	1/2	14,0	124,0	77,0	58,0	45,0	56464
0.5039	12,800 mm		14,0	124,0	77,0	58,0	45,0	66595
0.5118	13,000 mm		14,0	124,0	77,0	58,0	45,0	66596
0.5156	13,096 mm	33/64	14,0	124,0	77,0	57,0	45,0	56465
0.5315	13,500 mm		14,0	124,0	77,0	57,0	45,0	66597
0.5433	13,800 mm		14,0	124,0	77,0	56,0	45,0	66598
0.5512	14,000 mm		14,0	124,0	77,0	56,0	45,0	66599
0.5625	14,288 mm	9/16	16,0	133,0	83,0	61,0	48,0	56466
0.5709	14,500 mm		16,0	133,0	83,0	61,0	48,0	66600
0.5781	14,684 mm	37/64	16,0	133,0	83,0	61,0	48,0	56467
0.5827	14,800 mm		16,0	133,0	83,0	61,0	48,0	66601
0.5906	15,000 mm		16,0	133,0	83,0	60,0	48,0	66602
0.6102	15,500 mm		16,0	133,0	83,0	60,0	48,0	66603
0.6221	15,800 mm		16,0	133,0	83,0	59,0	48,0	66604
0.6250	15,875 mm	5/8	16,0	133,0	83,0	59,0	48,0	56468
0.6299	16,000 mm		16,0	133,0	83,0	59,0	48,0	66605
0.6562	16,667 mm	21/32	18,0	143,0	93,0	68,0	48,0	56469
0.6875	17,463 mm	11/16	18,0	143,0	93,0	67,0	48,0	56470
0.7500	19,050 mm	3/4	20,0	153,0	101,0	72,0	50,0	56471

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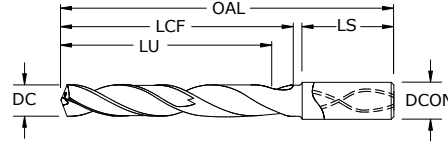
Series 142P 5xD | Fractional & Metric

FRACTIONAL & METRIC Series 142P



142P 8xD

FRACTIONAL & METRIC SERIES



Series 142P 8xD Fractional & Metric

- High-performance point design stabilizes on entry for exceptional hole size and cylindricity while also allowing for low thrust force and extended tool life
- Internal coolant hole improves coolant flow to extend tool life and aid in chip evacuation
- 4-margin design improves hole straightness and roundness while providing improved stability for difficult applications like cross holes and when exiting on angle
- Proprietary Ti-NAMITE[®]-X coating and industry leading carbide substrate provides exceptional wear resistance and toughness for demanding applications
- Recommended for materials ≤ 50HRc (475 Bhn)

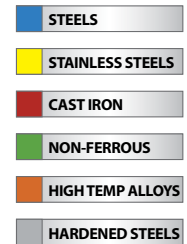
		inch & mm							EDP NO.
DECIMAL DC	METRIC DC	FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS	Ti-NAMITE [®] -X (TX)	
0.1181	3,000 mm		6,0	72,0	34,0	29,0	36,0	66606	
0.1220	3,100 mm		6,0	72,0	34,0	29,0	36,0	66607	
0.1250	3,175 mm	1/8	6,0	72,0	34,0	29,0	36,0	56472	
0.1260	3,200 mm		6,0	72,0	34,0	29,0	36,0	66608	
0.1299	3,300 mm		6,0	72,0	34,0	29,0	36,0	66609	
0.1339	3,400 mm		6,0	72,0	34,0	29,0	36,0	66610	
0.1360	3,454 mm	#29	6,0	72,0	34,0	29,0	36,0	56473	
0.1378	3,500 mm		6,0	72,0	34,0	29,0	36,0	66611	
0.1406	3,571 mm	9/64	6,0	72,0	34,0	29,0	36,0	56474	
0.1417	3,600 mm		6,0	72,0	34,0	29,0	36,0	66612	
0.1457	3,700 mm		6,0	72,0	34,0	29,0	36,0	66613	
0.1496	3,800 mm		6,0	81,0	43,0	37,0	36,0	66614	
0.1535	3,900 mm		6,0	81,0	43,0	37,0	36,0	66615	
0.1562	3,967 mm	5/32	6,0	81,0	43,0	37,0	36,0	56475	
0.1575	4,000 mm		6,0	81,0	43,0	37,0	36,0	66616	
0.1590	4,039 mm	#21	6,0	81,0	43,0	37,0	36,0	56476	
0.1614	4,100 mm		6,0	81,0	43,0	37,0	36,0	66617	
0.1654	4,200 mm		6,0	81,0	43,0	37,0	36,0	66618	
0.1693	4,300 mm		6,0	81,0	43,0	37,0	36,0	66619	
0.1719	4,366 mm	11/64	6,0	81,0	43,0	36,0	36,0	56477	
0.1732	4,400 mm		6,0	81,0	43,0	36,0	36,0	66620	
0.1772	4,500 mm		6,0	81,0	43,0	36,0	36,0	66621	
0.1811	4,600 mm		6,0	81,0	43,0	36,0	36,0	66622	
0.1850	4,699 mm	#13	6,0	81,0	43,0	36,0	36,0	66623	
0.1875	4,763 mm	3/16	6,0	95,0	57,0	50,0	36,0	56478	
0.1890	4,801 mm	#12	6,0	95,0	57,0	50,0	36,0	66624	
0.1929	4,900 mm		6,0	95,0	57,0	50,0	36,0	66625	
0.1969	5,000 mm		6,0	95,0	57,0	49,0	36,0	66626	
0.2008	5,100 mm		6,0	95,0	57,0	49,0	36,0	66627	
0.2031	5,159 mm	13/64	6,0	95,0	57,0	49,0	36,0	56479	
0.2047	5,200 mm		6,0	95,0	57,0	49,0	36,0	66628	
0.2087	5,300 mm		6,0	95,0	57,0	49,0	36,0	66629	
0.2126	5,400 mm		6,0	95,0	57,0	49,0	36,0	66630	
0.2165	5,500 mm		6,0	95,0	57,0	49,0	36,0	66631	
0.2188	5,558 mm	7/32	6,0	95,0	57,0	49,0	36,0	56480	
0.2205	5,600 mm		6,0	95,0	57,0	49,0	36,0	66632	
0.2244	5,700 mm		6,0	95,0	57,0	48,0	36,0	66633	
0.2283	5,800 mm		6,0	95,0	57,0	48,0	36,0	66634	

TOLERANCES (inch)

- ≤.1181 DIAMETER
DC = +.00008/+0.00047
DCON = h₆
- >.1181-.2362 DIAMETER
DC = +.00016/+0.00063
DCON = h₆
- >.2362-.3937 DIAMETER
DC = +.00024/+0.00083
DCON = h₆
- >.3937-.7087 DIAMETER
DC = +.00028/+0.00098
DCON = h₆
- >.7087-1.1811 DIAMETER
DC = +.00031/+0.00114
DCON = h₆

TOLERANCES (mm)

- ≤3 DIAMETER
DC = +0,002/+0,012
DCON = h₆
- >3-6 DIAMETER
DC = +0,004/+0,016
DCON = h₆
- >6-10 DIAMETER
DC = +0,006/+0,021
DCON = h₆
- >10-18 DIAMETER
DC = +0,007/+0,025
DCON = h₆
- >18-30 DIAMETER
DC = +0,008/+0,029
DCON = h₆



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FRACTIONAL & METRIC Series 142P

142P 8xD

FRACTIONAL & METRIC SERIES

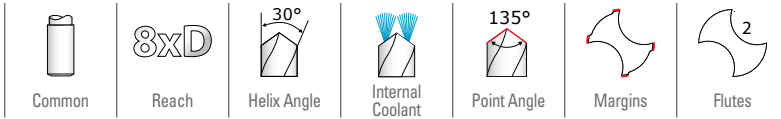
DECIMAL DC	METRIC DC	inch & mm						EDP NO. Ti-NAMITE®-X (TX)
		FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS	
0.2323	5,900 mm		6,0	95,0	57,0	48,0	36,0	66635
0.2344	5,954 mm	15/64	6,0	95,0	57,0	48,0	36,0	56481
0.2362	6,000 mm		6,0	95,0	57,0	48,0	36,0	66636
0.2402	6,100 mm		8,0	114,0	76,0	67,0	36,0	66637
0.2441	6,200 mm		8,0	114,0	76,0	67,0	36,0	66638
0.2480	6,300 mm		8,0	114,0	76,0	67,0	36,0	66639
0.2500	6,350 mm	1/4 E #0	8,0	114,0	76,0	66,0	36,0	56482
0.2520	6,400 mm		8,0	114,0	76,0	66,0	36,0	66640
0.2559	6,500 mm		8,0	114,0	76,0	66,0	36,0	66641
0.2570	6,528 mm	F	8,0	114,0	76,0	66,0	36,0	56483
0.2598	6,600 mm		8,0	114,0	76,0	66,0	36,0	66642
0.2638	6,700 mm		8,0	114,0	76,0	66,0	36,0	66643
0.2656	6,746 mm	17/64	8,0	114,0	76,0	66,0	36,0	56484
0.2677	6,800 mm		8,0	114,0	76,0	66,0	36,0	66644
0.2717	6,900 mm		8,0	114,0	76,0	66,0	36,0	66645
0.2756	7,000 mm		8,0	114,0	76,0	65,0	36,0	66646
0.2795	7,100 mm		8,0	114,0	76,0	65,0	36,0	66647
0.2812	7,142 mm	9/32	8,0	114,0	76,0	65,0	36,0	56485
0.2835	7,200 mm		8,0	114,0	76,0	65,0	36,0	66648
0.2874	7,300 mm		8,0	114,0	76,0	65,0	36,0	66649
0.2913	7,400 mm		8,0	114,0	76,0	65,0	36,0	66650
0.2953	7,500 mm		8,0	114,0	76,0	65,0	36,0	66651
0.2969	7,541 mm	19/64	8,0	114,0	76,0	65,0	36,0	56486
0.2992	7,600 mm		8,0	114,0	76,0	65,0	36,0	66652
0.3031	7,700 mm		8,0	114,0	76,0	64,0	36,0	66653
0.3071	7,800 mm		8,0	114,0	76,0	64,0	36,0	66654
0.3110	7,900 mm		8,0	114,0	76,0	64,0	36,0	66655
0.3125	7,938 mm	5/16	8,0	114,0	76,0	64,0	36,0	56487
0.3150	8,000 mm		8,0	114,0	76,0	64,0	36,0	66656
0.3189	8,100 mm		10,0	142,0	95,0	83,0	40,0	66657
0.3228	8,200 mm		10,0	142,0	95,0	83,0	40,0	66658
0.3268	8,300 mm		10,0	142,0	95,0	83,0	40,0	66659
0.3281	8,334 mm	21/64	10,0	142,0	95,0	83,0	40,0	56488
0.3307	8,400 mm		10,0	142,0	95,0	82,0	40,0	66660
0.3320	8,433 mm	Q	10,0	142,0	95,0	82,0	40,0	56489
0.3346	8,500 mm		10,0	142,0	95,0	82,0	40,0	66661
0.3386	8,600 mm		10,0	142,0	95,0	82,0	40,0	66662
0.3425	8,700 mm		10,0	142,0	95,0	82,0	40,0	66663
0.3438	8,733 mm	11/32	10,0	142,0	95,0	82,0	40,0	56490
0.3465	8,800 mm		10,0	142,0	95,0	82,0	40,0	66664
0.3504	8,900 mm		10,0	142,0	95,0	82,0	40,0	66665
0.3543	9,000 mm		10,0	142,0	95,0	82,0	40,0	66666
0.3583	9,100 mm		10,0	142,0	95,0	81,0	40,0	66667
0.3594	9,129 mm	23/64	10,0	142,0	95,0	81,0	40,0	56491

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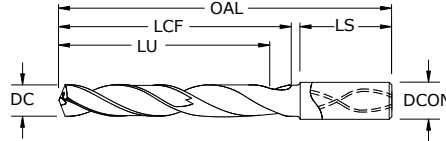
Series 142P 8xD | Fractional & Metric

FRACTIONAL & METRIC Series 142P



142P 8xD

FRACTIONAL & METRIC SERIES



- High-performance point design stabilizes on entry for exceptional hole size and cylindricity while also allowing for low thrust force and extended tool life
- Internal coolant hole improves coolant flow to extend tool life and aid in chip evacuation
- 4-margin design improves hole straightness and roundness while providing improved stability for difficult applications like cross holes and when exiting on angle
- Proprietary Ti-NAMITE[®]-X coating and industry leading carbide substrate provides exceptional wear resistance and toughness for demanding applications
- Recommended for materials ≤ 50HRc (475 Bhn)

		inch & mm							EDP NO.
DECIMAL DC	METRIC DC	FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS	Ti-NAMITE [®] -X (TX)	
0.3622	9,200 mm		10,0	142,0	95,0	81,0	40,0	66668	
0.3661	9,300 mm		10,0	142,0	95,0	81,0	40,0	66669	
0.3680	9,347 mm	U	10,0	142,0	95,0	81,0	40,0	56492	
0.3701	9,400 mm		10,0	142,0	95,0	81,0	40,0	66670	
0.3740	9,500 mm		10,0	142,0	95,0	81,0	40,0	66671	
0.3750	9,525 mm	3/8	10,0	142,0	95,0	81,0	40,0	56493	
0.3780	9,600 mm		10,0	142,0	95,0	81,0	40,0	66672	
0.3819	9,700 mm		10,0	142,0	95,0	80,0	40,0	66673	
0.3858	9,800 mm		10,0	142,0	95,0	80,0	40,0	66674	
0.3898	9,900 mm		10,0	142,0	95,0	80,0	40,0	66675	
0.3906	9,921 mm	25/64	10,0	142,0	95,0	80,0	40,0	56494	
0.3937	10,000 mm		10,0	142,0	95,0	80,0	40,0	66676	
0.3976	10,100 mm		12,0	162,0	114,0	99,0	45,0	66677	
0.4016	10,200 mm		12,0	162,0	114,0	99,0	45,0	66678	
0.4055	10,300 mm		12,0	162,0	114,0	99,0	45,0	66679	
0.4062	10,317 mm	13/32	12,0	162,0	114,0	99,0	45,0	56495	
0.4095	10,400 mm		12,0	162,0	114,0	98,0	45,0	66680	
0.4134	10,500 mm		12,0	162,0	114,0	98,0	45,0	66681	
0.4173	10,600 mm		12,0	162,0	114,0	98,0	45,0	66682	
0.4213	10,700 mm		12,0	162,0	114,0	98,0	45,0	66683	
0.4219	10,716 mm	27/64	12,0	162,0	114,0	98,0	45,0	56496	
0.4252	10,800 mm		12,0	162,0	114,0	98,0	45,0	66684	
0.4291	10,900 mm		12,0	162,0	114,0	98,0	45,0	66685	
0.4331	11,000 mm		12,0	162,0	114,0	97,0	45,0	66686	
0.4370	11,100 mm		12,0	162,0	114,0	97,0	45,0	66687	
0.4375	11,113 mm	7/16	12,0	162,0	114,0	97,0	45,0	56497	
0.4409	11,200 mm		12,0	162,0	114,0	97,0	45,0	66688	
0.4449	11,300 mm		12,0	162,0	114,0	97,0	45,0	66689	
0.4488	11,400 mm		12,0	162,0	114,0	97,0	45,0	66690	
0.4528	11,500 mm		12,0	162,0	114,0	97,0	45,0	66691	
0.4567	11,600 mm		12,0	162,0	114,0	97,0	45,0	66692	
0.4606	11,700 mm		12,0	162,0	114,0	96,0	45,0	66693	
0.4646	11,800 mm		12,0	162,0	114,0	96,0	45,0	66694	
0.4685	11,900 mm		12,0	162,0	114,0	96,0	45,0	66695	
0.4688	11,908 mm	15/32	12,0	162,0	114,0	96,0	45,0	56498	
0.4724	12,000 mm		12,0	162,0	114,0	96,0	45,0	66696	
0.4844	12,304 mm	31/64	14,0	178,0	133,0	114,0	45,0	56499	
0.4921	12,500 mm		14,0	178,0	133,0	114,0	45,0	66697	

TOLERANCES (inch)

≤.1181 DIAMETER

DC = +.0008/+0.0047
DCON = h₆

>.1181-.2362 DIAMETER

DC = +.00016/+0.00063
DCON = h₆

>.2362-.3937 DIAMETER

DC = +.00024/+0.00083
DCON = h₆

>.3937-.7087 DIAMETER

DC = +.00028/+0.00098
DCON = h₆

>.7087-1.1811 DIAMETER

DC = +.00031/+0.00114
DCON = h₆

TOLERANCES (mm)

≤3 DIAMETER

DC = +0,002/+0,012
DCON = h₆

>3-6 DIAMETER

DC = +0,004/+0,016
DCON = h₆

>6-10 DIAMETER

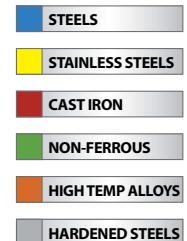
DC = +0,006/+0,021
DCON = h₆

>10-18 DIAMETER

DC = +0,007/+0,025
DCON = h₆

>18-30 DIAMETER

DC = +0,008/+0,029
DCON = h₆



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FRACTIONAL & METRIC Series 142P

142P 8xD

FRACTIONAL & METRIC SERIES

DECIMAL DC	METRIC DC	inch & mm						EDP NO.
		FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS	Ti-NAMITE®-X (TX)
0.5000	12,700 mm	1/2	14,0	178,0	133,0	114,0	45,0	56500
0.5039	12,800 mm		14,0	178,0	133,0	114,0	45,0	66698
0.5118	13,000 mm		14,0	178,0	133,0	114,0	45,0	66699
0.5156	13,096 mm	33/64	14,0	178,0	133,0	113,0	45,0	56501
0.5315	13,500 mm		14,0	178,0	133,0	113,0	45,0	66700
0.5433	13,800 mm		14,0	178,0	133,0	113,0	45,0	66701
0.5512	14,000 mm		14,0	178,0	133,0	113,0	45,0	66702
0.5625	14,288 mm	9/16	16,0	203,0	152,0	130,0	48,0	56502
0.5709	14,500 mm		16,0	203,0	152,0	130,0	48,0	66703
0.5781	14,684 mm	37/64	16,0	203,0	152,0	130,0	48,0	56503
0.5827	14,800 mm		16,0	203,0	152,0	130,0	48,0	66704
0.5906	15,000 mm		16,0	203,0	152,0	129,0	48,0	66705
0.6102	15,500 mm		16,0	203,0	152,0	129,0	48,0	66706
0.6221	15,800 mm		16,0	203,0	152,0	128,0	48,0	66707
0.6250	15,875 mm	5/8	16,0	203,0	152,0	128,0	48,0	56504
0.6299	16,000 mm		16,0	203,0	152,0	128,0	48,0	66708
0.6562	16,667 mm	21/32	18,0	222,0	171,0	145,0	48,0	56505
0.6875	17,463 mm	11/16	18,0	222,0	171,0	145,0	48,0	56506
0.7500	19,050 mm	3/4	20,0	243,0	190,0	161,0	50,0	56507

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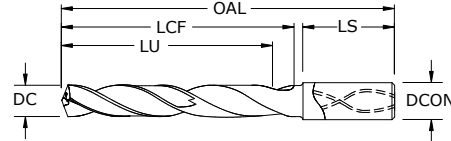
Series 142P 8xD | Fractional & Metric

FRACTIONAL & METRIC Series 142P



New Expanded Tools

142P 12xD FRACTIONAL & METRIC SERIES



Series 142P 12xD Fractional & Metric

- High-performance point design stabilizes on entry for exceptional hole size and cylindricity while also allowing for low thrust force and extended tool life
- Internal coolant hole improves coolant flow to extend tool life and aid in chip evacuation
- 4-margin design improves hole straightness and roundness while providing improved stability for difficult applications like cross holes and when exiting on angle
- Proprietary Ti-NAMITE[®]-X coating and industry leading carbide substrate provides exceptional wear resistance and toughness for demanding applications
- Recommended for materials ≤ 50HRc (475 Bhn)

		inch & mm							EDP NO.
DECIMAL DC	METRIC DC	FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS	Ti-NAMITE [®] -X (TX)	
0.1181	3,000 mm		6,0	87,0	49,0	44,0	36,0	66709	
0.1220	3,100 mm		6,0	87,0	49,0	44,0	36,0	66710	
0.1250	3,175 mm	1/8	6,0	87,0	49,0	44,0	36,0	56508	
0.1260	3,200 mm		6,0	87,0	49,0	44,0	36,0	66711	
0.1299	3,300 mm		6,0	87,0	49,0	44,0	36,0	66712	
0.1339	3,400 mm		6,0	87,0	49,0	44,0	36,0	66713	
0.1360	3,454 mm	#29	6,0	87,0	49,0	44,0	36,0	56509	
0.1378	3,500 mm		6,0	87,0	49,0	44,0	36,0	66714	
0.1406	3,571 mm	9/64	6,0	87,0	49,0	43,0	36,0	56510	
0.1417	3,600 mm		6,0	87,0	49,0	43,0	36,0	66715	
0.1457	3,700 mm		6,0	87,0	49,0	43,0	36,0	66716	
0.1496	3,800 mm		6,0	100,0	62,0	56,0	36,0	66717	
0.1535	3,900 mm		6,0	100,0	62,0	56,0	36,0	66718	
0.1562	3,967 mm	5/32	6,0	100,0	62,0	56,0	36,0	56511	
0.1575	4,000 mm		6,0	100,0	62,0	56,0	36,0	66719	
0.1590	4,039 mm	#21	6,0	100,0	62,0	56,0	36,0	56512	
0.1614	4,100 mm		6,0	100,0	62,0	56,0	36,0	66720	
0.1654	4,200 mm		6,0	100,0	62,0	55,0	36,0	66721	
0.1693	4,300 mm		6,0	100,0	62,0	55,0	36,0	66722	
0.1719	4,366 mm	11/64	6,0	100,0	62,0	55,0	36,0	56513	
0.1732	4,400 mm		6,0	100,0	62,0	55,0	36,0	66723	
0.1772	4,500 mm		6,0	100,0	62,0	55,0	36,0	66724	
0.1811	4,600 mm		6,0	100,0	62,0	55,0	36,0	66725	
0.1850	4,699 mm	#13	6,0	100,0	62,0	55,0	36,0	66726	
0.1875	4,763 mm	3/16	6,0	119,0	81,0	74,0	36,0	56514	
0.1890	4,801 mm	#12	6,0	119,0	81,0	74,0	36,0	66727	
0.1929	4,900 mm		6,0	119,0	81,0	74,0	36,0	66728	
0.1969	5,000 mm		6,0	119,0	81,0	73,0	36,0	66729	
0.2008	5,100 mm		6,0	119,0	81,0	73,0	36,0	66730	
0.2031	5,159 mm	13/64	6,0	119,0	81,0	73,0	36,0	56515	
0.2047	5,200 mm		6,0	119,0	81,0	73,0	36,0	66731	
0.2087	5,300 mm		6,0	119,0	81,0	73,0	36,0	66732	
0.2126	5,400 mm		6,0	119,0	81,0	73,0	36,0	66733	
0.2165	5,500 mm		6,0	119,0	81,0	73,0	36,0	66734	
0.2188	5,558 mm	7/32	6,0	119,0	81,0	73,0	36,0	56516	
0.2205	5,600 mm		6,0	119,0	81,0	73,0	36,0	66735	
0.2244	5,700 mm		6,0	119,0	81,0	72,0	36,0	66736	
0.2283	5,800 mm		6,0	119,0	81,0	72,0	36,0	66737	

TOLERANCES (inch)

- ≤.1181 DIAMETER
DC = +.0008/+0.0047
DCON = h₆
- >.1181-.2362 DIAMETER
DC = +.00016/+0.00063
DCON = h₆
- >.2362-.3937 DIAMETER
DC = +.00024/+0.00083
DCON = h₆
- >.3937-.7087 DIAMETER
DC = +.00028/+0.00098
DCON = h₆
- >.7087-1.1811 DIAMETER
DC = +.00031/+0.00114
DCON = h₆

TOLERANCES (mm)

- ≤3 DIAMETER
DC = +0,002/+0,012
DCON = h₆
- >3-6 DIAMETER
DC = +0,004/+0,016
DCON = h₆
- >6-10 DIAMETER
DC = +0,006/+0,021
DCON = h₆
- >10-18 DIAMETER
DC = +0,007/+0,025
DCON = h₆
- >18-30 DIAMETER
DC = +0,008/+0,029
DCON = h₆

- STEELS
- STAINLESS STEELS
- CAST IRON
- NON-FERROUS
- HIGH TEMP ALLOYS
- HARDENED STEELS

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FRACTIONAL & METRIC Series 142P

142P 12xD FRACTIONAL & METRIC SERIES

DECIMAL DC	METRIC DC	inch & mm						EDP NO.
		FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS	Ti-NAMITE®-X (TX)
0.2323	5,900 mm		6,0	119,0	81,0	72,0	36,0	66738
0.2344	5,954 mm	15/64	6,0	119,0	81,0	72,0	36,0	56517
0.2362	6,000 mm		6,0	119,0	81,0	72,0	36,0	66739
0.2402	6,100 mm		8,0	146,0	108,0	99,0	36,0	66740
0.2441	6,200 mm		8,0	146,0	108,0	99,0	36,0	66741
0.2480	6,300 mm		8,0	146,0	108,0	99,0	36,0	66742
0.2500	6,350 mm	1/4 E #0	8,0	146,0	108,0	98,0	36,0	56518
0.2520	6,400 mm		8,0	146,0	108,0	98,0	36,0	66743
0.2559	6,500 mm		8,0	146,0	108,0	98,0	36,0	66744
0.2570	6,528 mm	F	8,0	146,0	108,0	98,0	36,0	56519
0.2598	6,600 mm		8,0	146,0	108,0	98,0	36,0	66745
0.2638	6,700 mm		8,0	146,0	108,0	98,0	36,0	66746
0.2656	6,746 mm	17/64	8,0	146,0	108,0	98,0	36,0	56520
0.2677	6,800 mm		8,0	146,0	108,0	98,0	36,0	66747
0.2717	6,900 mm		8,0	146,0	108,0	98,0	36,0	66748
0.2756	7,000 mm		8,0	146,0	108,0	97,0	36,0	66749
0.2795	7,100 mm		8,0	146,0	108,0	97,0	36,0	66750
0.2812	7,142 mm	9/32	8,0	146,0	108,0	97,0	36,0	56521
0.2835	7,200 mm		8,0	146,0	108,0	97,0	36,0	66751
0.2874	7,300 mm		8,0	146,0	108,0	97,0	36,0	66752
0.2913	7,400 mm		8,0	146,0	108,0	97,0	36,0	66753
0.2953	7,500 mm		8,0	146,0	108,0	97,0	36,0	66754
0.2969	7,541 mm	19/64	8,0	146,0	108,0	97,0	36,0	56522
0.2992	7,600 mm		8,0	146,0	108,0	97,0	36,0	66755
0.3031	7,700 mm		8,0	146,0	108,0	96,0	36,0	66756
0.3071	7,800 mm		8,0	146,0	108,0	96,0	36,0	66757
0.3110	7,900 mm		8,0	146,0	108,0	96,0	36,0	66758
0.3125	7,938 mm	5/16	8,0	146,0	108,0	96,0	36,0	56523
0.3150	8,000 mm		8,0	146,0	108,0	96,0	36,0	66759
0.3189	8,100 mm		10,0	182,0	135,0	123,0	40,0	66760
0.3228	8,200 mm		10,0	182,0	135,0	123,0	40,0	66761
0.3268	8,300 mm		10,0	182,0	135,0	123,0	40,0	66762
0.3281	8,334 mm	21/64	10,0	182,0	135,0	123,0	40,0	56524
0.3307	8,400 mm		10,0	182,0	135,0	122,0	40,0	66763
0.3320	8,433 mm	Q	10,0	182,0	135,0	122,0	40,0	56525
0.3346	8,500 mm		10,0	182,0	135,0	122,0	40,0	66764
0.3386	8,600 mm		10,0	182,0	135,0	122,0	40,0	66765
0.3425	8,700 mm		10,0	182,0	135,0	122,0	40,0	66766
0.3438	8,733 mm	11/32	10,0	182,0	135,0	122,0	40,0	56526
0.3465	8,800 mm		10,0	182,0	135,0	122,0	40,0	66767
0.3504	8,900 mm		10,0	182,0	135,0	122,0	40,0	66768
0.3543	9,000 mm		10,0	182,0	135,0	122,0	40,0	66769
0.3583	9,100 mm		10,0	182,0	135,0	121,0	40,0	66770
0.3594	9,129 mm	23/64	10,0	182,0	135,0	121,0	40,0	56527

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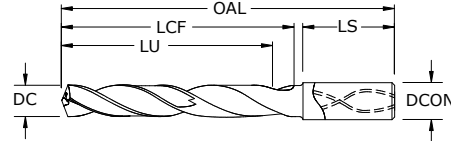
Series 142P 12xD | Fractional & Metric

FRACTIONAL & METRIC Series 142P



New Expanded Tools

142P 12xD FRACTIONAL & METRIC SERIES



Series 142P 12xD Fractional & Metric

- High-performance point design stabilizes on entry for exceptional hole size and cylindricity while also allowing for low thrust force and extended tool life
- Internal coolant hole improves coolant flow to extend tool life and aid in chip evacuation
- 4-margin design improves hole straightness and roundness while providing improved stability for difficult applications like cross holes and when exiting on angle
- Proprietary Ti-NAMITE[®]-X coating and industry leading carbide substrate provides exceptional wear resistance and toughness for demanding applications
- Recommended for materials ≤ 50HRc (475 Bhn)

		inch & mm							EDP NO.
DECIMAL DC	METRIC DC	FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS	Ti-NAMITE [®] -X (TX)	
0.3622	9,200 mm		10,0	182,0	135,0	121,0	40,0	66771	
0.3661	9,300 mm		10,0	182,0	135,0	121,0	40,0	66772	
0.3680	9,347 mm	U	10,0	182,0	135,0	121,0	40,0	56528	
0.3701	9,400 mm		10,0	182,0	135,0	121,0	40,0	66773	
0.3740	9,500 mm		10,0	182,0	135,0	121,0	40,0	66774	
0.3750	9,525 mm	3/8	10,0	182,0	135,0	121,0	40,0	56529	
0.3780	9,600 mm		10,0	182,0	135,0	121,0	40,0	66775	
0.3819	9,700 mm		10,0	182,0	135,0	120,0	40,0	66776	
0.3858	9,800 mm		10,0	182,0	135,0	120,0	40,0	66777	
0.3898	9,900 mm		10,0	182,0	135,0	120,0	40,0	66778	
0.3906	9,921 mm	25/64	10,0	182,0	135,0	120,0	40,0	56530	
0.3937	10,000 mm		10,0	182,0	135,0	120,0	40,0	66779	
0.3976	10,100 mm		12,0	210,0	162,0	147,0	45,0	66780	
0.4016	10,200 mm		12,0	210,0	162,0	147,0	45,0	66781	
0.4055	10,300 mm		12,0	210,0	162,0	147,0	45,0	66782	
0.4062	10,317 mm	13/32	12,0	210,0	162,0	147,0	45,0	56531	
0.4095	10,400 mm		12,0	210,0	162,0	146,0	45,0	66783	
0.4134	10,500 mm		12,0	210,0	162,0	146,0	45,0	66784	
0.4173	10,600 mm		12,0	210,0	162,0	146,0	45,0	66785	
0.4213	10,700 mm		12,0	210,0	162,0	146,0	45,0	66786	
0.4219	10,716 mm	27/64	12,0	210,0	162,0	146,0	45,0	56532	
0.4252	10,800 mm		12,0	210,0	162,0	146,0	45,0	66787	
0.4291	10,900 mm		12,0	210,0	162,0	146,0	45,0	66788	
0.4331	11,000 mm		12,0	210,0	162,0	145,0	45,0	66789	
0.4370	11,100 mm		12,0	210,0	162,0	145,0	45,0	66790	
0.4375	11,113 mm	7/16	12,0	210,0	162,0	145,0	45,0	56533	
0.4409	11,200 mm		12,0	210,0	162,0	145,0	45,0	66791	
0.4449	11,300 mm		12,0	210,0	162,0	145,0	45,0	66792	
0.4488	11,400 mm		12,0	210,0	162,0	145,0	45,0	66793	
0.4528	11,500 mm		12,0	210,0	162,0	145,0	45,0	66794	
0.4567	11,600 mm		12,0	210,0	162,0	145,0	45,0	66795	
0.4606	11,700 mm		12,0	210,0	162,0	144,0	45,0	66796	
0.4646	11,800 mm		12,0	210,0	162,0	144,0	45,0	66797	
0.4685	11,900 mm		12,0	210,0	162,0	144,0	45,0	66798	
0.4688	11,908 mm	15/32	12,0	210,0	162,0	144,0	45,0	56534	
0.4724	12,000 mm		12,0	210,0	162,0	144,0	45,0	66799	
0.4844	12,304 mm	31/64	14,0	234,0	189,0	171,0	45,0	56535	
0.4921	12,500 mm		14,0	234,0	189,0	170,0	45,0	66800	

TOLERANCES (inch)

≤.1181 DIAMETER

DC = +.0008/+0.0047
DCON = h₆

>.1181-.2362 DIAMETER

DC = +.00016/+0.00063
DCON = h₆

>.2362-.3937 DIAMETER

DC = +.00024/+0.00083
DCON = h₆

>.3937-.7087 DIAMETER

DC = +.00028/+0.00098
DCON = h₆

>.7087-1.1811 DIAMETER

DC = +.00031/+0.00114
DCON = h₆

TOLERANCES (mm)

≤3 DIAMETER

DC = +0,002/+0,012
DCON = h₆

>3-6 DIAMETER

DC = +0,004/+0,016
DCON = h₆

>6-10 DIAMETER

DC = +0,006/+0,021
DCON = h₆

>10-18 DIAMETER

DC = +0,007/+0,025
DCON = h₆

>18-30 DIAMETER

DC = +0,008/+0,029
DCON = h₆

- STEELS
- STAINLESS STEELS
- CAST IRON
- NON-FERROUS
- HIGH TEMP ALLOYS
- HARDENED STEELS

For patent information visit www.ksptpatents.com

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FRACTIONAL & METRIC Series 142P

142P 12xD FRACTIONAL & METRIC SERIES

DECIMAL DC	METRIC DC	inch & mm						EDP NO.
		FRACTIONAL/ LETTER/WIRE DC	SHANK DIAMETER DCON	OVERALL LENGTH OAL	FLUTE LENGTH LCF	USABLE LENGTH LU	SHANK LENGTH LS	Ti-NAMITE®-X (TX)
0.5000	12,700 mm	1/2	14,0	234,0	189,0	170,0	45,0	56536
0.5039	12,800 mm		14,0	234,0	189,0	170,0	45,0	66801
0.5118	13,000 mm		14,0	234,0	189,0	170,0	45,0	66802
0.5156	13,096 mm	33/64	14,0	234,0	189,0	169,0	45,0	56537
0.5315	13,500 mm		14,0	234,0	189,0	169,0	45,0	66803
0.5433	13,800 mm		14,0	234,0	189,0	168,0	45,0	66804
0.5512	14,000 mm		14,0	234,0	189,0	168,0	45,0	66805
0.5625	14,288 mm	9/16	16,0	267,0	216,0	195,0	48,0	56538
0.5709	14,500 mm		16,0	267,0	216,0	194,0	48,0	66806
0.5781	14,684 mm	37/64	16,0	267,0	216,0	194,0	48,0	56539
0.5827	14,800 mm		16,0	267,0	216,0	194,0	48,0	66807
0.5906	15,000 mm		16,0	267,0	216,0	193,0	48,0	66808
0.6102	15,500 mm		16,0	267,0	216,0	193,0	48,0	66809
0.6221	15,800 mm		16,0	267,0	216,0	192,0	48,0	66810
0.6250	15,875 mm	5/8	16,0	267,0	216,0	192,0	48,0	56540
0.6299	16,000 mm		16,0	267,0	216,0	192,0	48,0	66811
0.6562	16,667 mm	21/32	18,0	292,0	241,0	216,0	48,0	56541
0.6875	17,463 mm	11/16	18,0	292,0	241,0	215,0	48,0	56542
0.7500	19,050 mm	3/4	20,0	319,0	266,0	238,0	50,0	56543

CONTINUED

Series 142P 12xD | Fractional & Metric

FRACTIONAL
Series 142P



Series 142P Speed & Feed Recommendations

Series 142P Fractional	Hardness	Vc (sfm)	DC • in								
			1/8	3/16	1/4	3/8	1/2	5/8	3/4		
CARBON STEELS 1018, 1040, 1080, 1090, 10L50, 1140, 1212, 12L15, 1525, 1536	≤ 175 Bhn or ≤ 7 HRc	425 (340-510)	RPM	12988	8659	6494	4329	3247	2598	2165	
			Fr	0.0043	0.0065	0.0086	0.0129	0.0172	0.0216	0.0259	
			Feed (ipm)	56.0	56.0	56.0	56.0	56.0	56.0	56.0	
	≤ 275 Bhn or ≤ 28 HRc	380 (304-456)	RPM	11613	7742	5806	3871	2903	2323	1935	
			Fr	0.0039	0.0058	0.0078	0.0116	0.0155	0.0194	0.0233	
			Feed (ipm)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	
	≤ 425 Bhn or ≤ 45 HRc	220 (176-264)	RPM	6723	4482	3362	2241	1681	1345	1121	
			Fr	0.0033	0.0049	0.0065	0.0098	0.0131	0.0164	0.0196	
			Feed (ipm)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	
	P ALLOY STEELS 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100	≤ 275 Bhn or ≤ 28 HRc	330 (264-396)	RPM	10085	6723	5042	3362	2521	2017	1681
				Fr	0.0033	0.0049	0.0065	0.0098	0.0131	0.0164	0.0196
				Feed (ipm)	33.0	33.0	33.0	33.0	33.0	33.0	33.0
≤ 375 Bhn or ≤ 40 HRc		200 (160-240)	RPM	6112	4075	3056	2037	1528	1222	1019	
			Fr	0.0028	0.0042	0.0056	0.0083	0.0111	0.0139	0.0167	
			Feed (ipm)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	
≤ 425 Bhn or ≤ 45 HRc		140 (112-168)	RPM	4278	2852	2139	1426	1070	856	713	
			Fr	0.0020	0.0030	0.0040	0.0060	0.0079	0.0099	0.0119	
			Feed (ipm)	8.5	8.5	8.5	8.5	8.5	8.5	8.5	
TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2		≤ 200 Bhn or ≤ 13 HRc	145 (116-174)	RPM	4431	2954	2216	1477	1108	886	739
				Fr	0.0028	0.0042	0.0056	0.0085	0.0113	0.0141	0.0169
				Feed (ipm)	12.5	12.5	12.5	12.5	12.5	12.5	12.5
	≤ 375 Bhn or ≤ 40 HRc	95 (76-114)	RPM	2903	1935	1452	968	726	581	484	
			Fr	0.0013	0.0020	0.0027	0.0040	0.0054	0.0067	0.0081	
			Feed (ipm)	3.9	3.9	3.9	3.9	3.9	3.9	3.9	
M STAINLESS STEELS (FREE MACHINING) 303, 416, 420F, 430F, 440F	≤ 185 Bhn or ≤ 9 HRc	305 (244-366)	RPM	9321	6214	4660	3107	2330	1864	1553	
			Fr	0.0026	0.0039	0.0051	0.0077	0.0103	0.0129	0.0154	
			Feed (ipm)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
	≤ 275 Bhn or ≤ 28 HRc	195 (156-234)	RPM	5959	3973	2980	1986	1490	1192	993	
			Fr	0.0020	0.0030	0.0040	0.0060	0.0081	0.0101	0.0121	
			Feed (ipm)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
	≤ 275 Bhn or ≤ 28 HRc	150 (120-180)	RPM	4584	3056	2292	1528	1146	917	764	
			Fr	0.0020	0.0030	0.0040	0.0060	0.0079	0.0099	0.0119	
			Feed (ipm)	9.1	9.1	9.1	9.1	9.1	9.1	9.1	
	≤ 375 Bhn or ≤ 40 HRc	110 (88-132)	RPM	3362	2241	1681	1121	840	672	560	
			Fr	0.0018	0.0027	0.0036	0.0054	0.0071	0.0089	0.0107	
			Feed (ipm)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
K CAST IRONS Gray, Malleable, Ductile	≤ 220 Bhn or ≤ 19 HRc	360 (288-432)	RPM	11002	7334	5501	3667	2750	2200	1834	
			Fr	0.0045	0.0068	0.0091	0.0136	0.0182	0.0227	0.0273	
			Feed (ipm)	50.0	50.0	50.0	50.0	50.0	50.0	50.0	
	≤ 260 Bhn or ≤ 26 HRc	335 (268-402)	RPM	10238	6825	5119	3413	2559	2048	1706	
			Fr	0.0045	0.0068	0.0091	0.0136	0.0182	0.0227	0.0273	
			Feed (ipm)	46.5	46.5	46.5	46.5	46.5	46.5	46.5	

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Series 142P Fractional	Hardness	Vc (sfm)		DC • in							
				1/8	3/16	1/4	3/8	1/2	5/8	3/4	
N ALUMINUM ALLOYS 2017, 2024, 356, 6061, 7075	≤ 80 Bhn or ≤ 47 HRb	770 (616-924)	RPM	23531	15687	11766	7844	5883	4706	3922	
			Fr	0.0049	0.0073	0.0098	0.0147	0.0195	0.0244	0.0293	
			Feed (ipm)	115.0	115.0	115.0	115.0	115.0	115.0	115.0	
	≤ 150 Bhn or ≤ 8 HRb	660 (528-792)	RPM	20170	13446	10085	6723	5042	4034	3362	
			Fr	0.0050	0.0074	0.0099	0.0149	0.0198	0.0248	0.0297	
			Feed (ipm)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
	COPPER ALLOYS Alum Bronze, C110, Muntz Brass	≤ 140 Bhn or ≤ 3 HRc	550 (440-660)	RPM	16808	11205	8404	5603	4202	3362	2801
				Fr	0.0020	0.0030	0.0040	0.0060	0.0080	0.0100	0.0120
				Feed (ipm)	33.5	33.5	33.5	33.5	33.5	33.5	33.5
		≤ 200 Bhn or ≤ 23 HRc	440 (352-528)	RPM	13446	8964	6723	4482	3362	2689	2241
				Fr	0.0020	0.0030	0.0040	0.0060	0.0080	0.0100	0.0120
				Feed (ipm)	27.0	27.0	27.0	27.0	27.0	27.0	27.0
S HIGH TEMP ALLOYS (NICKEL, COBALT, IRON BASE) Inconel 601, 617, 625, Incoloy, Monel 400, Rene, Waspaloy	≤ 300 Bhn or ≤ 32 HRc	95 (76-114)	RPM	2903	1935	1452	968	726	581	484	
			Fr	0.0008	0.0012	0.0016	0.0024	0.0032	0.0040	0.0048	
			Feed (ipm)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
	≤ 400 Bhn or ≤ 43 HRc	50 (40-60)	RPM	1528	1019	764	509	382	306	255	
			Fr	0.0007	0.0010	0.0013	0.0020	0.0026	0.0033	0.0039	
			Feed (ipm)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	TITANIUM ALLOYS Pure Titanium, Ti6Al4V, Ti6Al2Sn4Zr2Mo, Ti4Al4Mo2Sn0.5Si, Ti-6Al4V	≤ 275 Bhn or ≤ 28 HRc	215 (172-258)	RPM	6570	4380	3285	2190	1643	1314	1095
				Fr	0.0018	0.0026	0.0035	0.0053	0.0070	0.0088	0.0105
				Feed (ipm)	11.5	11.5	11.5	11.5	11.5	11.5	11.5
		≤ 350 Bhn or ≤ 38 HRc	160 (128-192)	RPM	4890	3260	2445	1630	1222	978	815
				Fr	0.0016	0.0024	0.0032	0.0048	0.0064	0.0080	0.0096
				Feed (ipm)	7.8	7.8	7.8	7.8	7.8	7.8	7.8
≤ 440 Bhn or ≤ 47 HRc	85 (68-102)	RPM	2598	1732	1299	866	649	520	433		
		Fr	0.0012	0.0018	0.0024	0.0036	0.0048	0.0060	0.0072		
		Feed (ipm)	3.1	3.1	3.1	3.1	3.1	3.1	3.1		
H TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2	≤ 475 Bhn or ≤ 50 HRc	85 (68-102)	RPM	2598	1732	1299	866	649	520	433	
			Fr	0.0008	0.0013	0.0017	0.0025	0.0034	0.0042	0.0051	
			Feed (ipm)	2.2	2.2	2.2	2.2	2.2	2.2	2.2	

Bhn (Brinell) HRc (Rockwell C) HRb (Rockwell B)
rpm = Vc x 3.82 / DC
ipm = Fr x RPM
reduce speed and feed for materials harder than listed
refer to the SGS Tool Wizard® for complete technical information (www.kyocera-sgstool.com)



Series 142MP Metric	Hardness	Vc (m/min)	DC • mm								
			3	6	8	10	12	14	16		
CARBON STEELS 1018, 1040, 1080, 1090, 10L50, 1140, 1212, 12L15, 1525, 1536	≤ 175 Bhn or ≤ 7 HRc	130	RPM	13733	6867	5150	4120	3433	2943	2575	
		(104-155)	Fr	0.104	0.207	0.276	0.345	0.414	0.483	0.552	
			Feed (mm/min)	1422	1422	1422	1422	1422	1422	1422	
	≤ 275 Bhn or ≤ 28 HRc	116	RPM	12279	6140	4605	3684	3070	2631	2302	
		(93-139)	Fr	0.093	0.186	0.248	0.310	0.372	0.434	0.496	
			Feed (mm/min)	1143	1143	1143	1143	1143	1143	1143	
	≤ 425 Bhn or ≤ 45 HRc	67	RPM	7109	3555	2666	2133	1777	1523	1333	
		(54-80)	Fr	0.079	0.157	0.210	0.262	0.314	0.367	0.419	
			Feed (mm/min)	559	559	559	559	559	559	559	
	ALLOY STEELS 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100	≤ 275 Bhn or ≤ 28 HRc	101	RPM	10664	5332	3999	3199	2666	2285	1999
			(80-121)	Fr	0.079	0.157	0.210	0.262	0.314	0.367	0.419
				Feed (mm/min)	838	838	838	838	838	838	838
≤ 375 Bhn or ≤ 40 HRc		61	RPM	6463	3231	2424	1939	1616	1385	1212	
		(49-73)	Fr	0.067	0.134	0.178	0.223	0.267	0.312	0.356	
			Feed (mm/min)	432	432	432	432	432	432	432	
≤ 425 Bhn or ≤ 45 HRc		43	RPM	4524	2262	1696	1357	1131	969	848	
		(34-51)	Fr	0.048	0.095	0.127	0.159	0.191	0.223	0.255	
			Feed (mm/min)	216	216	216	216	216	216	216	
TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2		≤ 200 Bhn or ≤ 13 HRc	44	RPM	4686	2343	1757	1406	1171	1004	879
			(35-53)	Fr	0.068	0.136	0.181	0.226	0.271	0.316	0.361
				Feed (mm/min)	318	318	318	318	318	318	318
	≤ 375 Bhn or ≤ 40 HRc	29	RPM	3070	1535	1151	921	767	658	576	
		(23-35)	Fr	0.032	0.065	0.086	0.108	0.129	0.151	0.172	
			Feed (mm/min)	99	99	99	99	99	99	99	
STAINLESS STEELS (FREE MACHINING) 303, 416, 420F, 430F, 440F	≤ 185 Bhn or ≤ 9 HRc	93	9856	9856	4928	3696	2957	2464	2112	1848	
		(74-112)	0.062	0.062	0.124	0.165	0.206	0.247	0.289	0.330	
			610	610	610	610	610	610	610	610	
	≤ 275 Bhn or ≤ 28 HRc	59	6301	6301	3151	2363	1890	1575	1350	1181	
		(48-71)	0.048	0.048	0.097	0.129	0.161	0.193	0.226	0.258	
			305	305	305	305	305	305	305	305	
	STAINLESS STEELS (DIFFICULT) 304, 316, 321, 13-8 PH, 15-5PH, 17-4 PH, Custom 450	≤ 275 Bhn or ≤ 28 HRc	46	4847	4847	2424	1818	1454	1212	1039	909
			(37-55)	0.048	0.048	0.095	0.127	0.159	0.191	0.223	0.254
				231	231	231	231	231	231	231	231
		≤ 375 Bhn or ≤ 40 HRc	34	3555	3555	1777	1333	1066	889	762	666
			(27-40)	0.043	0.043	0.086	0.114	0.143	0.171	0.200	0.229
				152	152	152	152	152	152	152	152
CAST IRONS Gray, Malleable, Ductile	≤ 220 Bhn or ≤ 19 HRc	110	RPM	11633	5816	4362	3490	2908	2493	2181	
		(88-132)	Fr	0.109	0.218	0.291	0.364	0.437	0.509	0.582	
			Feed (mm/min)	1270	1270	1270	1270	1270	1270	1270	
	≤ 260 Bhn or ≤ 26 HRc	102	RPM	10825	5413	4059	3248	2706	2320	2030	
		(82-123)	Fr	0.109	0.218	0.291	0.364	0.436	0.509	0.582	
			Feed (mm/min)	1181	1181	1181	1181	1181	1181	1181	

continued on next page

Series 142MP Metric	Hardness	Vc (m/min)	DC • mm								
			3	6	8	10	12	14	16		
N ALUMINUM ALLOYS 2017, 2024, 356, 6061, 7075	≤ 80 Bhn or ≤ 47 HRb	235	RPM	24882	12441	9331	7465	6220	5332	4665	
		(188-282)	Fr	0.117	0.235	0.313	0.391	0.470	0.548	0.626	
			Feed (mm/min)	2921	2921	2921	2921	2921	2921	2921	
	≤ 150 Bhn or ≤ 88 HRb	201	RPM	21327	10664	7998	6398	5332	4570	3999	
		(161-241)	Fr	0.119	0.238	0.318	0.397	0.476	0.556	0.635	
			Feed (mm/min)	2540	2540	2540	2540	2540	2540	2540	
	Copper Alloys Alum Bronze, C110, Muntz Brass	≤ 140 Bhn or ≤ 3 HRc	168	RPM	17773	8886	6665	5332	4443	3808	3332
			(134-201)	Fr	0.048	0.096	0.128	0.160	0.192	0.223	0.255
				Feed (mm/min)	851	851	851	851	851	851	851
		≤ 200 Bhn or ≤ 23 HRc	134	RPM	14218	7109	5332	4265	3555	3047	2666
			(107-161)	Fr	0.048	0.096	0.129	0.161	0.193	0.225	0.257
				Feed (mm/min)	686	686	686	686	686	686	686
S HIGH TEMP ALLOYS (Nickel , Cobalt, Iron Base) Inconel 601, 617, 625, Incoloy, Monel 400, Rene, Waspaloy	≤ 300 Bhn or ≤ 32 HRc	29	RPM	3070	1535	1151	921	767	658	576	
		(23-35)	Fr	0.019	0.038	0.051	0.063	0.076	0.089	0.101	
			Feed (mm/min)	58	58	58	58	58	58	58	
	≤ 400 Bhn or ≤ 43 HRc	15	RPM	1616	808	606	485	404	346	303	
		(12-18)	Fr	0.016	0.031	0.042	0.052	0.063	0.073	0.084	
			Feed (mm/min)	25	25	25	25	25	25	25	
	TITANIUM ALLOYS Pure Titanium, Ti6Al4V, Ti6Al2Sn4Zr2Mo, Ti4Al4Mo2Sn0.5Si, Ti-6Al4V	≤ 275 Bhn or ≤ 28 HRc	66	RPM	6947	3474	2605	2084	1737	1489	1303
			(52-79)	Fr	0.042	0.084	0.112	0.140	0.168	0.196	0.224
				Feed (mm/min)	292	292	292	292	292	292	292
		≤ 350 Bhn or ≤ 38 HRc	49	RPM	5170	2585	1939	1551	1293	1108	969
			(39-59)	Fr	0.038	0.077	0.102	0.128	0.153	0.179	0.204
				Feed (mm/min)	198	198	198	198	198	198	198
≤ 440 Bhn or ≤ 47 HRc	26	RPM	2747	1373	1030	824	687	589	515		
	(21-31)	Fr	0.029	0.057	0.076	0.096	0.115	0.134	0.153		
		Feed (mm/min)	79	79	79	79	79	79	79		
H TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2	≤ 475 Bhn or ≤ 50 HRc	26	RPM	2747	1373	1030	824	687	589	515	
		(21-31)	Fr	0.020	0.041	0.054	0.068	0.081	0.095	0.109	
			Feed (mm/min)	56	56	56	56	56	56	56	

(Brinell) HRc (Rockwell C) HRb (Rockwell B)
 $rpm = (Vc \times 1000) / (DC \times 3.14)$
 $mm/min = Fr \times RPM$
 reduce speed and feed for materials harder than listed
 refer to the SGS Tool Wizard® for complete technical information (www.kyocera-sgstool.com)

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