

The background of the advertisement is a photograph of the interior of a large aircraft fuselage under construction. The structure is composed of numerous curved metal ribs and stringers, creating a tunnel-like appearance. In the foreground, two precision-machined metal tools are prominently displayed. On the left is a long, slender PCD drill. On the right is a shorter, more complex tool, likely a threaded adapter or a reamer, with a hexagonal base and a central hole. The lighting is dramatic, highlighting the metallic textures and the depth of the fuselage.

# ***AEROSPACE***

## ***STRUCTURAL HOLEMAKING SOLUTIONS***

PCD DRILLS | DRILL/REAMERS | THREADED ADAPTER TOOLS  
COUNTERSINKS | DAGGER DRILLS

# CUSTOM COMES STANDARD

**GWS Tool Group is a US-based, vertically integrated manufacturer of highly engineered custom, standard, and modified standard cutting tools, primarily servicing the aerospace and defense, power generation, automotive and medical sectors.**



**We maintain the size, scale and capabilities of the largest companies in the industry, but the service-oriented disposition of a small organization.**

The Custom Comes Standard mantra is meant to encapsulate how we deliver this dynamic value proposition to the marketplace. We lead with our ability to serve as a single-source supplier for virtually all custom tooling needs, which we design and build in one of our many factories.

Furthermore, we are distinguished by our ability and propensity to purpose-build capacity around our committed end-user base and the preferred partners through which they are served with our offering. To that end, we encourage our customers and channel partners to remember that when it comes to GWS and the level of support we can provide, one's imagination is often the only limitation!

We remain committed to the expansion of this value proposition always and in all ways.

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**CUSTOM - FAST DELIVERY**

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# ULTIMATE PERFORMANCE

Premium Performance PCD 8 Facet Drill for Composites



## Series 4221 DRPCD | Straight Shank | PCD | 8 Facet

### Polycrystalline Diamond (PCD)

Superior wear resistance in highly abrasive materials

8 facet drill point

Eliminates delamination and uncut fiber in carbon fiber reinforced plastics

### Custom Options:

Custom point geometry available upon request

Drill Size			Flute Length	Shank	OAL	Part Number
Wire/Fractional	Inch	mm				
#40	0.0980	2.49	1/2	#40	2	422102
1/8	0.1250	3.17	5/8	1/8	2	422103
#30	0.1285	3.26	5/8	#30	2	422104
#21	0.1590	4.04	1.0	#21	3	422107
#20	0.1610	4.09	1.0	#20	3	422108
3/16	0.1875	4.76	1.0	3/16	3	422109
#11	0.1910	4.85	1.0	#11	3	422110
#10	0.1935	4.91	1.0	#10	3	422111
1/4	0.2500	6.35	1.0	1/4	3	422115
5/16	0.3125	7.94	1-1/2	5/16	4	422117
3/8	0.3750	9.53	1-1/2	3/8	4	422118



# PERFORMANCE

Performance Carbide Countersinks for Aircraft



## Series 4215 CT | Threaded Shank | Carbide | Piloted

### 82 Degrees

Pilot Dia.	Body Dia.	Part Number
3/32	3/8	421501
1/8	3/8	421502
5/32	3/8	421503
3/16	3/8	421504
3/32	7/16	421505
1/8	7/16	421506
5/32	7/16	421507
3/16	7/16	421508
3/32	1/2	421509
1/8	1/2	421510
5/32	1/2	421511
3/16	1/2	421512
3/32	5/8	421513
1/8	5/8	421514
5/32	5/8	421515
3/16	5/8	421516
1/4	5/8	421517

### 90 Degrees

Pilot Dia.	Body Dia.	Part Number
3/32	3/8	421518
1/8	3/8	421519
5/32	3/8	421520
3/16	3/8	421521
3/32	7/16	421522
1/8	7/16	421523
5/32	7/16	421524
3/16	7/16	421525
3/32	1/2	421526
1/8	1/2	421527
5/32	1/2	421528
3/16	1/2	421529
3/32	5/8	421530
1/8	5/8	421531
5/32	5/8	421532
3/16	5/8	421533
1/4	5/8	421534

### 100 Degrees

Pilot Dia.	Body Dia.	Part Number
3/16	3/8	421535
#11	3/8	421536
#10	3/8	421537
3/32	7/16	421538
1/8	7/16	421539
5/32	7/16	421540
3/16	7/16	421541
3/32	1/2	421542
#40	1/2	421543
1/8	1/2	421544
#30	1/2	421545
5/32	1/2	421546
#21	1/2	421547
#20	1/2	421548
3/16	1/2	421549
#11	1/2	421550
#10	1/2	421551
3/32	5/8	421552
1/8	5/8	421553
5/32	5/8	421554
3/16	5/8	421555
1/4	5/8	421556

### 130 Degrees

Pilot Dia.	Body Dia.	Part Number
3/32	3/8	421557
#40	3/8	421558
1/8	3/8	421559
#30	3/8	421560
5/32	3/8	421561
#21	3/8	421562
#20	3/8	421563
3/16	3/8	421564
#11	3/8	421565
#10	3/8	421566

Note - Threaded adapter = Type 1: 1/4-28, 5/16 hex, 1" length

### Threaded Shank Countersinks

All body diameters 3/8" through 5/8" have 1/4-28 threaded shank

### Custom Options:

Call for price and delivery on other body diameters, pilot diameters, flute configurations or alternative threaded shanks



# PERFORMANCE

Performance Carbide Dagger Drills for Aircraft



## Series 4205 DGR | Straight Shank | Carbide | Dagger Drill

Size	Diameter		Shank	OAL	Part Number
	Inch	mm			
3/32	0.0938	2.38	3/32	6	420501
3/32	0.0938	2.38	3/32	4	420502
#40	0.098	2.49	#40	6	420503
#40	0.098	2.49	#40	4	420504
1/8	0.125	3.17	1/8	6	420505
1/8	0.125	3.17	1/8	4	420506
#30	0.1285	3.26	#30	6	420507
#30	0.1285	3.26	#30	4	420508
#28	0.1405	3.56	#28	6	420509
#28	0.1405	3.56	#28	4	420510
#27	0.144	3.65	#27	6	420511
#27	0.144	3.65	#27	4	420512
#26	0.147	3.73	#26	6	420513
#26	0.147	3.73	#26	4	420514
5/32	0.1562	3.97	5/32	6	420515
5/32	0.1562	3.97	5/32	4	420516
#21	0.159	4.04	#21	6	420517
#21	0.159	4.04	#21	4	420518
#20	0.161	4.09	#20	6	420519
#20	0.161	4.09	#20	4	420520
3/16	0.1875	4.76	3/16	6	420521
3/16	0.1875	4.76	3/16	4	420522
#11	0.191	4.85	#11	6	420523
#11	0.191	4.85	#11	4	420524
#10	0.1935	4.91	#10	6	420525
#10	0.1935	4.91	#10	4	420526
#9	0.196	4.98	#9	6	420527
#9	0.196	4.98	#9	4	420528
#8	0.199	5.05	#8	6	420529
#8	0.199	5.05	#8	4	420530
1/4	0.25	6.35	1/4	6	420531
1/4	0.25	6.35	1/4	4	420532
5/16	0.3125	7.94	5/16	6	420533
5/16	0.3125	7.94	5/16	4	420534
3/8	0.375	9.52	3/8	6	420535
3/8	0.375	9.52	3/8	4	420536

For strand free, accurate holes in laminate composite and graphite material

### Custom Options:

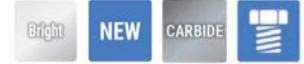
For sizes not shown please contact us for availability

CVD Diamond coating available upon request



# PERFORMANCE

Performance Carbide Dagger Drills for Aircraft



Series 4206		DGRT   Threaded Shank   Carbide   Dagger Drill			
Diameter			Shank	OAL	Part Number
Size	Inch	mm			
3/32	0.0938	2.38	3/32	2.5	420601
3/32	0.0938	2.38	3/32	1.5	420602
#40	0.098	2.49	#40	2.5	420603
#40	0.098	2.49	#40	1.5	420604
1/8	0.125	3.17	1/8	2.5	420605
1/8	0.125	3.17	1/8	1.5	420606
#30	0.1285	3.26	#30	2.5	420607
#30	0.1285	3.26	#30	1.5	420608
#28	0.1405	3.56	#28	2.5	420609
#28	0.1405	3.56	#28	1.5	420610
#27	0.144	3.65	#27	2.5	420611
#27	0.144	3.65	#27	1.5	420612
#26	0.147	3.73	#26	2.5	420613
#26	0.147	3.73	#26	1.5	420614
5/32	0.1562	3.97	5/32	2.5	420615
5/32	0.1562	3.97	5/32	1.5	420616
#21	0.159	4.04	#21	1.5	420617
#21	0.159	4.04	#21	2.5	420618
#20	0.161	4.09	#20	1.5	420619
#20	0.161	4.09	#20	2.5	420620
3/16	0.1875	4.76	3/16	1.5	420621
3/16	0.1875	4.76	3/16	2.5	420622
#11	0.191	4.85	#11	1.5	420623
#11	0.191	4.85	#11	2.5	420624
#10	0.1935	4.91	#10	1.5	420625
#10	0.1935	4.91	#10	2.5	420626
#9	0.196	4.98	#9	1.5	420627
#9	0.196	4.98	#9	2.5	420628
#8	0.199	5.05	#8	1.5	420629
#8	0.199	5.05	#8	2.5	420630
1/4	0.25	6.35	1/4	1.5	420631
1/4	0.25	6.35	1/4	2.5	420632
5/16	0.3125	7.94	5/16	1.5	420633
5/16	0.3125	7.94	5/16	2.5	420634
3/8	0.375	9.52	3/8	1.5	420635
3/8	0.375	9.52	3/8	4	420636

### Threaded Shank

For strand free, accurate holes in laminate composite and graphite material  
 Avoids delamination and controls depth in hand held operation

### Custom Options:

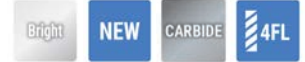
CVD Diamond coating available upon request



Note: Threaded adapter = Type 1: 1/4-28, 5/16 hex, 1" length

# PERFORMANCE

Performance Carbide Drill/Reamers for Aircraft



## Series 4207 DRM | Straight Shank | Carbide | Drill/Reamer

Drill / Reamer Size			Flute Length	Shank	OAL	Part Number
Fractional	Inch	mm				
3/32	0.0938	2.38	1.0	3/32	6	420701
3/32	0.0938	2.38	1.0	3/32	4	420702
#40	0.0980	2.49	1.0	#40	6	420703
#40	0.0980	2.49	1.0	#40	4	420704
1/8	0.1250	3.17	1.5	1/8	6	420705
1/8	0.1250	3.17	1.0	1/8	4	420706
#30	0.1285	3.26	1.5	#30	6	420707
#30	0.1285	3.26	1.0	#30	4	420708
5/32	0.1562	3.97	1.5	5/32	6	420709
5/32	0.1562	3.97	1.0	5/32	4	420710
#21	0.1590	4.04	1.5	#21	6	420711
#21	0.1590	4.04	1.0	#21	4	420712
#20	0.1610	4.09	1.5	#20	6	420713
#20	0.1610	4.09	1.0	#20	4	420714
3/16	0.1875	4.76	1.5	3/16	6	420715
3/16	0.1875	4.76	1.0	3/16	4	420716
#11	0.1910	4.85	1.5	#11	6	420717
#11	0.1910	4.85	1.0	#11	4	420718
#10	0.1935	4.91	1.5	#10	6	420719
#10	0.1935	4.91	1.0	#10	4	420720
#9	0.1960	4.98	1.5	#9	6	420721
#9	0.1960	4.98	1.0	#9	4	420722
#8	0.1990	5.05	1.5	#8	6	420723
#8	0.1990	5.05	1.0	#8	4	420724
1/4	0.2500	6.35	1.5	1/4	6	420725
1/4	0.2500	6.35	1.0	1/4	4	420726
5/16	0.3125	7.94	1.5	5/16	6	420727
5/16	0.3125	7.94	1.0	5/16	4	420728
3/8	0.3750	9.52	1.5	3/8	6	420729
3/8	0.3750	9.52	1.0	3/8	4	420730

For strand free, accurate holes in laminate composite and graphite material

### Custom Options:

For sizes not shown please contact us for availability

CVD Diamond coating available upon request





# PERFORMANCE

Performance Carbide Drill/Reamers for Aircraft



## Series 4208 DRMT | Threaded Shank | Carbide | Drill/Reamer

Drill / Reamer Size			Flute Length	Shank	OAL	Part Number
Fractional	Inch	mm				
3/32	0.0938	2.38	1.0	3/32	2.5	420801
3/32	0.0938	2.38	1.0	3/32	1.5	420802
#40	0.0980	2.49	1.0	#40	2.5	420803
#40	0.0980	2.49	1.0	#40	1.5	420804
1/8	0.1250	3.17	1.5	1/8	2.5	420805
1/8	0.1250	3.17	1.0	1/8	1.5	420806
#30	0.1285	3.26	1.5	#30	2.5	420807
#30	0.1285	3.26	1.0	#30	1.5	420808
5/32	0.1562	3.97	1.5	5/32	2.5	420809
5/32	0.1562	3.97	1.0	5/32	1.5	420810
#21	0.1590	4.04	1.5	#21	2.5	420811
#21	0.1590	4.04	1.0	#21	1.5	420812
#20	0.1610	4.09	1.5	#20	2.5	420813
#20	0.1610	4.09	1.0	#20	1.5	420814
3/16	0.1875	4.76	1.5	3/16	2.5	420815
3/16	0.1875	4.76	1.0	3/16	1.5	420816
#11	0.1910	4.85	1.5	#11	2.5	420817
#11	0.1910	4.85	1.0	#11	1.5	420818
#10	0.1935	4.91	1.5	#10	2.5	420819
#10	0.1935	4.91	1.0	#10	1.5	420820
#9	0.1960	4.98	1.5	#9	2.5	420821
#9	0.1960	4.98	1.0	#9	1.5	420822
#8	0.1990	5.05	1.5	#8	2.5	420823
#8	0.1990	5.05	1.0	#8	1.5	420824
1/4	0.2500	6.35	1.5	1/4	2.5	420825
1/4	0.2500	6.35	1.0	1/4	1.5	420826
5/16	0.3125	7.94	1.5	5/16	2.5	420827
5/16	0.3125	7.94	1.0	5/16	1.5	420828
3/8	0.3750	9.52	1.5	3/8	2.5	420829
3/8	0.3750	9.52	1.0	3/8	1.5	420830

### Threaded Shank

Hand held drilling and reaming of composites and graphite in one operation

### Custom Options:

CVD Diamond coating available upon request

Note - Threaded adapter = Type 1: 1/4-28, 5/16 hex, 1" length



# PERFORMANCE

Performance Carbide 4 Facet Drills for Aircraft



## Series 4210 DRS | Straight Shank | Carbide | 4 Facet

### 4 Facet Aircraft Drill

For strand free, accurate holes in laminate composite and graphite material

### Custom Options:

For sizes not shown please contact us for availability

CVD Diamond coating available upon request

Drill Diameter			# of Flutes	Flute Length	Shank	OAL	Part Number
Fractional	Inch	mm					
3/32	0.0938	2.38	2	7/8	3/32	2-1/8	421001
#40	0.0980	2.49	2	7/8	#40	2-1/8	421002
1/8	0.1250	3.17	2	7/8	1/8	2-1/8	421003
#30	0.1285	3.26	2	1-1/8	#30	2-1/8	421004
#26	0.1470	3.73	2	1-1/8	#26	2-1/8	421005
5/32	0.1562	3.97	2	1-1/8	5/32	2-1/8	421006
#21	0.1590	4.04	2	1-1/8	#21	2-1/8	421007
#20	0.1610	4.09	2	1-1/8	#20	2-1/8	421008
3/16	0.1875	4.76	2	1-1/8	3/16	2-1/8	421009
#11	0.1910	4.85	2	1-1/8	#11	2-1/8	421010
#10	0.1935	4.91	2	1-1/8	#10	2-1/8	421011
#9	0.1960	4.98	2	1-1/8	#9	2 1/8	421012
#8	0.1990	5.05	2	1-1/8	#8	2-1/8	421013
7/32	0.2188	5.56	2	1-1/8	7/32	2-1/8	421014
1/4	0.2500	6.35	2	1-1/8	1/4	2-1/8	421015
F	0.2570	6.53	2	1-1/8	F	2-1/8	421016
5/16	0.3125	7.94	2	1-1/8	5/16	2-1/8	421017
3/8	0.3750	9.53	2	1-1/8	3/8	2-1/8	421018



# PERFORMANCE

Performance Carbide 4 Facet Drills for Aircraft



## Series 4211 DRTS | Threaded Shank | Carbide | 4 Facet

Drill Diameter			# of Flutes	Flute Length	Shank	OAL	Part Number
Fractional	Inch	mm					
3/32	0.0938	2.38	2	7/8	3/32	2-1/8	421101
#40	0.0980	2.49	2	7/8	#40	2-1/8	421102
1/8	0.1250	3.17	2	7/8	1/8	2-1/8	421103
#30	0.1285	3.26	2	1-1/8	#30	2-1/8	421104
#26	0.1470	3.73	2	1-1/8	#26	2-1/8	421105
5/32	0.1562	3.97	2	1-1/8	5/32	2-1/8	421106
#21	0.1590	4.04	2	1-1/8	#21	2-1/8	421107
#20	0.1610	4.09	2	1-1/8	#20	2-1/8	421108
3/16	0.1875	4.76	2	1-1/8	3/16	2-1/8	421109
#11	0.1910	4.85	2	1-1/8	#11	2-1/8	421110
#10	0.1935	4.91	2	1-1/8	#10	2-1/8	421111
#9	0.1960	4.98	2	1-1/8	#9	2-1/8	421112
#8	0.1990	5.05	2	1-1/8	#8	2-1/8	421113
7/32	0.2188	5.56	2	1-1/8	7/32	2-1/8	421114
1/4	0.2500	6.35	2	1-1/8	1/4	2-1/8	421115
F	0.2570	6.53	2	1-1/8	F	2-1/8	421116
5/16	0.3125	7.94	2	1-1/8	5/16	2-1/8	421117
3/8	0.3750	9.53	2	1-1/8	3/8	2-1/8	421118

### Threaded Shank 4 Facet Aircraft Drill

For strand free, accurate holes in laminate composite and graphite material

### Custom Options:

For sizes not shown please contact us for availability

CVD Diamond coating available upon request

Note - Threaded adapter = Type 1: 1/4-28 , 5/16 hex, 1" length



# PERFORMANCE

Performance HSS Reverse Spot Facers for Aircraft



## Series 4219 RSF | HSS Body | HSS Pilots

### HSS Reverse Spot Facers

Standard Radius .030"

HSS pilots are 6" OAL, other sizes available upon request

### Custom Options:

Other radii available upon request



Diameter	Pilot Hole	Radius	Part Number
1/4	3/32	0.030	421901
1/4	1/8	0.030	421902
5/16	3/32	0.030	421903
5/16	1/8	0.030	421904
3/8	5/32	0.030	421905
3/8	1/8	0.030	421906
3/8	3/16	0.030	421907
7/16	1/8	0.030	421908
7/16	5/32	0.030	421909
7/16	3/16	0.030	421910
1/2	3/16	0.030	421911
1/2	1/4	0.030	421912
9/16	3/16	0.030	421913
9/16	1/4	0.030	421914
5/8	3/16	0.030	421915
5/8	1/4	0.030	421916
5/8	5/16	0.030	421917
11/16	1/4	0.030	421918
11/16	5/16	0.030	421919
3/4	1/4	0.030	421920
3/4	5/16	0.030	421921
3/4	3/8	0.030	421922
7/8	5/16	0.030	421923
7/8	3/8	0.030	421924
1	5/16	0.030	421925
1	3/8	0.030	421926
1	1/2	0.030	421927
1-1/4	3/8	0.030	421928
1-1/4	1/2	0.030	421929

Pilot Diameter	OAL	Part Number
3/32	6	422040
1/8	6	422041
5/32	6	422042
3/16	6	422043
1/4	6	422044
5/16	6	422045
3/8	6	422046
1/2	6	422047

# PERFORMANCE

Performance Carbide Reverse Spot Facers for Aircraft



## Series 4220 RSF-SC | Carbide Body | HSS Pilots

Diameter	Pilot Hole	Radius	Part Number
1/4	3/32	0.030	422001
1/4	1/8	0.030	422002
5/16	3/32	0.030	422003
5/16	1/8	0.030	422004
3/8	5/32	0.030	422005
3/8	1/8	0.030	422006
3/8	3/16	0.030	422007
7/16	1/8	0.030	422008
7/16	5/32	0.030	422009
7/16	3/16	0.030	422010
1/2	3/16	0.030	422011
1/2	1/4	0.030	422012
9/16	3/16	0.030	422013
9/16	1/4	0.030	422014
5/8	3/16	0.030	422015
5/8	1/4	0.030	422016
5/8	5/16	0.030	422017
11/16	1/4	0.030	422018
11/16	5/16	0.030	422019
3/4	1/4	0.030	422020
3/4	5/16	0.030	422021
3/4	3/8	0.030	422022
7/8	5/16	0.030	422023
7/8	3/8	0.030	422024
1	5/16	0.030	422025
1	3/8	0.030	422026
1	1/2	0.030	422027
1-1/4	3/8	0.030	422028
1-1/4	1/2	0.030	422029

Pilot Diameter	OAL	Part Number
3/32	6	422040
1/8	6	422041
5/32	6	422042
3/16	6	422043
1/4	6	422044
5/16	6	422045
3/8	6	422046
1/2	6	422047

### Carbide Reverse Spot Facers

Standard Radius .030"  
HSS pilots are 6" OAL,  
other sizes available  
upon request

### Custom Options:

Other radii available  
upon request



# PERFORMANCE

Performance Brazed Carbide Rivet Shavers for Aircraft



## Series 4218 HT | Threaded Shank | Brazed Carbide

### Custom Options:

Other sizes and thread sizes available upon request

Body Diameter	Thread	Part Number
5/16	1/4-28	421801
3/8	1/4-28	421802
7/16	1/4-28	421803
1/2	1/4-28	421804
9/16	1/4-28	421805
5/8	1/4-28	421806
3/4	1/4-28	421807
7/8	1/4-28	421808
1	1/4-28	421809

Note - Threaded adapter = Type 1: 1/4-28 , 5/16 hex, 1" length





## CARBIDE 8 FACET DRILLS

- Avoids delamination in composite and graphite materials
- See numbering system to the right to order special diameters and flute lengths

Example:

**DR8F-1285-1.5-4**

Drill Diameter      Flute Length      OAL



## CARBIDE BRAD POINT "W" POINT DRILLS

- Brad point drills work well in plastics, nylon, fiber, fiberglass, and many other man made materials
- See numbering system to the right to order special diameters and flute lengths

Example:

**DRWP-1285-1.5-4**

Drill Diameter      Flute Length      OAL



## CARBIDE NUT PLATE DRILLS

- 8-32 Threaded Shank Standard

Part #	Drill Size	Flute Length
DRNUT-098-420	.098	.420
DRNUT-098-560	.098	.560



## CARBIDE PILOTED REAMERS

- Finish an existing hole to a precise diameter
- See numbering system to the right to order reamers

Example:

**RMP-1562-1285-1.5-4**

Major Diameter      Pilot Diameter      Flute Length      OAL



### CARBIDE PILOTED CORE DRILLS

- Finish drilling an existing hole
- See numbering system to the right to order drills

Example:

**DRCD-1562-1285-1.5-4**

Major Diameter      Pilot Diameter      Flute Length      OAL



### CARBIDE PARABOLIC DRILLS

- Improves chip evacuation in deep hole drilling of non-ferrous materials
- See numbering system to the right to order drills

Example:

**DRP-1562-1.5-4**

Drill Diameter      Flute Length      OAL



### CARBIDE DOUBLE MARGIN DRILLS

- Superior finish in drilled holes
- See numbering system to the right to order drills

Example:

**DRDM-1562-1.5-4**

Drill Diameter      Flute Length      OAL



### CARBIDE THREADED SHANK REAMERS

- Accurate hole diameters in non-ferrous materials at controlled depths
- See numbering system to the right to order reamers

Example:

**RMTS-1562-1285-1.5-4**

Major Diameter      Pilot Diameter      Flute Length      OAL





## CARBIDE COMBINATION DRILL/COUNTERSINKS

- Combine Drill/Countersink into one operation
- Many different sizes and angles available
- Contact us for pricing and availability

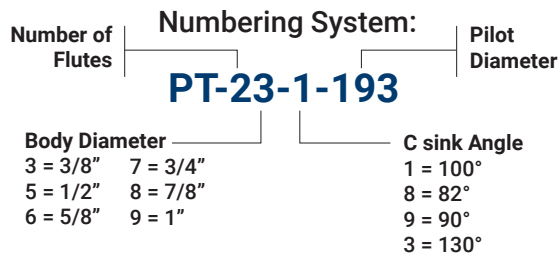
## PCD TIPPED COUNTERSINKS

- Superior wear resistance in highly abrasive materials
- 2 flute

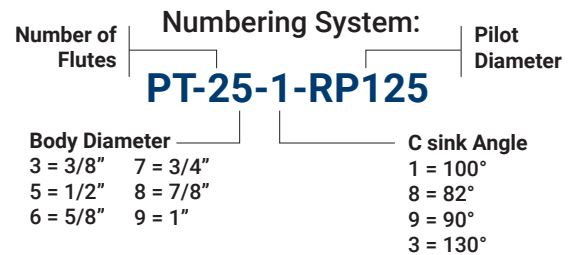
Integral Pilot Shown



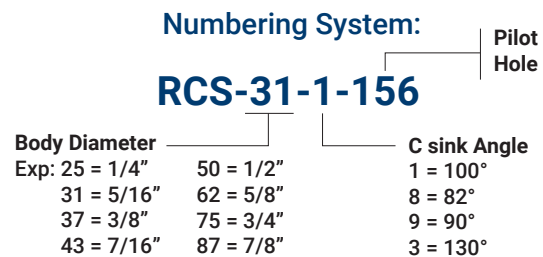
### INTEGRAL PILOT



### REMOVABLE PILOT



## CARBIDE REVERSE COUNTERSINKS



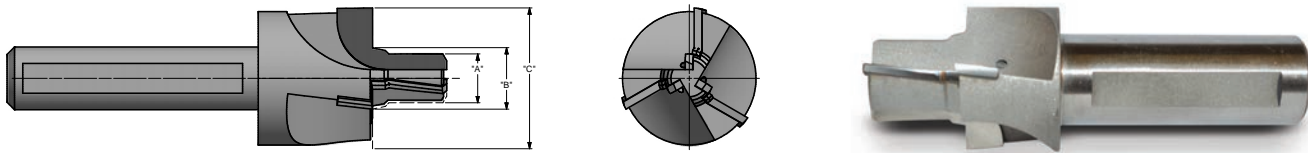
## HSS THREADED SHANK COUNTERSINKS

- All body diameters 3/8" through 5/8" have 1/4-28 threaded shank
- All stock standard countersinks in the charts below have 3 flutes
- Call for price and delivery on other body diameters, pilot diameters, flute configurations or alternative threaded shanks



82° HSS Countersinks			100° HSS Countersinks			130° HSS Countersinks		
Part Number	Body Dia	Pilot Dia	Part Number	Body Dia	Pilot Dia	Part Number	Body Dia	Pilot Dia
HT-33-8-094	3/8	3/32	HT-33-1-094	3/8	3/32	HT-33-3-094	3/8	3/32
HT-33-8-125	3/8	1/8	HT-33-1-098	3/8	#40	HT-33-3-098	3/8	#40
HT-33-8-156	3/8	5/32	HT-33-1-125	3/8	1/8	HT-33-3-125	3/8	1/8
HT-33-8-187	3/8	3/16	HT-33-1-128	3/8	#30	HT-33-3-128	3/8	#30
HT-34-8-094	7/16	3/32	HT-33-1-156	3/8	5/32	HT-33-3-156	3/8	5/32
HT-34-8-125	7/16	1/8	HT-33-1-159	3/8	#21	HT-33-3-159	3/8	#21
HT-34-8-156	7/16	5/32	HT-33-1-161	3/8	#20	HT-33-3-161	3/8	#20
HT-34-8-187	7/16	3/16	HT-33-1-187	3/8	3/16	HT-33-3-187	3/8	3/16
HT-35-8-094	1/2	3/32	HT-33-1-191	3/8	#11	HT-33-3-191	3/8	#11
HT-35-8-125	1/2	1/8	HT-33-1-193	3/8	#10	HT-33-3-193	3/8	#10
HT-35-8-156	1/2	5/32	HT-34-1-094	7/16	3/32	HT-35-3-098	1/2	#40
HT-35-8-187	1/2	3/16	HT-34-1-125	7/16	1/8	HT-35-3-125	1/2	1/8
HT-36-8-094	5/8	3/32	HT-34-1-156	7/16	5/32	HT-35-3-128	1/2	#30
HT-36-8-125	5/8	1/8	HT-34-1-187	7/16	3/16	HT-35-3-156	1/2	5/32
HT-36-8-156	5/8	5/32	HT-35-1-094	1/2	3/32	HT-35-3-159	1/2	#21
HT-36-8-187	5/8	3/16	HT-35-1-098	1/2	#40	HT-35-3-161	1/2	#20
HT-36-8-250	5/8	1/4	HT-35-1-125	1/2	1/8	HT-35-3-187	1/2	3/16
HT-36-8-312	5/8	5/16	HT-35-1-128	1/2	#30	HT-35-3-191	1/2	#11
<b>90° HSS Countersinks</b>			HT-35-1-156	1/2	5/32	HT-35-3-193	1/2	#10
<b>Part Number</b>	<b>Body Dia</b>	<b>Pilot Dia</b>	HT-35-1-159	1/2	#21			
HT-33-9-094	3/8	3/32	HT-35-1-161	1/2	#20			
HT-33-9-125	3/8	1/8	HT-35-1-187	1/2	3/16			
HT-33-9-156	3/8	5/32	HT-35-1-191	1/2	#11			
HT-33-9-187	3/8	3/16	HT-35-1-193	1/2	#10			
HT-34-9-094	7/16	3/32	HT-36-1-094	5/8	3/32			
HT-34-9-125	7/16	1/8	HT-36-1-125	5/8	1/8			
HT-34-9-156	7/16	5/32	HT-36-1-156	5/8	5/32			
HT-34-9-187	7/16	3/16	HT-36-1-187	5/8	3/16			
HT-35-9-094	1/2	3/32	HT-36-1-250	5/8	1/4			
HT-35-9-125	1/2	1/8	HT-36-1-312	5/8	5/16			
HT-35-9-156	1/2	5/32						
HT-35-9-187	1/2	3/16						
HT-36-9-094	5/8	3/32						
HT-36-9-125	5/8	1/8						
HT-36-9-156	5/8	5/32						
HT-36-9-187	5/8	3/16						
HT-36-9-250	5/8	1/4						
HT-36-9-312	5/8	5/16						

## CARBIDE-TIPPED PORT TOOLS



### SAE J1926/MS16142 (SERIES PC) WITH COOLANT THRU

CARBIDE TIPPED					
Part Number	Port Size	Pre-Drill Size	Dia A	Dia B	Dia C
CTPC-312-24	5/16-24	.25	.272	.360	.669
CTPC-375-24	3/8-24	.31	.335	.423	.748
CTPC-438-20	7/16-20	.37	.389	.490	.827
CTPC-500-20	1/2-20	.44	.452	.553	.906
CTPC-562-18	9/16-18	.48	.509	.618	.984
CTPC-750-16	3/4-16	.67	.689	.813	1.181
CTPC-875-14	7/8-14	.78	.806	.945	1.339
CTPC-1.062-12	1 1/16-12	.95	.981	1.150	1.614
CTPC-1.188-12	1 3/16-12	1.09	1.106	1.276	1.772
CTPC-1.312-12	1 5/16-12	1.21	1.231	1.400	1.929
CTPC-1.625-12	1 5/8-12	1.53	1.544	1.715	2.283
CTPC-1.875-12	1 7/8-12	1.78	1.794	1.965	2.559

### SAE AS5202/MS33649 (SERIES PC) WITH COOLANT THRU

CARBIDE TIPPED					
Part Number	Port Size	Pre-Drill Size	Dia A	Dia B	Dia C
CTPC-375-24-649	3/8-24	.31	.335	.390	.500
CTPC-438-24-649	7/16-20	.37	.389	.454	.562
CTPC-500-20-649	1/2-20	.43	.452	.517	.625
CTPC-562-18-649	9/16-18	.49	.515	.580	.688
CTPC-625-18-649	5/8-18	.55	.578	.643	.750
CTPC-750-16-649	3/4-16	.66	.689	.769	.875
CTPC-875-14-649	7/8-14	.77	.797	.896	1.000
CTPC-1.062-12-649	1 1/16-12	.96	.981	1.086	1.234
CTPC-1.188-12-649	1 3/16-12	1.08	1.106	1.211	1.562
CTPC-1.312-12-649	1 5/16-12	1.21	1.231	1.336	1.688
CTPC-1.625-12-649	1 5/8-12	1.52	1.544	1.648	2.000
CTPC-1.875-12-649	1 7/8-12	1.77	1.794	1.898	2.050



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