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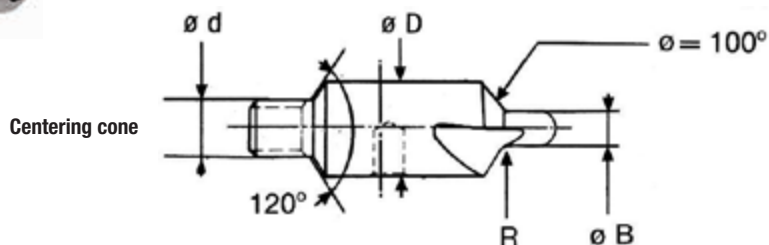
Cutters with Inserted Pilot for Rivets and Screws

Carbide | HSS-E | PCD

Recoules Quackenbush
Precision Drilling - Every Time



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
Carbide	●	●	●	●
HSS-E	●	●	●	
PCD*				●



MICROSTOP CAGE REF CHAPTER A	CUTTER $\varnothing D$ ± 0.1 mm	PILOT $\varnothing B$		RADIUS R mm	NUMBERS OF FLUTES	THREAD $\varnothing d$	CUTTER REF. HSS-E	CUTTER REF. CARBIDE
		-0.02 mm -0.05 mm	-0.0007 in -0.0020 in					
RB156 RB206 RB256 RB257 RB258	10	2.38	0.0937	0.2 - 0.4	3	M6x1	31206000	-
	10	2.50	0.0984	0 - 0.25	3	M6x1	-	02504028PT
	10	3.00	0.1181	0.45 - 0.65	3	M6x1	-	02504029PT
	10	3.162	0.1245	0 - 0.25	3	M6x1	-	02504067PT
	10	3.17	0.1248	0.2 - 0.4	3	M6x1	31206005	-
	10	3.50	0.1378	0.2 - 0.4	3	M6x1	31206010	-
	10	3.60	0.1417	0.2 - 0.4	3	M6x1	31206015	-
	10	3.97	0.1563	0.2 - 0.4	3	M6x1	31206020	-
	10	4.00	0.1575	0.2 - 0.4	3	M6x1	31206025	-
	10	4.00	0.1575	0.45 - 0.65	3	M6x1	-	02504030PT
	10	4.10	0.1614	0.55 - 0.75	3	M6x1	-	02504061PT
	10	4.15	0.1634	0.2 - 0.4	3	M6x1	31206030	-
	10	4.76	0.1874	0.4 - 0.75	3	M6x1	31206035	-
	10	4.80	0.1890	0.4 - 0.75	3	M6x1	31206040	-
	10	4.80	0.1890	0.55 - 0.75	3	M6x1	-	02504064PT
10	4.95	0.1949	0.55 - 0.75	3	M6x1	-	02504062PT	
10	5.60	0.2205	0.4 - 0.75	3	M6x1	31206045	-	
10	6.22	0.2449	0.4 - 0.75	3	M6x1	-	02504069PT	
RB306 RB307	14	4.76	0.1874	0.4 - 0.75	3	M8x1	31206100	-
	14	5.00	0.1969	0.4 - 0.75	3	M8x1	31206105	-
	14	5.00	0.1969	0.55 - 0.75	3	M8x1	-	02504031PT
	14	5.50	0.2165	0.55 - 0.75	3	M8x1	-	02504032PT
	14	5.60	0.2205	0.4 - 0.75	3	M8x1	31206110	-
	14	6.00	0.2362	0.4 - 0.75	3	M8x1	31206120	-
	14	6.00	0.2362	0.55 - 0.75	3	M8x1	-	02504033PT
	14	6.35	0.2500	0.4 - 0.75	3	M8x1	31206125	-
	14	6.50	0.2559	0.55 - 0.75	3	M8x1	-	02504034PT
	17	8.00	0.3150	0.75 - 1.25	3	M8x1	31206200	-
	21	8.00	0.3150	0.8 - 1.00	3	M8x1	-	02504035PT
	21	8.50	0.3346	0.8 - 1.00	3	M8x1	-	02504036PT
	21	9.52	0.3748	0.75 - 1.25	3	M8x1	31206300	-
21	10.00	0.3937	0.75 - 1.25	3	M8x1	31206305	-	
RB406 RB356HP58	25.4	10.00	0.3937	0.8 - 1.00	3	M10x1	-	02504037PT
	25.4	12.00	0.4724	1 - 1.25	3	M10x1	-	02504038PT

EXPERT ADVICE

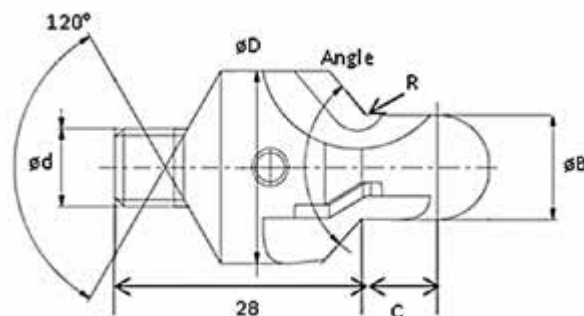


- In some cases, microstop cages are impractical or too bulky to be used. We then recommend to use drilling adapters, pg. 43.

Alternative cutters can be made on request with special diameters, special thread (ex: 1/4-28F, M10x1...), special angles (ex: 90°, 120°...), carbide, HSS-E or PCD*
* Only to use only with pilots having a head dia \geq shank dia + 0.5 mm (0.0196 in).



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
HSS-PCD				●



MICROSTOP CAGE REF CHAPTER A	CUTTER Ø D ± 0.1 mm	PILOT Ø B		RADIUS R mm	NUMBERS OF FLUTES	ANGLE	THREAD Ø D	PILOT Ø C	CUTTER REF. HSS-PCD
		-0.02 mm -0.05 mm	-0.0007 in -0.0020 in						
RB156	10	2.5	0.0984	0.2 / 0.4	2	100°	M6x100	2.4	02084019PT
	10	3	0.1181	0.2 / 0.4	2	100°	M6x100	3.1	02084021PT
	10	3.2	0.1260	0.2 / 0.4	2	100°	M6x100	3.1	02084020PT
	10	3.5	0.1378	0.2 / 0.4	2	100°	M6x100	3.7	02084022PT
	10	4	0.1575	0.2 / 0.4	2	100°	M6x100	4	02084023PT
	10	4.8	0.1890	0.4 / 0.75	2	100°	M6x100	4.7	02084032PT
RB306	10	5	0.1969	0.4 / 0.75	2	100°	M6x100	4.7	02084026PT
	14	3.89	0.1531	0.64 / 0.84	2	100°	M8x100	5.06	02084035PT
	14	4.15	0.1634	0.64 / 0.84	2	100°	M8x100	4.93	02084030PT
	14	4.81	0.1894	0.75 / 0.95	2	100°	M8x100	4.6	02084031PT
	14	5.04	0.1984	0.75 / 0.95	2	100°	M8x100	4.48	02084029PT
	14	6	0.2362	0.4 / 0.75	2	120°	M8x100	5	02084208PT
RB307	14	6.6	0.2598	0.75 / 1.25	2	100°	M8x100	5	02084027PT

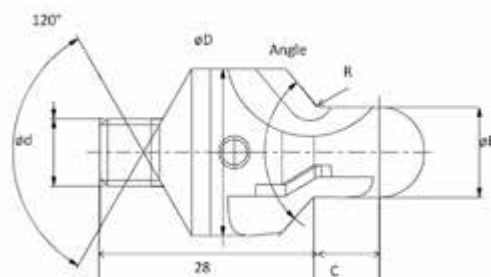
EXPERT ADVICE

- In some cases, microstop cages are impractical or too bulky to be used. We then recommend to use drilling adapters, pg. 43

Alternative cutters can be made on request with special diameters, special thread (ex: 1/4-28F, M10x1...), special angles (ex: 90°, 120°...), carbide, HSS-E or PCD*
* Only to use only with pilots having a head dia ≥ shank dia + 0.5 mm (0.0196 in).



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
Carbide PCD				●



MICROSTOP CAGE REF CHAPTER A	CUTTER Ø D ±0.1 mm	PILOT ØB		RADIUS R mm	NUMBERS OF FLUTES	ANGLE	THREAD Ø D	PILOT Ø C	REF. CUTTER CARBIDE PCD
		-0.02 mm -0.05 mm	-0.0007 in -0.0020 in						
RB156 RB206 RB256 RB257 RB258	12	4.82	0.190	0.5 / 0.7	2	100°	M6x100	6.6	02084001PT
RB306 RB307	12	4.82	0.1898	0.5 / 0.7	2	130°	M8x100	6.6	02084008PT
	14	5.54	0.2181	0.5 / 0.7	2	130°	M8x100	7.2	02084009PT
	14	6.34	0.2496	0.5 / 0.7	2	100°	M8x100	6.8	02084003PT
	17	7.93	0.3122	0.8 / 1	2	100°	M8x100	7	02084004PT
	17	9.51	0.3744	0.8 / 1	2	100°	M8x100	7.25	02084005PT
	21	7.93	0.3122	0.8 / 1	2	130°	M8x100	11	02084014PT
	21	9.52	0.3748	0.8 / 1	2	130°	M8x100	13.24	02084016PT
RB406 RB356HP58	21	11.11	0.4374	1.1 / 1.3	3	100°	M10x100	7.5	02084006PT
	22.2	12.67	0.4988	1.1 / 1.3	3	100°	M10x100	7.7	02084007PT
	25	14.27	0.5618	1.1 / 1.3	3	100°	M10x100	7.9	02084010PT

EXPERT ADVICE

- In some cases, microstop cages are impractical or too bulky to be used. We then recommend to use drilling adapters, pg. 44.

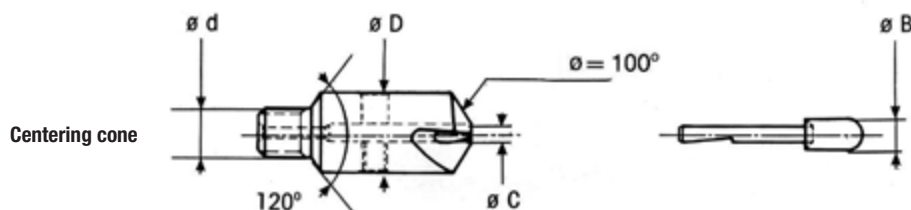
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* Only to use only with pilots having a head dia ≥ shank dia + 0.5 mm (0.0196 in).

Cutters with Inserted Pilot for Rivets and Screws

Carbide | HSS-E | PCD

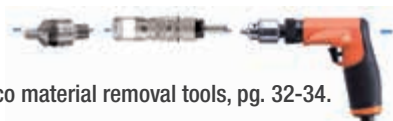


FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE	KEVLAR
Carbide	●	●	●	●	
HSS-E	●	●	●		
PCD*				●	
HSS-E					●
Carbide					●



MICROSTOP CAGE REF CHAPTER A	CUTTER Ø D ± 0.1 mm	PILOT			NUMBERS OF FLUTES	THREAD Ø D	CUTTER + PILOT REF. HSS-E	CUTTER ONLY REF. HSS-E
		HEAD Ø B		SHANK Ø C mm				
		-0.02 mm -0.05 mm	-0.0007 in -0.0020 in					
RB 156 RB 206 RB 256 RB 257 RB 258	10	2.00	0.0787	2	2	M6 x 1	30220005	30220001
	10	2.38	0.0937	2	2	M6 x 1	30220010	30220001
	10	2.50	0.0984	2	2	M6 x 1	30220015	30220001
	10	2.80	0.1102	2.5	2	M6 x 1	30220110	30220101
	10	3.00	0.1181	2.5	2	M6 x 1	30220115	30220101
	10	3.17	0.1248	2.5	2	M6 x 1	30220120	30220101
	10	3.50	0.1377	2.5	2	M6 x 1	30220215	30220101
	10	4.00	0.1574	3.5	2	M6 x 1	30220310	30220301
RB 306 RB 307	10	4.15	0.1634	3.5	2	M6 x 1	30220315	30220301
	14	4.76	0.1874	4	2	M8 x 1	30222015	30222001
	14	4.80	0.1890	4	2	M8 x 1	30222025	30222001
	14	5.00	0.1968	4	2	M8 x 1	30222030	30222001
	14	5.60	0.2204	4	2	M8 x 1	30222040	30222001
	14	6.00	0.2362	4	2	M8 x 1	30222050	30222001
	14	6.35	0.2500	4	2	M8 x 1	30222055	30222001
	17	7.94	0.3126	5	3	M8 x 1	30223035	30223001
	17	8.00	0.3149	5	3	M8 x 1	30223040	30223001
	21	9.52	0.3748	5	3	M8 x 1	30224045	30224001
21	10.00	0.3937	5	3	M8 x 1	30224050	30224001	

EXPERT ADVICE



- We recommend using Dotco material removal tools, pg. 32-34.
- For microstop cage selection, refer to pg. 49-72.

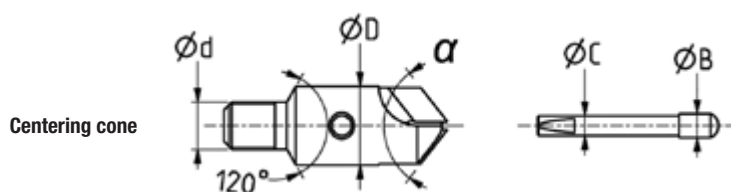
Alternative cutters can be made on request with special diameters, special thread (ex: 1/4-28F, M10x1...), special angles (ex: 90°, 120°...), carbide, HSS-E or PCD*
* Only to use only with pilots having a head dia ≥ shank dia + 0.5 mm (0.0196 in).

ADVANTAGES

- High quality PCD inserts provide superior surface finish to composite materials requiring minimal effort from the operator.
- Superior characteristics of PCD ensure cutters with extended life.



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE	KEVLAR
Carbide	●	●	●	●	
HSS-E	●	●	●		
PCD*				●	
HSS-E					●
Carbide					●



MICROSTOP CAGE REF CHAPTER A	CUTTER Ø D ± 0.1 mm	PILOT			NUMBERS OF FLUTES	THREAD Ø D	COUNTERSINKING ANGLE	CUTTER + PILOT REF. PCD*	CUTTER ONLY REF. PCD*
		HEAD Ø B		SHANK Ø C mm					
		-0.02 mm -0.05 mm	0.0007 in -0.0020 in						
RB 156 RB 206 RB 256 RB 257 RB 258	10	2.40	0.0945	2	2	M6 x 1	100°	30500311	30500300
	10	3.00	0.1181	2.5	2	M6 x 1	100°	30500055	30500000
	10	3.17	0.1248	2.5	2	M6 x 1	100°	30500060	30500000
	10	3.50	0.1377	2.5	2	M6 x 1	100°	30500065	30500000
	10	4.00	0.1574	2.5	2	M6 x 1	100°	30500070	30500000
	10	4.00	0.1574	2.5	2	M6 x 1	130°	30503060	30503060
	10	4.15	0.1634	2.5	2	M6 x 1	100°	30500075	30500000
	14	-	-	2.5	2	M6 x 1	130°	-	02500591PT
14	-	-	3.5	2	M6 x 1	130°	-	02500592PT	
RB 306 RB 307	14	-	-	2.5	2	M8 x 1	130°	-	02500593PT
	14	-	-	3.5	2	M8 x 1	130°	-	02500586PT
	14	4.10	0.0614	4	2	M8 x 1	130°	30503166	30503160
	14	4.76	0.1874	4	2	M8 x 1	100°	30500105	30500100
	14	4.80	0.1890	4	2	M8 x 1	100°	30500110	30500100
	14	4.80	0.1890	4	2	M8 x 1	130°	30502160	30503160
	14	5.00	0.1968	4	2	M8 x 1	100°	30500115	30500100
	14	5.10	0.2007	4	2	M8 x 1	130°	30503165	30503160
	14	5.60	0.2204	4	2	M8 x 1	100°	30500120	30500100
	14	6.00	0.2362	4	2	M8 x 1	100°	30500125	30500100
	14	6.35	0.2500	4	2	M8 x 1	100°	30500130	30500100
	21	7.00	0.2756	5	3	M8 x 1	100°	30500203	30500200
	21	7.94	0.3126	5	3	M8 x 1	100°	30500205	30500200
	21	8.00	0.3149	5	3	M8 x 1	100°	30500210	30500200
	21	9.52	0.3748	5	3	M8 x 1	100°	30500215	30500200
	21	10.00	0.3937	5	3	M8 x 1	100°	30500220	30500200
	21	-	-	5	3	M8 x 1	130°	-	30503260

EXPERT ADVICE

- Our PDC cutters can be resharpened 3 to 4 times.

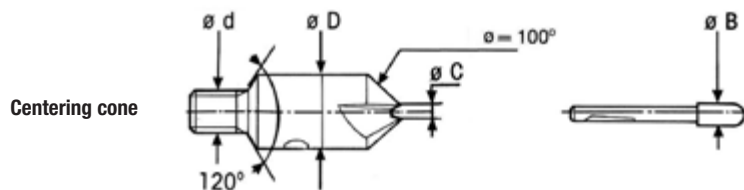
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* Only to use only with pilots having a head dia ≥ shank dia + 0.5 mm (0.0196 in).

Cutters with Inserted Pilot for Rivets and Screws

Carbide | HSS-E | PCD

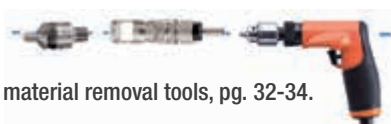


FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE	KEVLAR
Carbide	●	●	●	●	
HSS-E	●	●	●		
PCD*				●	
HSS-E					●
Carbide					●



MICROSTOP CAGE REF CHAPTER A	CUTTER Ø D ± 0.1 mm	PILOT		SHANK Ø C mm	NUMBERS OF FLUTES	THREAD THREAD Ø D	CUTTER + PILOT REF. CARBIDE	CUTTER ONLY REF. CARBIDE
		HEAD Ø B						
		-0.02 mm -0.05 mm	-0.0007 in -0.0020 in					
RB 156 RB 206 RB 256 RB 257 RB 258	10	2.00	0.0787	2	3	M6 x 1	30320005	30320000
	10	2.38	0.0937	2	3	M6 x 1	30320010	30320000
	10	2.50	0.0984	2	3	M6 x 1	30320015	30320000
	10	2.80	0.1102	2.5	3	M6 x 1	30320110	30320100
	10	3.00	0.1181	2.5	3	M6 x 1	30320115	30320100
	10	3.17	0.1248	2.5	3	M6 x 1	30320120	30320100
	10	3.50	0.1377	2.5	3	M6 x 1	30320215	30320100
	10	4.00	0.1574	3.5	3	M6 x 1	30320310	30320300
	10	4.15	0.1634	3.5	3	M6 x 1	30320315	30320300
RB 306 RB 307	14	4.76	0.1874	4	3	M8 x 1	30322015	30322000
	14	4.80	0.1890	4	3	M8 x 1	30322025	30322000
	14	5.00	0.1968	4	3	M8 x 1	30322030	30322000
	14	5.60	0.2204	4	3	M8 x 1	30322040	30322000
	14	6.00	0.2362	4	3	M8 x 1	30322050	30322000
	14	6.35	0.2500	4	3	M8 x 1	30322055	30322000
	17	7.94	0.3126	5	3	M8 x 1	30323035	30323000
	17	8.00	0.3149	5	3	M8 x 1	30323040	30323000
	21	9.52	0.3748	5	2	M8 x 1	30324045	30324000
	21	10.00	0.3937	5	2	M8 x 1	30324050	30324000

EXPERT ADVICE



- We recommend using Dotco material removal tools, pg. 32-34.
- For microstop cage selection, refer to pg. 49-72.

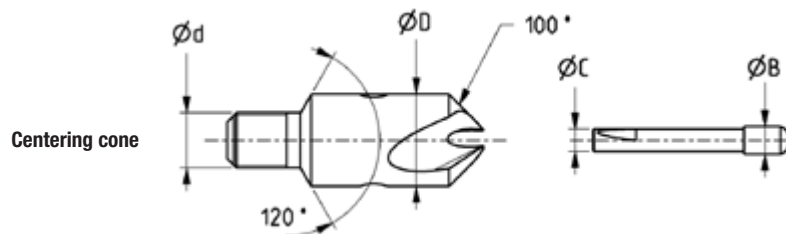
Alternative cutters can be made on request with special diameters, special thread (ex: 1/4-28F, M10x1...), special angles (ex: 90°, 120°...), carbide, HSS-E or PCD*
* Only to use only with pilots having a head dia ≥ shank dia + 0.5 mm (0.0196 in).

ADVANTAGES

- Unique cutter geometry provides excellent surface finish and prevents tearing of fibers.



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE	KEVLAR
Carbide	●	●	●	●	
HSS-E	●	●	●		
PCD*				●	
HSS-E					●
Carbide					●



MICROSTOP CAGE REF CHAPTER A	CUTTER ϕD ± 0.1 mm	PILOT			NUMBERS OF FLUTES	THREAD ϕD	CUTTER + PILOT REF. HSS-E	CUTTER ONLY REF. HSS-E
		HEAD ϕB		SHANK ϕC mm				
		-0.02 mm -0.05 mm	-0.0007 in -0.0020 in					
RB 156 RB 206 RB 256 RB 257 RB 258	10	3.00	0.1181	2.5	2	M6 x 1	30600010	30600001
	10	3.17	0.1248	2.5	2	M6 x 1	30600015	30600001
	10	3.50	0.1377	2.5	2	M6 x 1	30600020	30600001
	10	4.00	0.1574	2.5	2	M6 x 1	30600025	30600001
	10	4.15	0.1634	2.5	2	M6 x 1	30600030	30600001
RB 306 RB 307	14	4.80	0.1890	4	2	M8 x 1	30600110	30600101
	14	5.00	0.1968	4	2	M8 x 1	30600115	30600101
	14	6.00	0.2362	4	2	M8 x 1	30600120	30600101
	14	6.35	0.2500	4	2	M8 x 1	30600125	30600101

EXPERT ADVICE

- Alternate pilots may be manufactured on request.
e.g.: special diameters and lengths.

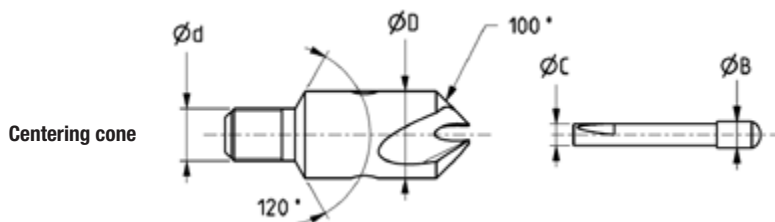
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* Only to use only with pilots having a head dia \geq shank dia + 0.5 mm (0.0196 in).

ADVANTAGES

- Unique cutter geometry provides excellent surface finish and prevents tearing of fibers.



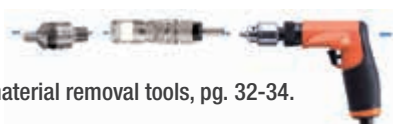
FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE	KEVLAR
Carbide	●	●	●	●	
HSS-E	●	●	●		
PCD*				●	
HSS-E					●
Carbide					●



MICROSTOP CAGE REF CHAPTER A	CUTTER $\varnothing D$ ± 0.1 mm	PILOT			NUMBERS OF FLUTES	THREAD $\varnothing D$	CUTTER + PILOT REF. CARBIDE	CUTTER ONLY REF. CARBIDE
		HEAD $\varnothing B$		SHANK $\varnothing C$ mm				
		-0.02 mm -0.05 mm	-0.0007 in -0.0020 in					
RB 156 RB 206 RB 256 RB 257 RB 258	10	3.00	0.1181	2.5	2	M6 x 1	30601010	30601001
	10	3.17	0.1248	2.5	2	M6 x 1	30601015	30601001
	10	3.50	0.1377	2.5	2	M6 x 1	30601020	30601001
	10	4.00	0.1574	2.5	2	M6 x 1	30601025	30601001
	10	4.15	0.1634	2.5	2	M6 x 1	30601030	30601001
RB 306 RB 307	14	4.80	0.1890	4	2	M8 x 1	30601110	30601101
	14	5.00	0.1968	4	2	M8 x 1	30601115	30601101
	14	6.00	0.2362	4	2	M8 x 1	30601120	30601101
	14	6.35	0.2500	4	2	M8 x 1	30601125	30601101

EXPERT ADVICE

- We recommend using Dotco material removal tools, pg. 32-34.
- For microstop cage selection, refer to pg. 49-72.

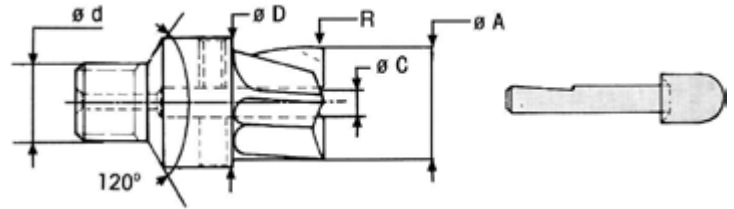


Alternative cutters can be made on request with special diameters, special thread (ex: 1/4-28F, M10x1...), special angles (ex: 90°, 120°...), carbide, HSS-E or PCD*
* Only to use only with pilots having a head dia \geq shank dia + 0.5 mm (0.0196 in).



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
Carbide	●	●	●	
HSS-E	●	●	●	
PCD*				●

Centering cone



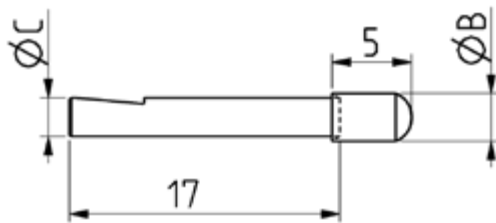
MICROSTOP CAGE REF CHAPTER A	Ø SPOTFACING DIA		CUTTERS BODY Ø D mm	SHANK DU PILOT Ø C mm	NUMBER OF FLUTES	THREAD Ø D	CUTTER REF. HSS-E R = 0 mm	CUTTER REF. HSS-E R = 1 mm	CUTTER REF. HSS-E R = 2 mm	CUTTER REF. CARBIDE R = 0 mm
	mm	in								
RB 156 RB 206 RB 256 RB 257 RB 258	5	0.1968	10	2	4	M6 x 1	31000000	31001002	-	-
	6	0.2362	10	2	4	M6 x 1	31000005	31001007	-	-
	7	0.2755	10	2	4	M6 x 1	31000010	31001012	-	-
	8	0.3149	10	2	4	M6 x 1	31000015PT	31001017	-	-
	9	0.3543	10	2	4	M6 x 1	31000020	31001022	-	-
RB 306 RB 307	10	0.3937	10	2	4	M6 x 1	31000025	31001030	-	02506010PT
	11	0.4330	11	3	4	M8 x 1	31000100PT	31001101	31001103	-
	12	0.4724	12	3	4	M8 x 1	31000105	31001106	31001108	02506012PT
	13	0.5118	13	3	4	M8 x 1	31000110	31001111	31001113	02506013PT
	14	0.5511	14	3	4	M8 x 1	31000115	31001120	31001130	02506014PT
	15	0.5905	15	4	4	M8 x 1	31000200PT	31001201	31001203	02506015PT
	16	0.6299	16	4	4	M8 x 1	31000205	31001206	31001208	02506016PT
	17	0.6692	17	4	4	M8 x 1	31000210	31001215	31001225	02506017PT
	18	0.7086	18	4	4	M8 x 1	31000300PT	31001301	31001303	02506018PT
	19	0.7480	19	4	4	M8 x 1	31000305	31001306	31001308	02506019PT
	20	0.7874	20	4	4	M8 x 1	31000310	31001311	31001313	02506020PT
21	0.8267	21	4	4	M8 x 1	31000315	31001320	31001330	02506021PT	
RB 406	22	0.8661	22	5	4	M10 x 1	31000400PT	31001401	31001404	-
	24	0.9448	24	5	4	M10 x 1	31000410	31001413	31001420	-
	25.4	1.000	25.4	5	4	M10 x 1	31000500PT	31001501	31001503	-
	26	1.0236	26	5	4	M10 x 1	31000505	31001506	31001508	-
	28	1.1023	28	5	4	M10 x 1	31000510	31001511	31001513	-
	30	1.1811	30	5	4	M10 x 1	31000520	31001521	31001523	-
	38.1	1.5000	38.1	5	4	M10 x 1	31000600PT	31001610	31001620	-

EXPERT ADVICE

- Alternate cutter example: combined carbide cutter chamfer + counterbore.



Alternative cutters can be made on request with special diameters, special thread (ex: 1/4-28F, M10x1...), special angles (ex: 90°, 120°...), carbide, HSS-E or PCD*
* Only to use only with pilots having a head dia ≥ shank dia + 0.5 mm (0.0196 in).



HEAD Ø B		SHANK Ø C mm	PILOT REF.
-0.02 mm -0.05 mm	-0.0007 in -0.0020 in		
3.80	0.1496	3.5	31100300
4.00	0.1574	3.5	31100305
4.15	0.1634	3.5	31100310
4.80	0.1890	3.5	31100315
5.00	0.1968	3.5	31100320
4.00	0.1574	4	31100400
4.50	0.1771	4	31100405
4.76	0.1874	4	31100410
4.80	0.1890	4	31100415
5.00	0.1968	4	31100420
5.50	0.2165	4	31100425
5.60	0.2204	4	31100430
6.00	0.2362	4	31100440
6.20	0.2441	4	31100444
6.30	0.2480	4	31100446
6.35	0.2500	4	31100445
7.00	0.2756	4	31100460
7.90	0.3110	4	31100478
8.00	0.3149	4	31100455
6.35	0.2500	5	31100515
7.00	0.2755	5	31100520
9.30	0.3661	5	31100586

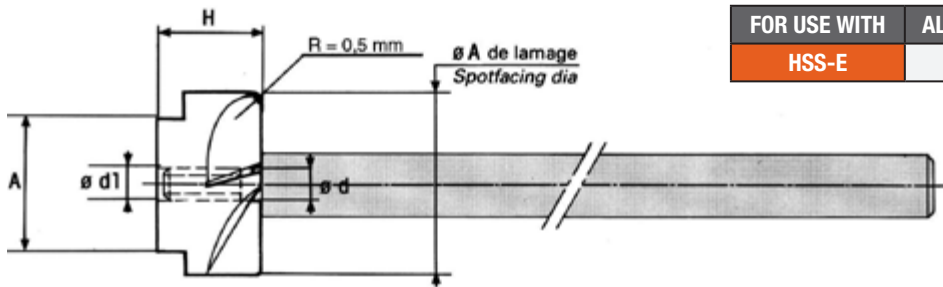
HEAD Ø B		SHANK Ø C mm	PILOT REF.
-0.02 mm -0.05 mm	-0.0007 in -0.0020 in		
2.00	0.0787	2	31100000
2.38	0.0937	2	31100005
2.40	0.0944	2	31100006
2.45	0.0964	2	31100009
2.50	0.0984	2	31100010
3.00	0.1181	2	31100020
3.17	0.1248	2	31100025
3.20	0.1259	2	31100024
3.50	0.1377	2	31100030
4.00	0.1574	2	31100035
4.80	0.1890	2	31100056
2.50	0.0984	2.5	31100100
2.80	0.1102	2.5	31100105
3.00	0.1181	2.5	31100110
3.17	0.1248	2.5	31100115
3.20	0.1259	2.5	31100114
3.50	0.1377	2.5	31100120
3.60	0.1417	2.5	31100122
4.00	0.1574	2.5	31100130
4.15	0.1634	2.5	31100131
4.40	0.1732	2.5	31100138
4.46	0.1755	2.5	03590513PT
4.60	0.1811	2.5	31100142
4.76	0.1874	2.5	31100145
4.80	0.1890	2.5	31100133
5.00	0.1968	2.5	31100135
5.50	0.2165	2.5	03590436PT
6.35	0.2500	2.5	31100177
3.00	0.1181	3	31100200
3.17	0.1248	3	31100205
3.20	0.1259	3	31100206
3.50	0.1377	3	31100210
4.00	0.1574	3	31100220
4.80	0.1890	3	31100236
5.00	0.1968	3	31100225
5.50	0.2165	3	31100250
6.00	0.2362	3	31100230

EXPERT ADVICE




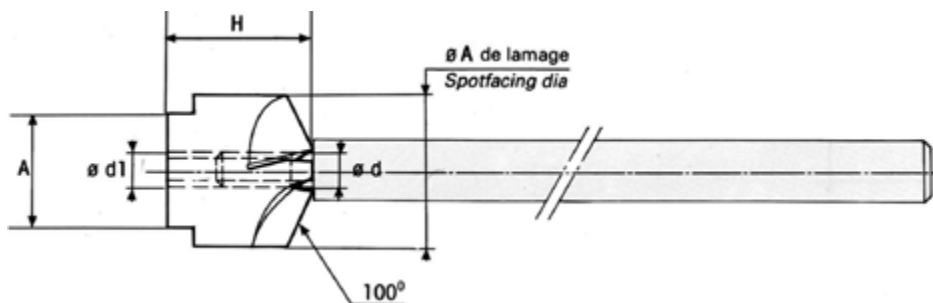
- We recommend using Dotco material removal tools, pg. 32-34.
- For microstop cage selection, refer to pg. 49-72.


Alternative pilots may be manufactured on request. e.g.: special diameters and lengths.



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
HSS-E	●	●	●	

BACK SPOTFACING CUTTERS	Ø SPOTFACING DIA		Ø D1	Ø D H9 mm	H ± 0.5 mm	A ACROSS FLATS -0.00 mm -0.10 mm	CUTTER REF.
	mm	in					
	10	0.3937	M4 x 0.7	4	10	6	31500035
	12	0.4724	M4 x 0.7	4	10	6	31500065
	14	0.5511	M4 x 0.7	4	10	10	31500095



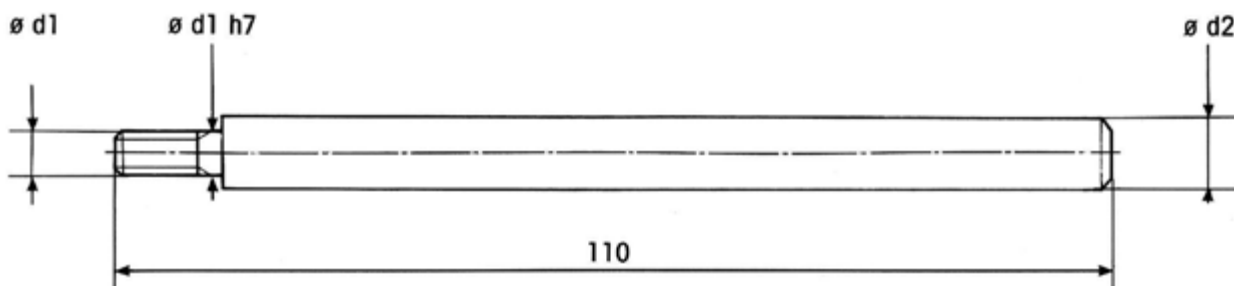
BACK COUNTERSINK CUTTERS	Ø SPOTFACING DIA		Ø D1	Ø D H9 mm	H ± 0.5 mm	A ACROSS FLATS -0.00 mm -0.10 mm	CUTTER REF.
	mm	in					
	6	0.2362	M2 x 0.4	2	7	5	31601000
	8	0.3149	M3 x 0.5	3	10	6	31601025



EXPERT ADVICE

- To use with our back spotfacing guns, pg. 41-42.

Alternative cutters can be made on request with special diameters and/or radius;
See next page for pilot selection.



$\varnothing d1$	PILOT		PILOT REF.
	-0.02 mm -0.05 mm	-0.0007 in -0.0020 in	
M2 x 0.4	2.35	0.0925	31700000
M2 x 0.4	2.50	0.0984	31700005
M3 x 0.5	3.00	0.1181	31700200
M3 x 0.5	4.00	0.1574	31700210
M4 x 0.7	4.00	0.1574	31700300
M4 x 0.7	4.75	0.1870	31700310
M4 x 0.7	5.00	0.1986	31700315
M4 x 0.7	6.00	0.2362	31700325

EXPERT ADVICE



- Special attachment diameter can be made to collet size.
- To be used with backspotfacing and countersink cutters.

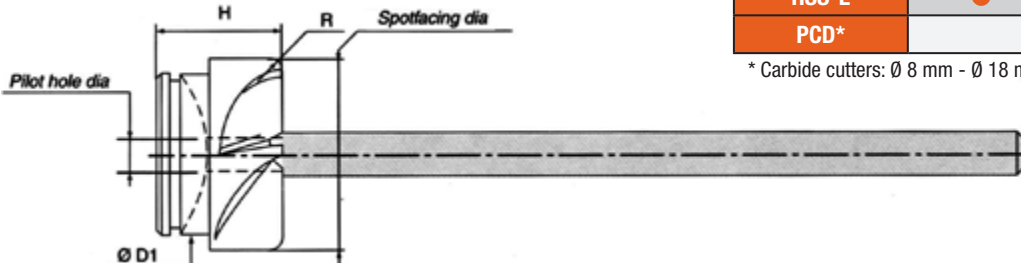
Alternative pilots can be manufactured on request with special diameters and lengths.

Back Spotfacing and Countersink Cutters - Bayonet Locking Pilot

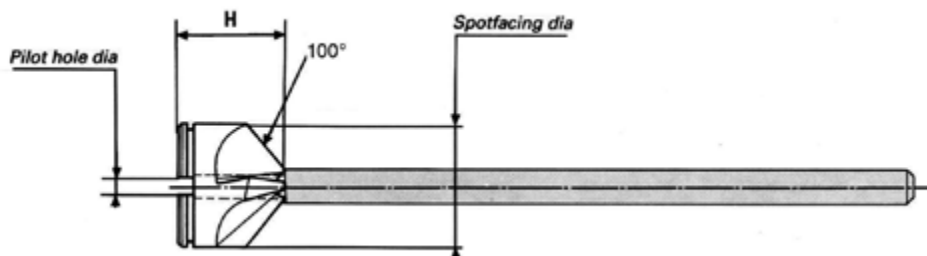
Carbide | HSS-E | PCD

FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
Carbide	●	●	●	
HSS-E	●	●	●	
PCD*				●

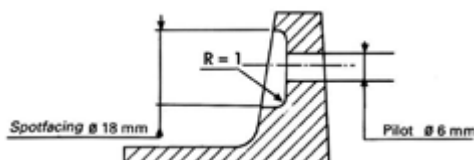
* Carbide cutters: Ø 8 mm - Ø 18 mm Ü H = 16 mm



BACK SPOTFACING CUTTERS	Ø SPOTFACING DIA		RADIUS R mm	H mm	Ø PILOT HOLE DIA mm	Ø D1	CUTTER REF. HSS-E	RING REF.
	mm	in						
<p>Retaining ring</p>	8	0.3149	0.5	10	3	8	31300000	91825010
	10	0.3937	0.5	10	3	8	31300025	91825010
	10	0.3937	2	10	3	8	31302035	91825010
	12	0.4724	0.5	10	3	10	31300050	91825015
	12	0.4724	2	10	3	10	31302060	91825015
	14	0.5511	1	10	3	10	31300125	91825015
	14	0.5511	2	10	3	10	31302135	91825015
	14	0.5511	1	16	4	10	31300150	91825015
	14	0.5511	2	16	4	10	31302160	91825015
	16	0.6299	1	16	4	14	31300200	91825025
	16	0.6299	2	16	4	14	31302210	91825025
	18	0.7086	1	16	4	14	31300250	91825025
	20	0.7874	1	16	4	14	31300300	91825025



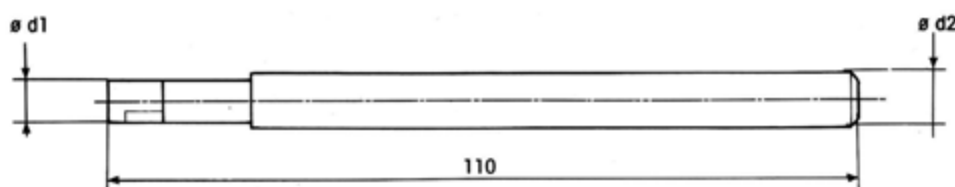
BACK COUNTERSINK CUTTERS	Ø SPOTFACING DIA		H mm	Ø PILOT HOLE DIA mm	Ø D1	CUTTER REF. HSS-E	RING REF.
	mm	in					
<p>Retaining ring</p>	8	0.3149	10	3	8	31306000	91825010
	10	0.3937	10	3	8	31306025	91825015
	12	0.4724	10	3	8	31306050	91825020
	14	0.5511	10	3	10	31306150	91825025
	17	0.7083	10	3	10	31306225	91825030



EXPERT ADVICE

- Necessary tools: cutter - 31300250, pilot - 31400125.

Alternative cutters can be made on request with special diameters and/or radius, special angles (ex : 90°, 120°...), carbide*, HSS-E or PCD. See next page for pilot selection.



Ø d1	PILOT Ød2		PILOT REF.
	-0.00 mm -0.02 mm	-0.000 in. -0.0007 in	
2.5	2.50	0.0820	03596083PT
3	3.00	0.1181	31400000
3	3.20	0.1260	31400004
3	3.50	0.1377	31400005
3	4.00	0.1574	31400015
3	5.00	0.1968	31400020
4	4.00	0.1574	31400100
4	4.50	0.1771	31400105
4	4.80	0.1889	31400110
4	5.00	0.1968	31400115
4	6.00	0.2362	31400125
5	5.00	0.1968	31400200
5	6.00	0.2362	31400210
6	6.00	0.2362	31400300



EXPERT ADVICE

- To use with our back spotfacing guns, pg. 41-42.

Alternative pilots can be manufactured on request with special diameters and lengths.
To use with backspotfacing and countersink cutters.
Special attachment diameter can be made to collet size.

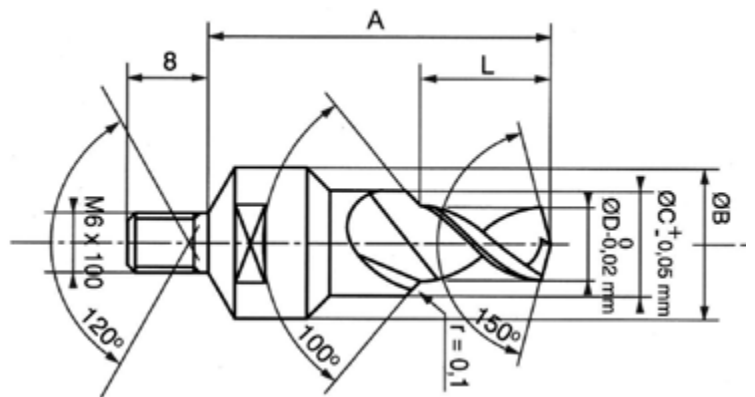
ADVANTAGES

- Drilling and countersinking of all rivet holes can be achieved in one operation.
- Cutter diameters have been designed to meet requirements of various riveting specifications.



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
Carbide	●	●	●	
HSS-E	●	●	●	
PCD*				●

* PCD cutters countersinking section.



EXPERT ADVICE

- The RB 018 drill and countersink cutter is suitable for use with any of the above microstop cages.



Alternative diameters, lengths, angles, radius, material (PCD, Carbide, HSS-E) are available on request. When ordering, please indicate material to drill, material thickness, holes diameter, tolerance required.

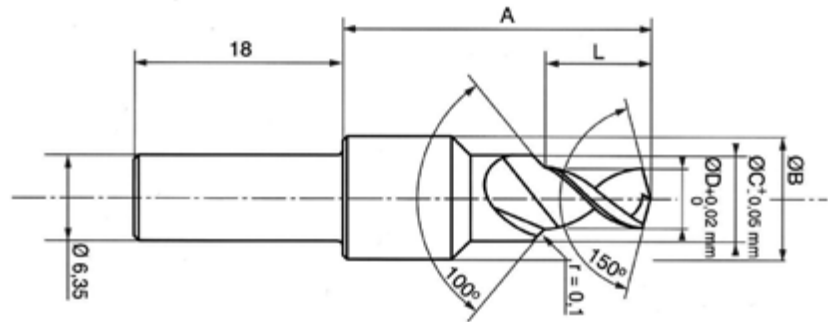
ADVANTAGES

- Drilling and countersinking of all rivet holes can be achieved in one operation with tolerance of 0.003 in (0.07 mm) according to nominal diameter, which meets the requirements of most riveting specifications.



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
Carbide	●	●	●	
HSS-E	●	●	●	
PCD*				●

* PCD cutters countersinking section.



NOMINAL RIVET		DIA C		L		DIA C		A		DIA B		DRILL CAPACITY		PART N° HSS-E	PART N° CARBIDE
mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in		
3.20	1/8	3.20	0.126	7.00	0.276	7.00	0.276	26.00	1.023	10.00	0.394	6.00	0.236	32800100	32802100
4.00	5/32	4.00	0.157	7.00	0.276	10.00	0.394	26.00	1.023	10.00	0.394	5.50	0.216	32800200	32802200
4.00	5/32	4.00	0.157	12.00	0.472	10.00	0.394	26.00	1.023	10.00	0.394	10.00	0.394	32800205	32802205
4.80	3/16	4.80	0.189	12.00	0.472	10.00	0.394	26.00	1.023	10.00	0.394	10.50	0.413	32800260	32802260

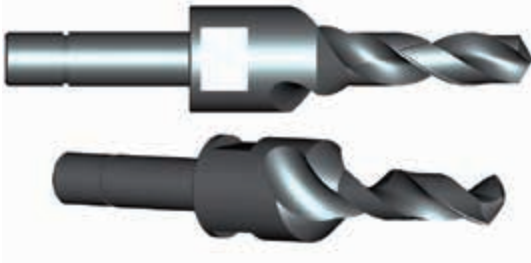
RB 019 HP: HIGH-PRECISION CUTTERS

- On request only. we can supply the RB 019 HP in HSS-E, carbide, or PCD to use on aluminum alloy or titanium, which will guarantee a hole accuracy of 0.0012 in (0.03 mm). These cutters with special grinding, polished flutes, and a drill point concentric to less than 0.0005 in (0.01 mm) are commonly used for HI-LITE or HUCK LGP fasteners installation.
- When ordering, please indicate: material to drill, material thickness, hole diameter, and tolerance required.

Alternative RB019 may be made on request with special diameters and dimensions carbide, HSS-E, or PCD.

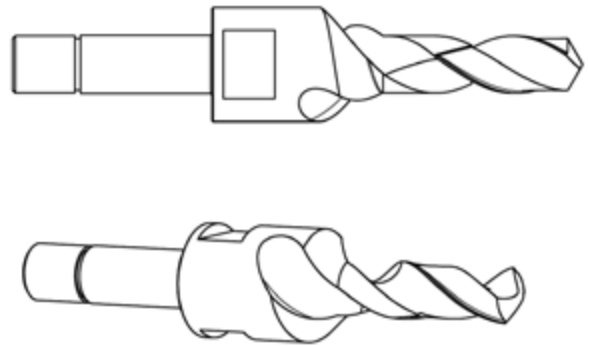
PRECISION MANUFACTURING

- On request only, we can supply the RB 020 HP in HSS-E, carbide, or PCD to use on aluminum alloy or titanium, which will guarantee a hole accuracy of 0.0012 in (0.03 mm). These cutters are manufactured with special grinding, polished flutes, and a drill point concentric to less than 0.0005 in (0.01 mm).
- When ordering, please indicate: material to drill, material thickness, hole diameter and tolerance required.



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
Carbide	●	●	●	
HSS-E	●	●	●	
PCD*				●

* Carbide cutters: Ø 8 mm - Ø 18 mm Ü H = 16 mm



EXPERT ADVICE

- We recommend the use of Recoles Quackenbush ADE machines.

THREAD	M6	M8-M10-M12
	21500	20962
ADE Machine		

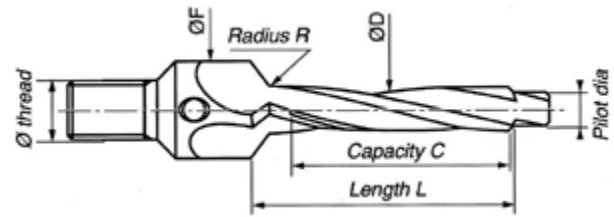
ADVANTAGES

- This particular type of drill featuring a solid pilot and three flutes has been developed especially to produce finished holes in a single operation: reaming, countersinking, and producing the blend radius for all holes up to grade 8, locating in pre-drilled holes as reference.
- The non-cutting rear guide ensures perfect concentricity of the countersink, with no elongation of reamed holes.



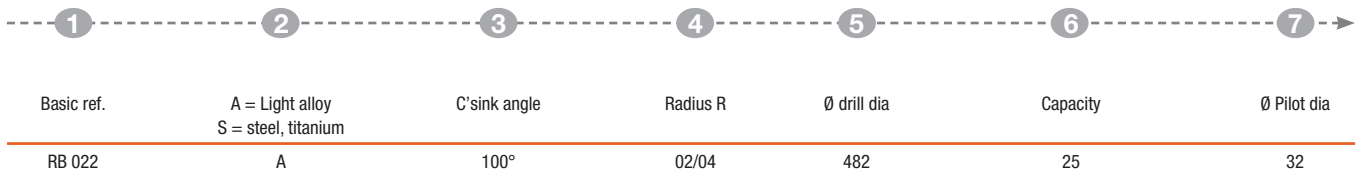
FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
Carbide	●	●	●	
HSS-E	●	●	●	
PCD*				●

* Carbide cutters: Ø 8 mm - Ø 18 mm Ü H = 16 mm



MICROSTOP CAGE REF CHAPTER A	THREAD Ø D	REAMER DIA Ø D		L MAXI		MAXI BODY DIA F		DRILL CAPACITY C MAXI	
		mm	in	mm	in	mm	in	mm	in
RB 356 HP 21	M6 x 1	3.20 - 4.20	0.125 - 0.165	20	0.787	10	0.393	12	1/2
RB 356 HP 38	M6 x 1	3.20 - 4.21	0.125 - 0.165	36	1.417	10	0.393	25	1
RB 356 HP 21	M6 x 1	4.30 - 6.35	0.169 - 1/4	20	0.787	14	0.551	12	1/2
RB 356 HP 38	M6 x 1	4.30 - 6.35	0.169 - 1/4	36	1.417	14	0.551	25	1
RB 356 HP 58	M10 x 1	6.35 - 8.00	1/4 - 0.315	40	1.574	17	0.669	30	1.181
RB 356 HP 58	M10 x 1	8.00 - 10.00	0.315 - 0.393	40	1.574	21	0.826	30	1.181

Example ordering information RB 022:



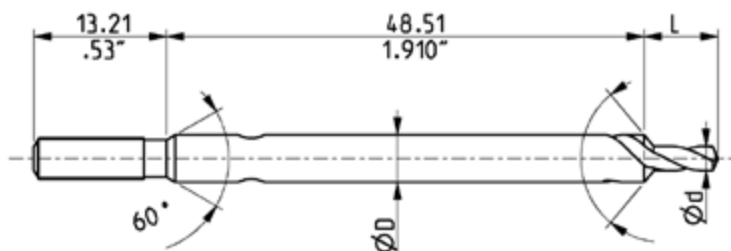
EXPERT ADVICE

- The RB 022 drill- ream and countersink cutter is suitable for use with any of the above microstop cages.

Alternative diameters, lengths, radius, materials (PCD, Carbide, HSS-E) are available on request. On request 1/4-28 cutter thread.



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
Carbide	●	●	●	
HSS-E	●	●	●	



TYPE	SHANK DIA D		DRILL DIA D		DRILL LENGTH L		COUNTERSINK ANGLE	EXTERNAL THREAD	PART N° HSS-E	PART N° CARBIDE
	mm	in	mm	in	mm	in				
WD40 100 25	4.76	0.1875	2.49	0.0980	7.49	0.2950	100°	8-32	32820010	-
WD40 100 35	4.76	0.1875	2.49	0.0980	10.67	0.4200	100°	8-32	32820110	-
WD40 M3 100 25	4.76	0.1875	2.49	0.0980	7.49	0.2950	100°	8-32	-	02110004PT



EXPERT ADVICE

- To use with our nutplate drill 10 QNDP, pg. 18.

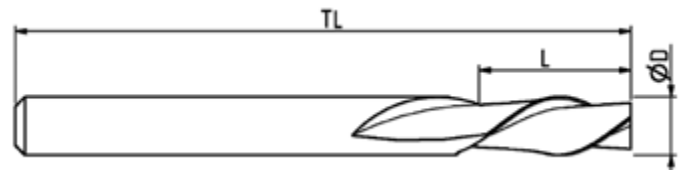
Alternative WD and WDS series drill-countersink cutters are available on request. When ordering, please state code and series number.



ADVANTAGES

- These cutters are manufactured with a left hand helix. This ensures swarf dispersion towards the tip of the cutter, improving the working conditions for the operator.
- Can be used on thicknesses up to 6 mm in light alloys.
- For certain jobs where the routing operation is in the middle of the plate (such as routing windows or inspection doors), ground point cutters are recommended.



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
Carbide	●			
HSS-E	●			
PCD*				●



NOMINAL DIA. D		CUTTING LENGTH L		TOTAL LENGTH		REF. WITHOUT GROUND POINT	REF. WITH GROUND POINT
mm	in	mm	in	mm	in		
6.00	0.2362	15.00	0.5905	64.00	2.52	32600000	32600005
6.35	1/4	15.00	0.5905	64.00	2.52	32600050	32600055
7.94	5/16	15.00	0.5905	64.00	2.52	32600100	32600105



EXPERT ADVICE

- These router cutters are designed for use on all Dotco routers.

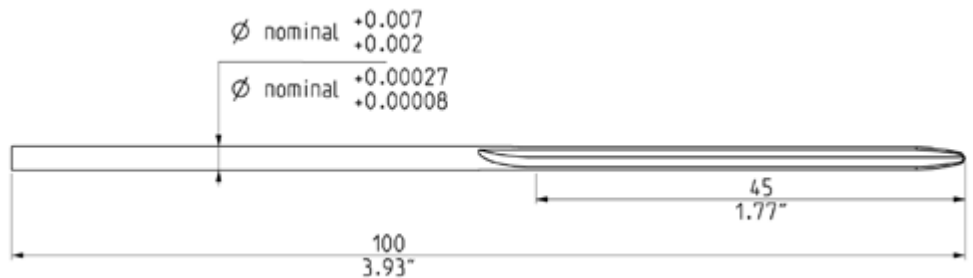
Alternative diameters, lengths, materials (PCD, Carbide, HSS-E) are available on request.

ADVANTAGES

- Special drill reamers producing accurate holes without delamination.
- For small thickness material, we recommend the 4 fluted cutter.
- Diameter 0.094 in up to 0.393 in.



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
Carbide				●



Example - for use with a drill of 3.17 mm dia:



3 FLUTED OGIVAL SHAPE

Basic Code

32757

+

Drill size in 1/100 mm

317

32757317

Code to indicate



4 FLUTED TAPERED SHAPE

Basic Code

32755

+

Drill size in 1/100 mm

317

32755317

Code to indicate

EXPERT ADVICE

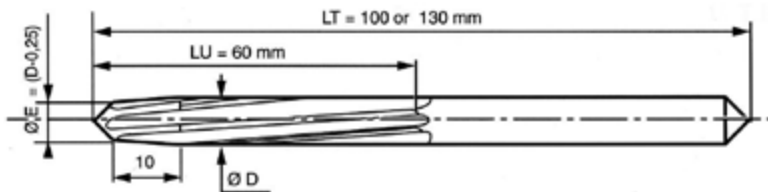
- To use with our drill guides RB 240 - RB 245, pg. 47 and Dotco Pistol Drills, pg. 32-34.



For best results, Recoules Quackenbush recommends cutting speed of 125.150 sfpm. Workpiece must be clamped secure to reduce risk of vibration.

SPECIFICATIONS

- HSS-E Cobalt
- 15° left hand spiral flutes
- Overall length: 100 mm / 4 in or 130 mm / 5.1 in
- Flute length: 60 mm / 2.36 in
- 90° ground points
- Taper lead length: 10 mm / 0.4 in
- Diameter from 3/32 in to 0.5 in
- All tolerances
- N° of flutes: up to dia 4.9 mm
up to dia 13 mm



FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
Carbide	●	●	●	●
HSS-E	●	●	●	

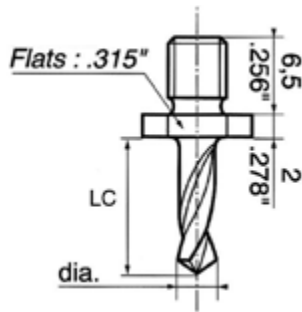
DIA REQUIRED	CODE NUMBER	
	LENGTH = 100 mm (4 in)	LENGTH = 130 mm (5.1 in)
4 U 9	33503108	-
4 X 7	33504104	33504105
4 Z 7	33506100	-
4.8 H 7	33500104	-
4.8 H 8	-	33500187
5 H 8	33500206	33500207
5 X 7	33504204	33504205
5.2 U 9	33503228	-
5.2 X 7	33504224	-
6 H 8	33500306	-
6 X 7	33504304	-
6.33 H 7	33500301	-
6.35 H 7	33500305	-
7.9 H 8	33500404	-
8 H 7	33500504	-
8.3 H 8	33500536	33500537
9.2 H 8	-	33500627
9.5 H 8	-	33500657
10 M 8	-	33501707
12 H 7	33500904PT	-

EXPERT ADVICE

- To use with our drill guides RB 240 - RB 245, pg. 47 and Dotco Pistol Drills, pg. 32-34.



On request, we can supply special reamers - diameters, length, tolerance, flutes, coating, shank according to your specifications.



Alternative drills may be manufactured on request:
E.g. special diameters and lengths.

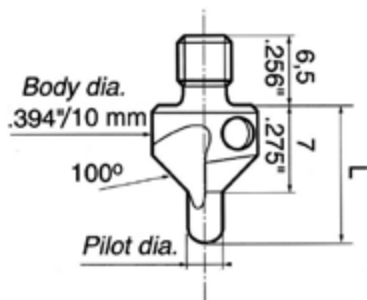
FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
HSS	●			

LC		DRILL DIAMETER		PART NUMBER
mm	in	mm	in	
8	0.315	3.20	0.1260	33000132
12	0.472	2.50	0.0984	33000020
12	0.472	3.00	0.1181	33000025
12	0.472	3.20	0.1260	33000030
12	0.472	4.00	0.1575	33000040
15	0.591	4.00	0.1575	33000240
15	0.591	4.80	0.1890	33000248
20	0.787	2.50	0.0984	33000625
20	0.787	3.20	0.1260	33000632

COUNTERSINK CUTTERS FOR FLAT OFFSET ANGLE DRILL

- HSS UNF 10-32F

FOR USE WITH	ALUMINIUM	STEEL	TITANIUM	COMPOSITE
HSS	●			



L		PILOT DIAMETER		PART NUMBER
mm	in	mm	in	
9.40	0.370	1.60	0.0630	33001005
10.60	0.417	2.40	0.0945	33001010
10.75	0.423	2.50	0.0984	33001015
11.60	0.456	3.20	0.1260	33001020

EXPERT ADVICE

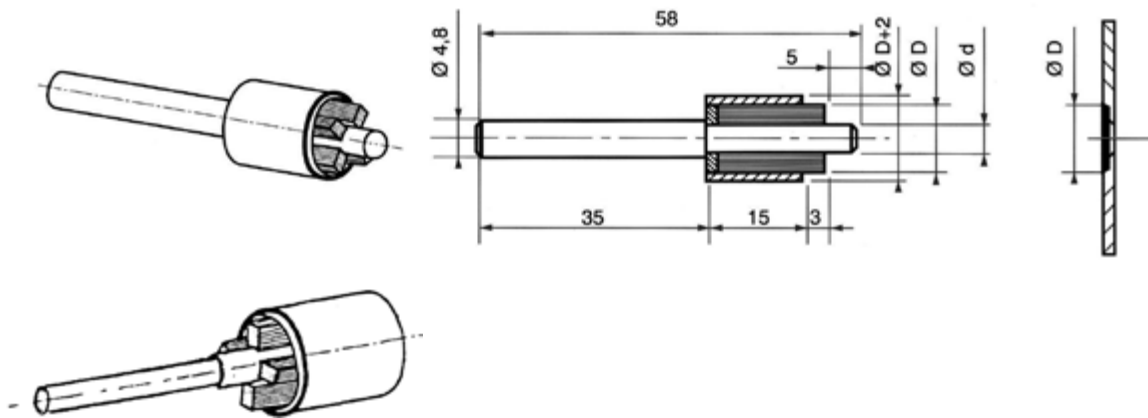
- These cutters are designed for use with the flat offset angle drill RB 106 with UNF 10-32 F spindle thread, pg. 44.
- We recommend the use of Dotco pistol drills, pg. 32-34.

Alternative drills may be manufactured on request:
E.g. special diameters and lengths.



PRECISION MANUFACTURING

- Used for cleaning paint, dirt, rust from around rivet or bolt holes. By placing the pilot in the rivet hole, the cleaning process is secure. Assures a positive electrical contact to eliminate static electricity buildup.
- Wire diameter 0.008 in.
- Solid item with a steel shank + pilot, nylon body in a copper sleeve, 4 steel brushes set at 90°.



DIA D mm	DIA D mm	PART NUMBER
8	3.20	32110067
10	2.40	32110102
10	2.50	32110069
10	3.10	32110070
10	3.50	32110071
10	4.00	32110065
10	5.00	32110078
12	2.40	32110103
12	3.00	32110097
12	3.10	32110072
12	3.50	32110073
12	4.00	32110055

DIA D mm	DIA D mm	PART NUMBER
12	4.80	32110074
12	5.00	32110079
13	3.00	32110060
13	4.80	32110057
13	5.00	32110056
14	4.00	32110063
14	4.80	32110064
14	5.00	32110082
14	5.20	32110081
14	6.00	32110080
14	6.30	32110068

DIA D mm	DIA D mm	PART NUMBER
14	7.50	32110059
16	4.10	32110075
16	4.80	32110076
16	5.00	32110119
16	6.00	32110098
16	6.30	32110058
18	4.80	32110062
20	5.00	32110077
20	7.80	32110066
21	9.30	32110083
23	7.50	32110061