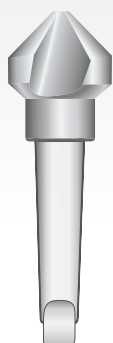
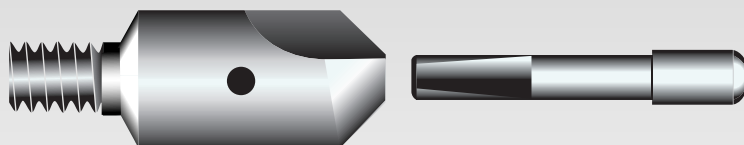
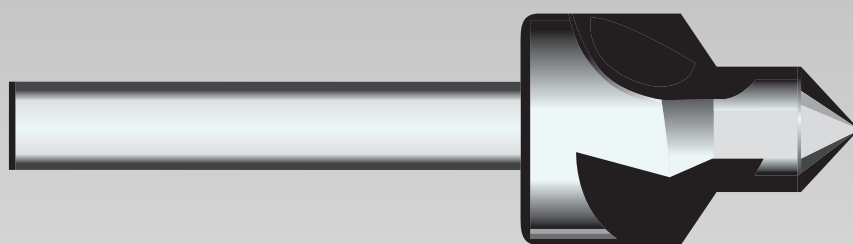




Robert Charles

High Performance Cutting Tools

Quality Countersinks for Aerospace, Marine, Automotive and General Engineering



Manufactured by

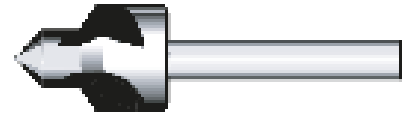


DAVID RICHARDS ENGINEERING

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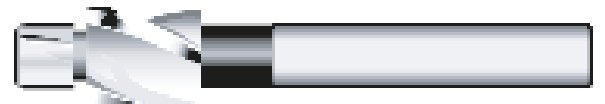
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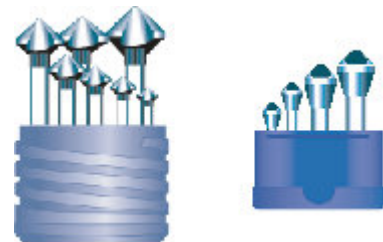


24 5760 Counterbores



25 5770 Imperial Counterbores
(Close Fit, +1/64 & +1/32)

26 Countersink Sets Contents



About Us

David Richards Engineering Ltd., are the sole manufacturer of the **Robert Charles** brand of countersinks and counterbores which, over the past 45 years, have earned their enviable worldwide reputation in the demanding aerospace, automotive, marine and general engineering industries.

Our high level of customer service and product quality is reinforced by our ISO 9001 registration which helps maintain our position as a leading manufacturer and supplier in this highly competitive market.

Material

We only use M35 and M42 high speed steel to produce our quality products.

The addition of cobalt in M35 (5%) and M42 (8%), greatly enhances performance and tool life when compared to standard high speed steel.

We also offer a range of coatings for more demanding applications (*See Available Coatings section for more details*)

Special Requirements

Another large part of our service is manufacturing to customer requirements with products ranging from small back cutters and spot facing tools for the aerospace industry, to 100mm diameter countersinks for the rail industry.

The manufacture of specialist cutting tools in either HSS Co or carbide can often be achieved from 3 to 6 weeks. We pride ourselves in being able to produce bespoke cutting tools from limited information, be that a hand sketch or a finished component drawing.

Available Coatings

Coating our HSS Cobalt tools should always be considered before making the step up to Carbide. Carbide is more expensive and will usually have a longer lead time. We have had great success with customer trials using Hi-Pulse Hard and Hi-Pulse Power. The coatings below are available on our full range. Please contact us for pricing.

Titanium Nitride (TiN)

Colour: Gold.

Improves tool life and lubricity in general machining applications.

Hi-Pulse Hard

Colour: Copper/Bronze.

Will improve tool life when cutting hardend steels or titanium. HPH perfectly combines the high temperature of a silicon-enhanced coating with the excellent adhesion of HIPIMS technology. HPH demonstrates this superior combination in machining hard materials and high temperature applications.

Hi-Pulse Power

Colour: Anthracite.

The HIPIMS process gives HPP unparalleled coating adhesion. The high hardness, toughness and oxidation temperature of HPP makes it ideal for machining hardened steels, superalloys and other difficult to machine materials in either wet or dry conditions.

Because it has better adhesion than other coatings, HPP offers excellent wear resistance and release in high temperature settings.



Regrind Service

Our regrind service is a cost effective way to get more from worn out countersinks (of any brand) and end mills before replacing with new.

Tools returned to us that are eligible for regrinding will usually be completed within 3 days. It is possible that some tools will be rejected for regrinding if they are too worn or damaged.

Cancellations and Returns

For cutting tools requiring special manufacture, cancellation will not generally be permitted once the manufacture process has commenced.

To return standard products, please contact us within 14 days of delivery to obtain authorisation.

A restocking fee may be applied for tools that are no longer required and returned due to customer error.

Piloted Countersinks



Microstop Countersinks

(removable pilot)



Microstop Countersinks

(integral pilot)



Back Cutters

(available with bayonet, threaded and pin type pilots)

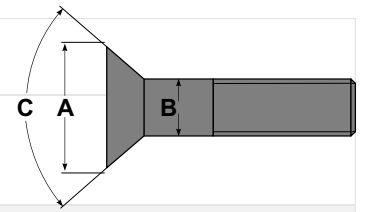


Many other tools available on request

- Router cutters
- Rivet mills
- Back spot facers
- Back spot countersinks
- Rad cutters
- Drills and Reamers
- Diamond coated tools
- Microstop cages



SCREW SIZE CHART



ISO Metric Cap Screws

Screw Size	A mm	B mm	C mm
M3	6.72	3.00	90°
M4	8.96	4.00	90°
M5	11.20	5.00	90°
M6	13.44	5.00	90°
M8	17.92	8.00	90°
M10	22.40	10.00	90°
M12	26.88	12.00	90°
M14	30.24	10.00	90°

BA, BSW & BSF Screws

Screw Size	A mm	B mm	C mm
8BA	0.164 (4.16)	0.0866	82°
6BA	0.211 (5.35)	0.1102	82°
5BA	0.239 (6.07)	0.1260	82°
4BA	0.269 (6.83)	0.1417	82°
3BA	0.307 (7.80)	0.1614	82°
2BA	0.351 (8.90)	0.1850	82°
1BA	0.396 (10.05)	0.2087	82°
0BA	0.449 (11.40)	0.2362	82°
1/8	0.239 (6.07)	0.1250	82°
3/16	0.356 (9.04)	0.1875	82°
1/4	0.475 (12.06)	0.2500	82°
5/16	0.594 (15.08)	0.3125	82°
3/8	0.712 (18.08)	0.3750	82°
7/16	0.831 (21.15)	0.4375	82°
1/2	0.950 (24.13)	0.5000	82°
9/16	1.096 (27.15)	0.5625	82°
5/8	1.187 (30.15)	0.6250	82°
3/4	1.425 (36.20)	0.7500	82°

UNC & UNF Screws

Screw Size	A mm	B mm	C mm
No.0	0.138 (3.50)	0.0600	82°
No.1	0.168 (4.27)	0.0730	82°
No.2	0.197 (5.00)	0.0860	82°
No.3	0.226 (5.74)	0.0990	82°
No.4	0.255 (6.47)	0.1120	82°
No.5	0.281 (7.13)	0.1250	82°
No.6	0.307 (7.80)	0.1380	82°
No.8	0.359 (9.11)	0.1640	82°
No.10	0.411 (10.40)	0.1900	82°
1/4	0.531 (13.40)	0.2500	82°
5/16	0.656 (16.66)	0.3125	82°
3/8	0.781 (19.83)	0.3750	82°
7/16	0.844 (21.43)	0.4375	82°
1/2	0.935 (23.17)	0.5000	82°
5/8	1.188 (30.17)	0.6250	82°
3/4	1.438 (36.52)	0.7500	82°
7/8	1.688 (42.87)	0.8750	82°
1	1.938 (49.22)	1.0000	82°

IMPERIAL PILOTED COUNTERSINKS

M35 – HSS – E 5% Cobalt

3 Flutes - Integral Pilot - Straight Shank



5855 x 82° / 90° / 100° / 120°

Product Code	Pilot Ø	Inclusive Angle	Body Ø	Shank Ø	Overall Length	Shank Length
5855-3/32-82	3/32	82°	0.190	3/16	2 1/2	1 3/4
5855-3/32-90	3/32	90°	0.170	3/16	2 1/2	1 3/4
5855-3/32-100	3/32	100°	0.190	3/16	2 1/2	1 3/4
5855-3/32-120	3/32	120°	0.190	3/16	2 1/2	1 3/4
5855-1/8-82	1/8	82°	0.252	3/16	2 1/2	1 3/4
5855-1/8-90	1/8	90°	0.252	3/16	2 1/2	1 3/4
5855-1/8-100	1/8	100°	0.252	3/16	2 1/2	1 3/4
5855-1/8-120	1/8	120°	0.252	3/16	2 1/2	1 3/4
5855-5/32-82	5/32	82°	0.340	3/16	2 1/2	1 3/4
5855-5/32-90	5/32	90°	0.275	3/16	2 1/2	1 3/4
5855-5/32-100	5/32	100°	0.340	3/16	2 1/2	1 3/4
5855-5/32-120	5/32	120°	0.340	3/16	2 1/2	1 3/4
5855-3/16-82	3/16	82°	0.405	3/16	2 1/2	1 3/4
5855-3/16-90	3/16	90°	0.360	3/16	2 1/2	1 3/4
5855-3/16-100	3/16	100°	0.405	3/16	2 1/2	1 3/4
5855-3/16-120	3/16	120°	0.405	3/16	2 1/2	1 3/4
5855-7/32-82	7/32	82°	0.440	3/16	2 1/2	1 3/4
5855-7/32-90	7/32	90°	0.440	3/16	2 1/2	1 3/4
5855-7/32-100	7/32	100°	0.440	3/16	2 1/2	1 3/4
5855-7/32-120	7/32	120°	0.440	3/16	2 1/2	1 3/4
5855-1/4-82	1/4	82°	0.530	3/16	2 1/2	1 3/4
5855-1/4-90	1/4	90°	0.470	3/16	2 1/2	1 3/4
5855-1/4-100	1/4	100°	0.530	3/16	2 1/2	1 3/4
5855-1/4-120	1/4	120°	0.530	3/16	2 1/2	1 3/4

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

IMPERIAL PILOTED COUNTERSINKS

M35 – HSS – E 5% Cobalt

3 Flutes - Integral Pilot - Straight Shank



5855 - 5844 x 90° / 100° / 120°

Product Code	Pilot Ø	Inclusive Angle	Body Ø	Shank Ø	Overall Length	Shank Length
5801	3/32	90°	3/16	3/16	2 1/2	1 3/4
5805	3/32	90°	1/4	3/16	2 1/2	1 3/4
5802	3/32	100°	3/16	3/16	2 1/2	1 3/4
5806	3/32	100°	1/4	3/16	2 1/2	1 3/4
5804	3/32	100°	3/8	3/16	2 1/2	1 3/4
5803	3/32	120°	3/16	3/16	2 1/2	1 3/4
5807	3/32	120°	1/4	3/16	2 1/2	1 3/4
5809	1/8	90°	1/4	3/16	2 1/2	1 3/4
5816	1/8	90°	5/16	3/16	2 1/2	1 3/4
5825	1/8	90°	3/8	3/16	2 1/2	1 3/4
5810	1/8	100°	1/4	3/16	2 1/2	1 3/4
5817	1/8	100°	5/16	3/16	2 1/2	1 3/4
5811	1/8	100°	3/8	3/16	2 1/2	1 3/4
5812	1/8	120°	1/4	3/16	2 1/2	1 3/4
5818	1/8	120°	5/16	3/16	2 1/2	1 3/4
5826	1/8	120°	3/8	3/16	2 1/2	1 3/4
5820	5/32	90°	5/16	3/16	2 1/2	1 3/4
5827	5/32	90°	3/8	3/16	2 1/2	1 3/4
5821	5/32	100°	5/16	3/16	2 1/2	1 3/4
5823	5/32	100°	3/8	3/16	2 1/2	1 3/4
5822	5/32	120°	5/16	3/16	2 1/2	1 3/4
5828	5/32	120°	3/8	3/16	2 1/2	1 3/4
5830	3/16	90°	3/8	3/16	2 1/2	1 3/4
5831	3/16	100°	3/8	3/16	2 1/2	1 3/4
5832	3/16	120°	3/8	3/16	2 1/2	1 3/4
5834	3/16	120°	7/16	3/16	2 1/2	1 3/4
5835	7/32	90°	7/16	3/16	2 1/2	1 3/4
5837	7/32	100°	7/16	3/16	2 1/2	1 3/4
5838	7/32	120°	7/16	3/16	2 1/2	1 3/4
5840	1/4	90°	7/16	3/16	2 1/2	1 3/4
5843	1/4	90°	1/2	3/16	2 1/2	1 3/4
5841	1/4	100°	7/16	3/16	2 1/2	1 3/4
5839	1/4	100°	1/2	3/16	2 1/2	1 3/4
5842	1/4	120°	7/16	3/16	2 1/2	1 3/4
5844	1/4	120°	1/2	3/16	2 1/2	1 3/4

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

METRIC PILOTED COUNTERSINKS

M35 – HSS – E 5% Cobalt

3 Flutes - Integral Pilot - Straight Shank



5845 x / 90° / 100° / 120°

Product Code	Pilot Ø	Inclusive Angle	Body Ø	Shank Ø	Overall Length	Shank Length
5845-2.5-90	2.5	90°	4.76	3/16	2 1/2	1 3/4
5845-2.5-100	2.5	100°	4.76	3/16	2 1/2	1 3/4
5845-2.5-120	2.5	120°	4.76	3/16	2 1/2	1 3/4
5845-3.0-90	3.0	90°	6.72	3/16	2 1/2	1 3/4
5845-3.0-100	3.0	100°	6.72	3/16	2 1/2	1 3/4
5845-3.0-120	3.0	120°	6.72	3/16	2 1/2	1 3/4
5845-3.5-90	3.5	90°	8.60	3/16	2 1/2	1 3/4
5845-3.5-100	3.5	100°	8.60	3/16	2 1/2	1 3/4
5845-3.5-120	3.5	120°	8.60	3/16	2 1/2	1 3/4
5845-4.0-90	4.0	90°	8.96	3/16	2 1/2	1 3/4
5845-4.0-100	4.0	100°	8.96	3/16	2 1/2	1 3/4
5845-4.0-120	4.0	120°	8.96	3/16	2 1/2	1 3/4
5845-5.0-90	5.0	90°	11.20	3/16	2 1/2	1 3/4
5845-5.0-100	5.0	100°	11.20	3/16	2 1/2	1 3/4
5845-5.0-120	5.0	120°	11.20	3/16	2 1/2	1 3/4
5845-6.0-90	6.0	90°	13.44	3/16	2 1/2	1 3/4
5845-6.0-100	6.0	100°	13.44	3/16	2 1/2	1 3/4
5845-6.0-120	6.0	120°	13.44	3/16	2 1/2	1 3/4
5845-8.0-90	8.0	90°	17.92	3/8	2 1/2	1 3/4
5845-8.0-100	8.0	100°	17.92	3/8	2 1/2	1 3/4
5845-8.0-120	8.0	120°	17.92	3/8	2 1/2	1 3/4
5845-10.0-90	10.0	90°	22.40	3/8	2 1/2	1 3/4
5845-10.0-100	10.0	100°	22.40	3/8	2 1/2	1 3/4
5845-10.0-120	10.0	120°	22.40	3/8	2 1/2	1 3/4
5845-12.0-90	10.0	90°	26.88	3/8	2 1/2	1 3/4
5845-12.0-100	10.0	100°	26.88	3/8	2 1/2	1 3/4
5845-12.0-120	10.0	120°	26.88	3/8	2 1/2	1 3/4

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

PILOTED MICROSTOP COUNTERSINKS

M42 – HSS – E 8% Cobalt

3 Flutes - Integral Pilot - Threaded Shank



90° / 100° / 120° *(Cages available on request)*

Product Code	Pilot Ø	Cutter Ø	Inclusive Angle	Thread	Radius between Pilot & Flute
S2.38-90-10	3/32	10.00	90°	M6 x 1	0.010 - 0.015
S3.17-90-10	1/8	10.00	90°	M6 x 1	0.015 - 0.020
S3.96-90-10	5/32	10.00	90°	M6 x 1	0.020 - 0.025
S4.76-90-10	3/16	10.00	90°	M6 x 1	0.020 - 0.025
S4.76-90-14	3/16	14.00	90°	M8 x 1	0.025 - 0.030
S6.35-90-14	1/4	14.00	90°	M8 x 1	0.025 - 0.030
S7.94-90-17	5/16	17.00	90°	M8 x 1	0.035 - 0.040
S9.52-90-21	3/8	21.00	90°	M8 x 1	0.035 - 0.040
S2.38-100-10	3/32	10.00	100°	M6 x 1	0.010 - 0.015
S3.17-100-10	1/8	10.00	100°	M6 x 1	0.015 - 0.020
S3.96-100-10	5/32	10.00	100°	M6 x 1	0.020" - 0.025
S4.76-100-10	3/16	10.00	100°	M6 x 1	0.020" - 0.025
S4.76-100-14	3/16	14.00	100°	M8 x 1	0.025 - 0.030
S6.35-100-14	1/4	14.00	100°	M8 x 1	0.025 - 0.030
S7.94-100-17	5/16	17.00	100°	M8 x 1	0.035 - 0.040
S9.52-100-21	3/8	21.00	100°	M8 x 1	0.035 - 0.040
S2.38-100-10	3/32	10.00	120°	M6 x 1	0.010 - 0.015
S3.17-120-10	1/8	10.00	120°	M6 x 1	0.015 - 0.020
S3.96-120-10	5/32	10.00	120°	M6 x 1	0.020 - 0.025
S9.52-120-10	3/16	10.00	120°	M6 x 1	0.020 - 0.025
S9.52-120-14	3/16	14.00	120°	M8 x 1	0.025 - 0.030
S9.52-120-14	1/4	14.00	120°	M8 x 1	0.025 - 0.030
S9.52-120-17	5/16	17.00	120°	M8 x 1	0.035 - 0.040
S9.52-120-21	3/8	21.00	120°	M8 x 1	0.035 - 0.040
Code	Pilot Ø	Cutter Ø	Inclusive Angle	Thread	Decimal Equivalent
SUNF3/32-100-1/2	3/32	1/2	100°	1/4-28	0.0938
SUNF1/8-100-1/2	1/8	1/2	100°	1/4-28	0.1250
SUNF5/32-100-1/2	5/32	1/2	100°	1/4-28	0.1563
SUNF3/16-100-1/2	3/16	1/2	100°	1/4-28	0.1875
SUNF7/32-100-1/2	7/32	1/2	100°	1/4-28	0.2188
SUNF1/4-100-1/2	1/4	1/2	100°	1/4-28	0.2500

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

PILOTED MICROSTOP COUNTERSINKS

M42 – HSS – E 8% Cobalt

2 or 3 Flutes - Removable Pilot - Threaded Shank



90° / 100° / 120° (Cages available on request)

Product Code	Pilot Ø	Pilot Shank Ø	Inclusive Angle	Cutter Ø	Number of Flutes	Thread
D2.38-90-10	3/32	2.00	90°	10.00	2	M6 x 1
D3.17-90-10	1/8	2.50	90°	10.00	2	M6 x 1
D3.96-90-10	5/32	3.50	90°	10.00	2	M6 x 1
D4.76-90-10	3/16	3.50	90°	10.00	2	M6 x 1
D4.76-90-14	3/16	4.00	90°	14.00	2	M8 x 1
D6.35-90-14	1/4	4.00	90°	14.00	2	M8 x 1
D7.94-90-17	5/16	5.00	90°	17.00	3	M8 x 1
D9.52-90-21	3/8	5.00	90°	21.00	3	M8 x 1
D2.38-90-10	3/32	2.00	100°	3/16	2	M6 x 1
D3.17-90-10	1/8	2.50	100°	3/16	2	M6 x 1
D3.96-90-10	5/32	3.50	100°	3/16	2	M6 x 1
D4.76-90-10	3/16	3.50	100°	3/16	2	M6 x 1
D4.76-90-14	3/16	4.00	100°	3/16	2	M8 x 1
D6.35-90-14	1/4	4.00	100°	3/16	2	M8 x 1
D7.94-90-17	5/16	5.00	100°	3/16	2	M8 x 1
D9.52-90-21	3/8	5.00	100°	3/16	2	M8 x 1
D2.38-120-10	3/32	2.00	120°	3/16	2	M6 x 1
D3.17-120-10	1/8	2.50	120°	3/16	2	M6 x 1
D3.96-120-10	5/32	3.50	120°	3/16	2	M6 x 1
D4.76-120-10	3/16	3.50	120°	3/16	2	M6 x 1
D4.76-120-14	3/16	4.00	120°	3/16	2	M8 x 1
D6.35-120-14	1/4	4.00	120°	3/16	2	M8 x 1
D7.94-120-17	5/16	5.00	120°	3/16	2	M8 x 1
D9.52-120-21	3/8	5.00	120°	3/16	2	M8 x 1

Product Code	Pilot Ø	Shank Ø	Material
PILOT2.38-2.00	3/32	2.00	Tool Steel
PILOT3.17-2.50	1/8	2.50	Tool Steel
PILOT3.96-3.50	5/32	3.50	Tool Steel
PILOT4.76-3.50	3/16	3.50	Tool Steel
PILOT4.76-4.00	3/16	4.00	Tool Steel
PILOT6.35-4.00	1/4	4.00	Tool Steel
PILOT7.94-5.00	5/16	5.00	Tool Steel
PILOT9.52-5.00	3/8	5.00	Tool Steel

REPLACEMENT PILOTS



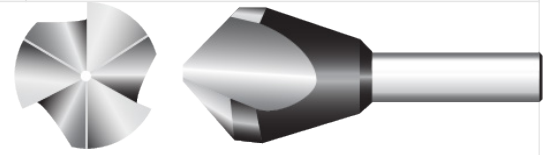
Pilot Diameter Tolerance = - 0.0005" - 0.0015

Additional sizes and angles available on request

IMPERIAL 3 FLUTE COUNTERSINKS

M35 – HSS – E5% Cobalt

3 Flutes



5858 x 60° / 82° / 90° / 100° / 120°

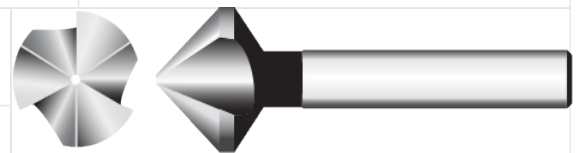
Product Code	Dia. Ø	Small Dia. Ø	Shank Ø	Overall Length	Inclusive Angle	Shank Length
5858-1/4-60	1/4	1/16	3/16	1 3/4	60°	1 3/8
5858-3/8-60	3/8	1/16	1/4	1 3/4	60°	1 1/4
5858-1/2-60	1/2	3/32	5/16	1 7/8	60°	1 1/4
5858-5/8-60	5/8	7/64	3/8	2 1/4	60°	1 3/8
5858-3/4-60	3/4	1/8	3/8	2 1/2	60°	1 1/2
5858-1-60	1	5/32	3/8	2 3/4	60°	1 1/4
5858-1 1/4-60	1 1/4	3/16	1/2	3 1/4	60°	1 1/2
5858-1/4-82	1/4	1/16	3/16	1 3/4	82°	1 3/8
5858-3/8-82	3/8	1/16	1/4	1 3/4	82°	1 1/4
5858-1/2-82	1/2	3/32	5/16	1 7/8	82°	1 1/4
5858-5/8-82	5/8	7/64	3/8	2 1/4	82°	1 3/8
5858-3/4-82	3/4	1/8	3/8	2 1/2	82°	1 1/2
5858-1-82	1	5/32	3/8	2 3/4	82°	1 1/4
5858-1 1/4-82	1 1/4	3/16	1/2	3 1/4	82°	1 1/2
5858-1/4-90	1/4	1/16	3/16	1 3/4	90°	1 3/8
5858-3/8-90	3/8	1/16	1/4	1 3/4	90°	1 1/4
5858-1/2-90	1/2	3/32	5/16	1 7/8	90°	1 1/4
5858-5/8-90	5/8	7/64	3/8	2 1/4	90°	1 3/8
5858-3/4-90	3/4	1/8	3/8	2 1/2	90°	1 1/2
5858-1-90	1	5/32	3/8	2 3/4	90°	1 1/4
5858-1 1/4-90	1 1/4	3/16	1/2	3 1/4	90°	1 1/2
5858-1/4-100	1/4	1/16	3/16	1 3/4	100°	1 3/8
5858-3/8-100	3/8	1/16	1/4	1 3/4	100°	1 1/4
5858-1/2-100	1/2	3/32	5/16	1 7/8	100°	1 1/4
5858-5/8-100	5/8	7/64	3/8	2 1/4	100°	1 3/8
5858-3/4-100	3/4	1/8	3/8	2 1/2	100°	1 1/2
5858-1-100	1	5/32	3/8	2 3/4	100°	1 1/4
5858-1 1/4-100	1 1/4	3/16	1/2	3 1/4	100°	1 1/2
5858-1/4-120	1/4	1/16	3/16	1 3/4	120°	1 3/8
5858-3/8-120	3/8	1/16	1/4	1 3/4	120°	1 1/4
5858-1/2-120	1/2	3/32	5/16	1 7/8	120°	1 1/4
5858-5/8-120	5/8	7/64	3/8	2 1/4	120°	1 3/8
5858-3/4-120	3/4	1/8	3/8	2 1/2	120°	1 1/2
5858-1-120	1	5/32	3/8	2 3/4	120°	1 1/4
5858-1 1/4-120	1 1/4	3/16	1/2	3 1/4	120°	1 1/2

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

DIN 3 FLUTE COUNTERSINKS

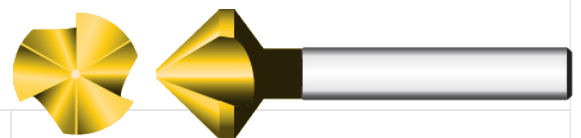
M35 – HSS – E 5% Cobalt

3 Flutes



335C x 90°

Product Code	Diameter Ø	Small Dia. Ø	Shank Ø	Overall Length	Head Length
335C-4.3-90	4.3	1.2	4	40	3.5
335C-5.3-90	5.3	1.5	4	40	4.0
335C-6.3-90	6.3	1.5	5	45	5.0
335C-8.3-90	8.3	2.0	6	50	6.0
335C-10.0-90	10.0	2.5	6	50	7.1
335C-10.4-90	10.4	2.5	6	50	7.1
335C-11.5-90	11.5	2.8	8	56	7.5
335C-12.4-90	12.4	2.8	8	56	8.0
335C-15.0-90	15.0	3.2	10	60	9.0
335C-16.5-90	16.5	3.2	10	60	10.0
335C-19.0-90	19.0	3.5	10	63	11.2
335C-20.5-90	20.5	3.5	10	63	12.5
335C-23.0-90	23.0	3.8	10	67	13.2
335C-25.0-90	25.0	3.8	10	67	15.0
335C-26.0-90	26.0	3.8	10	67	15.0
335C-28.0-90	28.0	4.0	12	71	16.0
335C-30.0-90	30.0	4.2	12	71	18.0
335C-31.0-90	31.0	4.2	12	71	18.0



TiN Coated

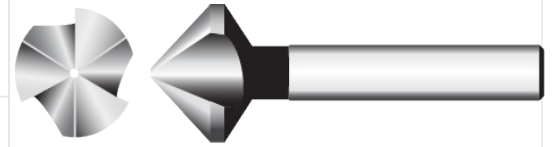
Product Code	Diameter Ø	Small Dia. Ø	Shank Ø	Overall Length	Head Length
TiN335C-6.3-90	6.3	1.5	5	45	5.0
TiN335C-8.3-90	8.3	2.0	6	50	6.0
TiN335C-10.4-90	10.4	2.5	6	50	7.1
TiN335C-12.4-90	12.4	2.8	8	56	8.0
TiN335C-16.5-90	16.5	3.2	10	60	10.0
TiN335C-20.5-90	20.5	3.5	10	63	12.5
TiN335C-25.0-90	25.0	3.8	10	67	15.0
TiN335C-31.0-90	31.0	4.2	12	71	19.0

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

DIN 3 FLUTE COUNTERSINKS

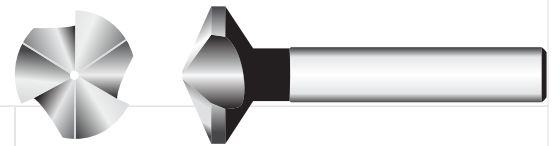
M35 – HSS – E 5%
Cobalt

3 Flutes



335C x 82°

Product Code	Diameter Ø	Small Dia. Ø	Shank Ø	Overall Length	Head Length
335C-6.3-82	6.3	1.5	5	45	5.0
335C-8.3-82	8.3	2.0	6	50	6.0
335C-10.4-82	10.4	2.5	6	50	7.1
335C-12.4-82	12.4	2.8	8	56	8.0
335C-16.5-82	16.5	3.2	10	60	10.0
335C-20.5-82	20.5	3.5	10	63	12.5
335C-25.0-82	25.0	3.8	10	67	15.0
335C-30.0-82	30.0	4.2	12	71	18.0
335C-31.0-82	31.0	4.2	12	71	18.0



335C x 100°

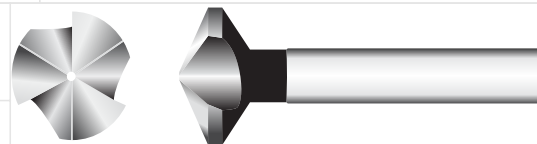
Product Code	Diameter Ø	Small Dia. Ø	Shank Ø	Overall Length	Head Length
335C-6.3-100	6.3	1.5	5	45	5.0
335C-8.3-100	8.3	2.0	6	50	6.0
335C-10.4-100	10.4	2.5	6	50	7.1
335C-12.4-100	12.4	2.8	8	56	8.0
335C-16.5-100	16.5	3.2	10	60	10.0
335C-20.5-100	20.5	3.5	10	63	12.5
335C-25.0-100	25.0	3.8	10	67	15.0
335C-30.0-100	30.0	4.2	12	71	18.0
335C-31.0-100	31.0	4.2	12	71	18.0

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

DIN 3 FLUTE COUNTERSINKS

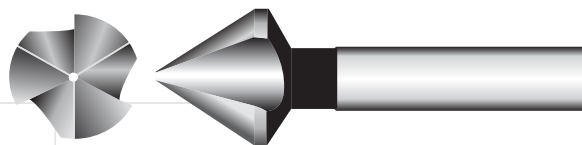
M35 – HSS – E 5% Cobalt

3 Flutes



335C x 120°

Product Code	Diameter Ø	Small Dia. Ø	Shank Ø	Overall Length	Head Length
335C-6.3-120	6.3	1.5	5	45.0	5.0
335C-8.3-120	8.3	2.0	6	50.0	6.0
335C-10.4-120	10.4	2.5	6	50.0	7.1
335C-12.4-120	12.4	2.8	8	56.0	8.0
335C-16.5-120	16.5	3.2	10	60.0	10.0
335C-20.5-120	20.5	3.5	10	63.0	12.5
335C-25.0-120	25.0	3.8	10	67.0	15.0
335C-30.0-120	30.0	4.2	12	71.0	18.0
335C-31.0-120	31.0	4.2	12	71.0	18.0



334C x 60°

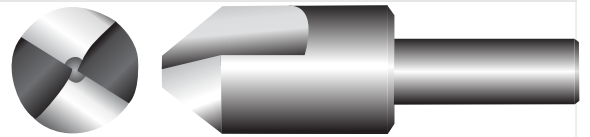
Product Code	Diameter Ø	Small Dia. Ø	Shank Ø	Overall Length	Head Length
335C-6.3-60	6.3	1.6	5	45.0	6.3
335C-8.0-60	8.0	2.0	6	50.0	8.0
335C-10.0-60	10.0	2.5	6	53.0	10.0
335C-12.5-60	12.5	3.2	8	56.0	11.2
335C-16.0-60	16.0	4.0	10	63.0	14.0
335C-20.0-60	20.0	5.0	10	67.0	17.0
335C-25.0-60	25.0	6.0	10	71.0	20.0

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

CHATTERLESS COUNTERSINKS

M35 – HSS – E 5% Cobalt

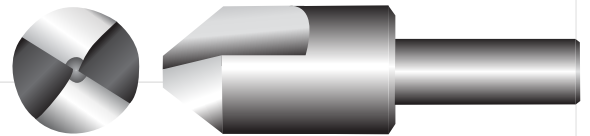
2 Flutes



5850 METRIC x 90°

Product Code	Head Ø	Shank Ø	Overall Length	Head Length	Inclusive Angle
5850-4.0-90	4.0	1/8	38.0	19.0	90°
5850-5.0-90	5.0	1/8	38.0	19.0	90°
5850-6.0-90	6.0	3/16	38.0	19.0	90°
5850-8.0-90	8.0	1/4	45.0	26.0	90°
5850-10.0-90	10.0	1/4	45.0	26.0	90°
5850-12.5-90	12.5	3/8	51.0	26.0	90°
5850-16.0-90	16.0	3/8	57.0	32.0	90°
5850-20.0-90	20.0	1/2	66.0	35.0	90°
5850-25.0-90	25.0	1/2	70.0	38.0	90°

ADDITIONAL ANGLES



5850 x 60° / 82° / 100° / 120° (Add required angle to code)

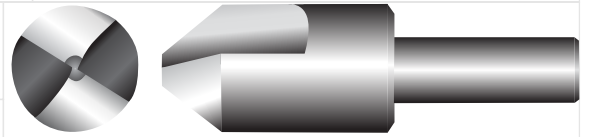
Product Code	Head Ø	Shank Ø	Overall Length	Head Length	Inclusive Angle
335C-4.0- ***	4.0	1/8	38.0	19.0	***
335C-5.0- ***	5.0	1/8	38.0	19.0	***
335C-6.0- ***	6.0	3/16	38.0	19.0	***
335C-8.0- ***	8.0	1/4	45.0	26.0	***
335C-10.0- ***	10.0	1/4	45.0	26.0	***
335C-12.5- ***	12.5	3/8	51.0	26.0	***
335C-16.0- ***	16.0	3/8	57.0	32.0	***
335C-20.0- ***	20.0	1/2	66.0	35.0	***
335C-25.0- ***	25.0	1/2	70	38.0	***

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

CHATTERLESS COUNTERSINKS

M35 – HSS – E 5% Cobalt

2 Flutes



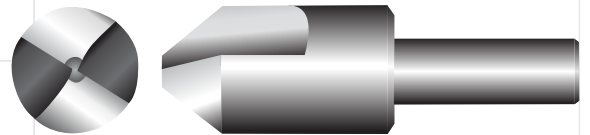
5850 IMPERIAL x 90°

Product Code	Head Ø	Shank Ø	Overall Length	Head Length	Inclusive Angle
5850-1/8-90	1/8	1/8	1 1/2	3/4	90°
5850-3/18-90	3/16	1/8	1 1/2	3/4	90°
5850-1/4-90	1/4	3/16	1 1/2	3/4	90°
5850-5/16-90	5/16	1/4	1 3/4	1	90°
5850-3/8-90	3/8	1/4	1 3/4	1	90°
5850-7/16-90	7/16	3/8	2	1	90°
5850-1/2-90	1/2	3/8	2	1	90°
5850-5/8-90	5/8	3/8	2 1/4	1 1/4	90°
5850-3/4-90	3/4	1/2	2 5/8	1 3/8	90°
5850-7/8-90	7/8	1/2	2 3/4	1 1/2	90°
5850-1-90	1	1/2	2 3/4	1 1/2	90°

ADDITIONAL ANGLES

M35 – HSS – E 5% Cobalt

2 Flutes



5850 x 60° / 82° / 100° / 120° (Add required angle to code)

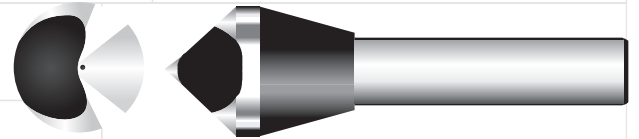
Product Code	Head Ø	Shank Ø	Overall Length	Head Length	Inclusive Angle
5850-1/8- ***	1/8	1/8	1 1/2	3/4	***
5850-3/18- ***	3/16	1/8	1 1/2	3/4	***
5850-1/4- ***	1/4	3/16	1 1/2	3/4	***
5850-5/16- ***	5/16	1/4	1 3/4	1	***
5850-3/8- ***	3/8	1/4	1 3/4	1	***
5850-7/16- ***	7/16	3/8	2	1	***
5850-1/2- ***	1/2	3/8	2	1	***
5850-5/8- ***	5/8	3/8	2 1/4	1 1/4	***
5850-3/4- ***	3/4	1/2	2 5/8	1 3/8	***
5850-7/8- ***	7/8	1/2	2 3/4	1 1/2	***
5850-1- ***	1	1/2	2 3/4	1 1/2	***

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

DEBURRING TOOLS

M35 – HSS – E 5% Cobalt

Through Hole - Zero Flute



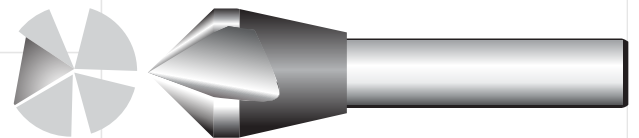
5880 METRIC x 90°

Product Code	Head Ø	Shank Ø	Overall Length	Shank Length	Standard Cut Range
5880-10.0-90	10.0	6.0	45	32.0	2 - 5
5850-12.5-90	12.5	8.0	48	32.0	3 - 8
5850-14.0-90	14.0	8.0	52	30.5	5 - 10
5850-16.0-90	16.0	10.0	56	36.0	6 - 12
5850-21.0-90	21.0	10.0	65	37.5	10 - 15
5850-25.0-90	25.0	10.0	65	36.0	12.5 - 20
5850-28.0-90	28.0	12.0	85	48.0	15 - 20
5850-35.0-90	35.0	15.0	102	56.5	20 - 25

SINGLE FLUTE COUNTERSINKS

M35 – HSS – E 5% Cobalt


1 Flute



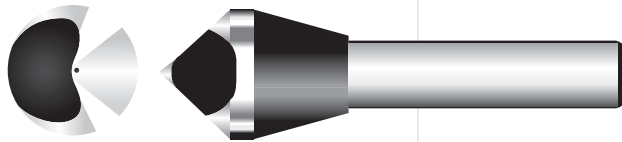
5890 METRIC x 90°

Product Code	Head Ø	Shank Ø	Overall Length	Shank Length	Inclusive Angle
5890-4.0-90	4.0	4	44	36.0	90°
5890-6.0-90	6.0	5	45	36.0	90°
5890-8.0-90	8.0	6	45	32.0	90°
5890-10.0-90	10.0	6	45	32.0	90°
5890-12.5-90	12.5	8	48	32.0	90°
5890-14.0-90	14.0	8	48	30.5	90°
5890-16.0-90	16.0	10	56	36.0	90°
5890-21.0-90	21.0	10	65	37.5	90°
5890-25.0-90	25.0	10	65	36.0	90°
5890-28.0-90	28.0	12	85	48.0	90°
5890-35.0-90	35.0	15	102	56.5	90°

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

DEBURRING TOOLS				M35 – HSS – E 5% Cobalt		
Through Hole - Zero Flute						
5880 IMPERIAL x 90°						
Product Code	Cutting Range	Head Ø	Shank Ø	Overall Length	Shank Length	Inclusive Angle
5880-5/16-90	7/64 - 1/4	5/16	1/4	1 3/4	1 1/4	90°
5850-3/8-90	5/32 - 9/32	3/8	1/4	1 3/4	1 1/4	90°
5850-1/2-90	3/16 - 3/8	1/2	5/16	1 7/8	1 1/4	90°
5850-5/8-90	5/16 - 15/32	5/8	3/8	2 1/4	1 3/8	90°
5850-3/4-90	3/8 - 9/16	3/4	3/8	2 1/2	1 1/2	90°
5850-1-90	7/16 - 3/4	1	3/8	2 3/4	1 1/4	90°
5850-1 1/4-90	1/2 - 1	1 1/4	1/2	3 1/4	1 1/2	90°

ADDITIONAL ANGLES

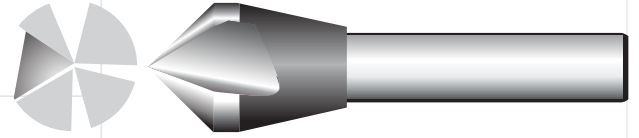
DEBURRING TOOLS				M35 – HSS – E 5% Cobalt		
Through Hole - Zero Flute						
5880 IMPERIAL x 60° / 82° / 100° <i>(Add required angle to code)</i>						
Product Code	Cutting Range	Head Ø	Shank Ø	Overall Length	Shank Length	Inclusive Angle
5880-5/16-90	7/64 - 1/4	5/16	1/4	1 3/4	1 1/4	***
5850-3/8-90	5/32 - 9/32	3/8	1/4	1 3/4	1 1/4	***
5850-1/2-90	3/16 - 3/8	1/2	5/16	1 7/8	1 1/4	***
5850-5/8-90	5/16 - 15/32	5/8	3/8	2 1/4	1 3/8	***
5850-3/4-90	3/8 - 9/16	3/4	3/8	2 1/2	1 1/2	***
5850-1-90	7/16 - 3/4	1	3/8	2 3/4	1 1/4	***
5850-1 1/4-90	1/2 - 1	1 1/4	1/2	3 1/4	1 1/2	***

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

SINGLE FLUTE COUNTERSINKS

M35 – HSS – E 5%
Cobalt

1 Flute



5890 IMPERIAL x 90°

Product Code	Head Ø	Shank Ø	Overall Length	Shank Length	Inclusive Angle
5890-1/4-90	1/4	3/16	1 3/4	1 3/8	90°
5890-5/16-90	5/16	1/4	1 3/4	1 1/4	90°
5890-3/8-90	3/8	1/4	1 3/4	1 1/4	90°
5890-1/2-90	1/2	5/16	1 7/8	1 1/4	90°
5890-5/8-90	5/8	3/8	2 1/4	1 3/8	90°
5890-3/4-90	3/4	3/8	2 1/2	1 1/2	90°
5890-1-90	1	3/8	2 3/4	1 1/4	90°
5890-1 1/4-90	1 1/4	1/2	3 1/4	1 1/2	90°

ADDITIONAL ANGLES

5890 IMPERIAL x 60° / 82° / 100° (Add required angle to code)

Product Code	Head Ø	Shank Ø	Overall Length	Shank Length	Inclusive Angle
5890-1/4- ***	1/4	3/16	1 3/4	1 3/8	***
5890-5/16- ***	5/16	1/4	1 3/4	1 1/4	***
5890-3/8- ***	3/8	1/4	1 3/4	1 1/4	***
5890-1/2- ***	1/2	5/16	1 7/8	1 1/4	***
5890-5/8- ***	5/8	3/8	2 1/4	1 3/8	***
5890-3/4- ***	3/4	3/8	2 1/2	1 1/2	***
5890-1- ***	1	3/8	2 3/4	1 1/4	***
5890-1 1/4- ***	1 1/4	1/2	3 1/4	1 1/2	***

5890 IMPERIAL x 120°

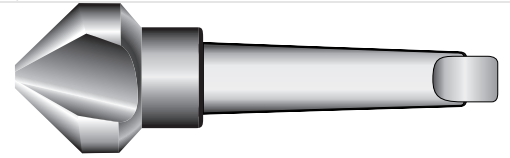
Product Code	Head Ø	Shank Ø	Overall Length	Shank Length	Inclusive Angle
5890-1/4-120	1/4	3/16	1 3/4	1 3/8	120°
5890-5/16-120	5/16	1/4	1 3/4	1 1/4	120°
5890-3/8-120	3/8	1/4	1 3/4	1 1/4	120°
5890-1/2-120	1/2	5/16	1 7/8	1 1/4	120°
5890-5/8-120	5/8	3/8	2 1/4	1 3/8	120°
5890-3/4-120	3/4	3/8	2 1/2	1 1/2	120°
5890-1-120	1	3/8	2 3/4	1 1/4	120°
5890-1 1/4-120	1 1/4	1/2	3 1/4	1 1/2	120°

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

MORSE TAPER COUNTERSINKS

M35 – HSS – E 5% Cobalt

3 Flutes



5859 x 60°

Product Code	Head Ø	Small Ø	Morse Taper Shank	Overall Length	Minimum Head Length
5859-16.0-60	16.0	3.2	1	97	21
5859-20.0-60	20.0	4.0	2	120	28
5859-25.0-60	25.0	7.0	2	125	31
5859-31.5-60	31.5	9.0	2	132	40
5859-40.0-60	40.0	12.5	3	160	43
5859-50.0-60	50.0	16.0	3	165	47
5859-63.0-60	63.0	20.0	4	200	49
5859-80.0-60	80.0	25.0	4	215	59

5859 x 82°

Product Code	Head Ø	Small Ø	Morse Taper Shank	Overall Length	Minimum Head Length
5859-16.0-82	16.0	3.2	1	93	18
5859-20.0-82	20.0	4.0	2	116	25
5859-25.0-82	25.0	7.0	2	121	27
5859-31.5-82	31.5	9.0	2	124	31
5859-40.0-82	40.0	12.5	3	150	33
5859-50.0-82	50.0	16.0	3	153	35
5859-63.0-82	63.0	20.0	4	185	40
5859-80.0-82	80.0	25.0	4	196	44

5859 x 90°

Product Code	Head Ø	Small Ø	Morse Taper Shank	Overall Length	Minimum Head Length
5859-16.0-90	16.0	3.2	1	93	18
5859-20.0-90	20.0	4.0	2	116	25
5859-25.0-90	25.0	7.0	2	121	27
5859-31.5-90	31.5	9.0	2	124	31
5859-40.0-90	40.0	12.5	3	150	33
5859-50.0-90	50.0	16.0	3	153	35
5859-63.0-90	63.0	20.0	4	185	40
5859-80.0-90	80.0	25.0	4	196	44

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

ROSE COUNTERSINKS

M35 – HSS – E
5% Cobalt

6 Flutes

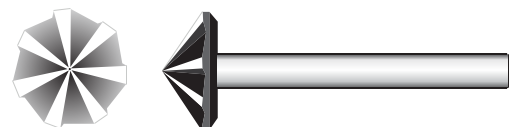
5852 x 90° / 100° / 120°



Product Code	Head Ø	Inclusive Angle	Overall Length	Shank Ø	Shank Length
5852-1/2-90	1/2	90	1 9/16	1/4	7/8
5852-1/2-100	1/2	100	1 9/16	1/4	7/8
5852-1/2-120	1/2	120	1 9/16	1/4	7/8

6 Flutes

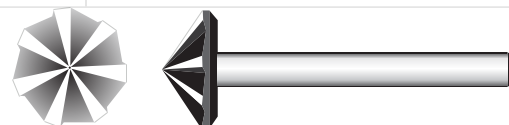
5853 x 90°



Product Code	Head Ø	Inclusive Angle	Overall Length	Shank Ø	Shank Length
5853-3/8-90	3/8	90	2	3/16	1.675
5853-1/2-90	1/2	90	2	3/16	1.675
5853-5/8-90	5/8	90	2	1/4	1.675

6 Flutes

5853 x 100°



Product Code	Head Ø	Inclusive Angle	Overall Length	Shank Ø	Shank Length
5853-3/8-100	3/8	100	2	3/16	1.675
5853-1/2-100	1/2	100	2	3/16	1.675
5853-5/8-100	5/8	100	2	1/4	1.675

6 Flutes

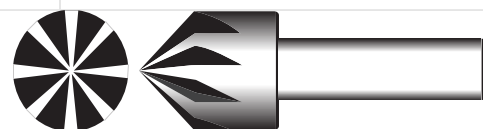
5853 x 120°



Product Code	Head Ø	Inclusive Angle	Overall Length	Shank Ø	Shank Length
5853-3/8-120	3/8	120	2	3/16	1.675
5853-1/2-120	1/2	120	2	3/16	1.675
5853-5/8-120	5/8	120	2	1/4	1.675

6 Flutes

5854 x 90°



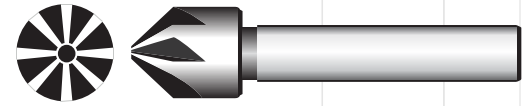
Product Code	Head Ø	Inclusive Angle	Overall Length	Shank Ø	Shank Length
5854-1/2-90	1/2	90	2	3/8	1
5854-5/8-90	5/8	90	2 1/4	3/8	1
5854-3/4-90	3/4	90	2 5/8	1/2	1 1/4
5854-1-90	1	90	2 3/4	1/2	1 1/4

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

ROSE COUNTERSINKS

M35 – HSS – E 5% Cobalt

5 and 6 Flutes



DIN 335A x 90°

Product Code	Head Ø	Small Ø	Shank Ø	Number of Flutes	Overall Length	Head Length
335A-8.0-90	8.0	0.5	8	5	48	-
335A-10.0-100	10.0	2.0	8	5	48	16
335A-12.5-120	12.5	2.0	8	5	48	16
335A-16.0-100	16.0	3.2	10	6	56	20
335A-20.0-120	20.0	5.0	10	6	60	24
335A-25.0-100	25.0	5.0	10	6	68	30

5 and 6 Flutes



DIN 334A x 60°

Product Code	Head Ø	Small Ø	Shank Ø	Number of Flutes	Overall Length	Head Length
334A-8.0-90	8.0	0.5	8	5	50	-
334A-10.0-100	10.0	2.0	8	5	50	18
334A-12.5-120	12.5	2.0	8	5	50	18
334A-16.0-100	16.0	3.2	10	6	60	24
334A-20.0-120	20.0	5.0	10	6	63	27

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

PLAIN SHANK COUNTERBORES

M35 – HSS – E 5% Cobalt

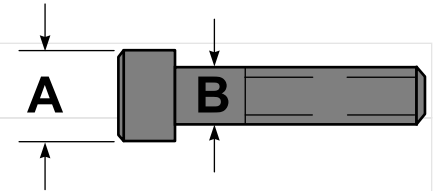
Standard Metric Counterbores



5760 METRIC

Product Code	Cap Screw Size	Pilot Size	Cutting Ø	Shank Size	Overall Length
5760-M3	M3	3.4	6.0	5.0	71
5760-M3.5	M3.5	3.9	6.5	5.0	71
5760-M4	M4	4.5	8.0	5.0	71
5760-M5	M5	5.5	10.0	8.0	80
5760-M6	M6	6.4	11.0	8.0	80
5760-M8	M8	9.0	15.0	12.5	100
5760-M10	M10	11.0	18.0	12.5	100
5760-M12	M12	14.0	20.0	12.5	100

COUNTERBORE CAP SCREW SIZE CHART



ISO Metric Cap Screws

Screw Size	A mm	B mm	Pilot Ø mm	Head Ø mm
M3	5.50	3.00	3.40	6.00
M4	7.00	4.00	4.50	6.00
M5	8.50	5.00	5.50	10.00
M6	10.00	6.00	6.40	11.00
M8	13.00	8.00	9.00	15.00
M10	16.00	10.00	11.00	18.00
M12	18.00	12.00	14.00	20.00

Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

PLAIN SHANK COUNTERBORES

M35 – HSS – E 5% Cobalt

Close fit, 1/64 Clearance & 1/32 Clearance



5770 IMPERIAL

Product Code	Cap Screw Size	Pilot Size	Cutting Ø	Shank Size	Overall Length
5770-4-Close Fit	#4	0.112	0.186	5/32	3.0
5770-4-1/64 Over	#4	0.127	0.202	5/32	3.0
5770-4-1/32 Over	#4	0.143	0.217	5/32	3.0
5770-5-Close Fit	#5	0.125	0.205	3/16	3.0
5770-5-1/64 Over	#5	0.140	0.221	3/16	3.0
5770-5-1/32 Over	#5	0.156	0.237	3/16	3.0
5770-6-Close Fit	#6	0.138	0.228	7/32	3.0
5770-6-1/64 Over	#6	0.153	0.224	7/32	3.0
5770-6-1/32 Over	#6	0.169	0.260	7/32	3.0
5770-8-Close Fit	#8	0.164	0.272	1/4	3.0
5770-8-1/64 Over	#8	0.179	0.288	1/4	3.0
5770-8-1/32 Over	#8	0.195	0.304	1/4	3.0
5770-10-Close Fit	#10	0.190	0.314	9/32	4.5
5770-10-1/64 Over	#10	0.205	0.330	9/32	4.5
5770-10-1/32 Over	#10	0.221	0.346	9/32	4.5
5770-1/4-Close Fit	1/4	0.250	0.382	5/16	4.5
5770-1/4-1/64 Over	1/4	0.265	0.398	5/16	4.5
5770-1/4-1/32 Over	1/4	0.281	0.414	5/16	4.5
5770-5/16-Close Fit	5/16	0.312	0.475	3/8	4.5
5770-5/16-1/64 Over	5/16	0.328	0.491	3/8	4.5
5770-5/16-1/32 Over	5/16	0.343	0.507	3/8	4.5
5770-3/8-Close Fit	3/8	0.375	0.572	1/2	5.0
5770-3/8-1/64 Over	3/8	0.390	0.588	1/2	5.0
5770-3/8-1/32 Over	3/8	0.406	0.604	1/2	5.0
5770-7/16-Close Fit	7/16	0.437	0.663	1/2	5.0
5770-7/16-1/64 Over	7/16	0.452	0.679	1/2	5.0
5770-7/16-1/32 Over	7/16	0.468	0.695	1/2	5.0
5770-1/2-Close Fit	1/2	0.500	0.757	1/2	6.0
5770-1/2-1/64 Over	1/2	0.515	0.773	1/2	6.0
5770-1/2-1/32 Over	1/2	0.531	0.789	1/2	6.0
5770-5/8-1/64 Over	5/8	0.641	0.961	5/8	6.0
5770-5/8-Close Fit	5/8	0.625	0.945	5/8	6.0
5770-5/8-1/32 Over	5/8	0.656	0.977	5/8	6.0
5770-3/4-Close Fit	3/4	0.766	1.187	3/4	7.0
5770-3/4-1/32 Over	3/4	0.781	1.203	3/4	7.0
5770-7/8-Close Fit	7/8	0.891	1.375	7/8	7.0
5770-7/8-1/32 Over	7/8	0.906	1.391	7/8	7.0

Pilot Diameter Tolerance = - 0.0005" - 0.0015

Additional sizes and angles available on request

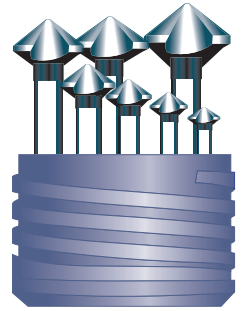
METRIC COUNTERSINK SETS

3 Flutes

335C x 90°

Product Code	Sizes Included						
335C-SET.A	6.3	12.4	20.5				
335C-SET.B	8.3	12.4	16.5	25.0			
335C-SET.C	6.3	8.3	10.4	12.4	16.5	20.5	
335C-SET.D	8.3	8.3	10.4	12.4	16.5	20.5	25.0

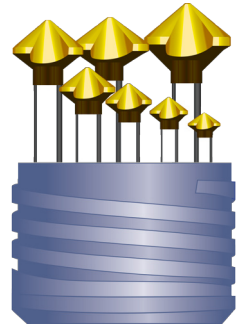
M35 – HSS – E 5% Cobalt



3 Flutes

TiN COATED 335C x 90°

Product Code	Sizes Included					
335C-SET.A	6.3	12.4	20.5	20.5	20.5	20.5



Through Hole

5880 METRIC x 90°

Product Code	Sizes Included			
335C-SET.A	10.0	14.0	21.0	28.0
335C-SET.B	10.0	12.5	16.0	21.0



Pilot Diameter Tolerance = - 0.0005" - 0.0015 Additional sizes and angles available on request

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