

NC SPOTTING DRILLS

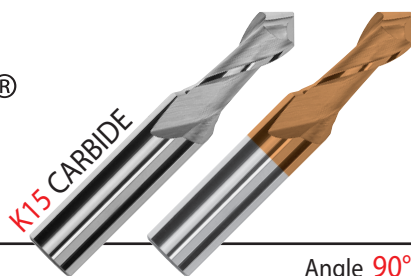


Angle				90°		120°		140° *
Diameter inch mm	L	\		Carbide 8195	Hard'X 8195-H	Carbide 8196	Hard'X 8196-H	Hard'X 8190-H
.078 2	1-9/16	.315		81950200	81950200-H	81960200	81960200-H	
.118 3	1-3/4	.400		81950300	81950300-H	81960300	81960300-H	
.157 4	2	.475		81950400	81950400-H	81960400	81960400-H	
.197 5	2	.600		81950500	81950500-H	81960500	81960500-H	
.236 6	2	.700		81950600	81950600-H	81960600	81960600-H	81900600-H
1/4	2	.700		81950635	81950635-H	81960635	81960635-H	81900635-H
5/16	2-3/8	.900		81950793	81950793-H	81960793	81960793-H	
.315 8	2-3/8	.900		81950800	81950800-H	81960800	81960800-H	81900800-H
3/8	2-3/4	.950		81950952	81950952-H	81960952	81960952-H	81900952-H
.394 10	2-3/4	.950		81951000	81951000-H	81961000	81961000-H	81901000-H
.472 12	2-3/4	.950		81951200	81951200-H	81961200	81961200-H	81901200-H
1/2	2-3/4	.950		81951270	81951270-H	81961270	81961270-H	81901270-H
.551 14	3	.950		81951400	81951400-H	81961400	81961400-H	
5/8	3-1/8	1		81951587	81951587-H	81961587	81961587-H	81901587-H
.630 16	3-1/8	1		81951600	81951600-H	81961600	81961600-H	81901600-H
.787 20	4	1-3/8		81952000	81952000-H	81962000	81962000-H	

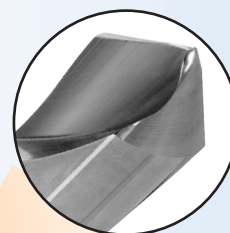
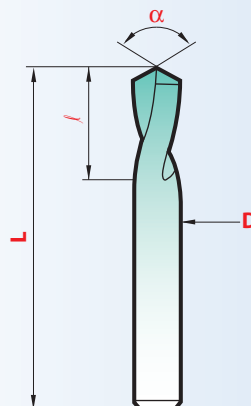
* 140 degree angle : for hard alloys

MINIATURE NC SPOTTING DRILLS MULTI-V®

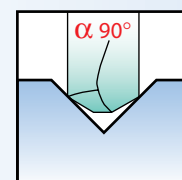
Shown in more detail on page 28



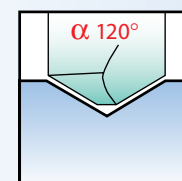
STANDARD magafor						Angle 90°	
Diameter inch mm	L	\	d2	MULTI-V 8090	Hard'X 8090-H		
.020 0,5	1-1/2	.040	.118	80900050	80900050-H		
.024 0,6	1-1/2	.047	.118	80900060	80900060-H		
.028 0,7	1-1/2	.055	.118	80900070	80900070-H		
.031 0,8	1-1/2	.063	.118	80900080	80900080-H		
.035 0,9	1-1/2	.071	.118	80900090	80900090-H		
.039 1,0	1-1/2	.080	.118	80900100	80900100-H		
.047 1,2	1-1/2	.095	.118	80900120	80900120-H		
.055 1,4	1-1/2	.110	.118	80900140	80900140-H		
.059 1,5	1-1/2	.120	.118	80900150	80900150-H		
.063 1,6	1-1/2	.125	.118	80900160	80900160-H		
.071 1,8	1-1/2	.140	.118	80900180	80900180-H		
.078 2,0	1-1/2	.160	.118	80900200	80900200-H		
.098 2,5	1-1/2	.195	.118	80900250	80900250-H		
.118 3,0	2	.240	.157	80900300	80900300-H		
.157 4,0	2	.315	.197	80900400	80900400-H		
3/16	2	.375	1/4	80900476	80900476-H		



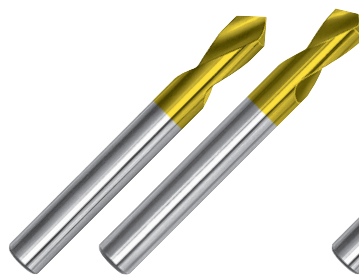
NEW WEB THINNING
FEATURE FOR
HIGH SPEED
CUTTING



90 degree angle :
By using the **magafor NC**
drill of diameter over the
drilling tool, centering and
chamfering are obtained
in a single operation.



120 and 140 degree angles :
The preliminary hole obtained
with the **magafor NC** drill
corresponds to the angle at
the end of the tool used in
drilling and prevents it from
deviating.



Angle		60°		90°	120°	90°	120°	90°	120°
Diameter		L	\	Cobalt	Cobalt	TIN	TIN	Futura	Futura
inch	mm			191	195	0895	0896	0995	0996
.078	2	2	.315		1950200	1960200	08950200	08960200	09950200
.118	3	2	.400		1950300	1960300	08950300	08960300	09950300
1/8		2	.400		1950317	1960317	08950317	08960317	09950317
.157	4	2-1/16	.475	1910400	1950400	1960400	08950400	08960400	09950400
3/16		2-3/8	.600		1950476	1960476	08950476	08960476	09950476
.197	5	2-3/8	.600	1910500	1950500	1960500	08950500	08960500	09950500
.236	6	2-5/8	.800	1910600	1950600	1960600	08950600	08960600	09950600
1/4		2-5/8	.900		1950635	1960635	08950635	08960635	09950635
.315	8	3-1/8	1	1910800	1950800	1960800	08950800	08960800	09950800
3/8		3-1/2	1		1950952	1960952	08950952	08960952	09950952
.394	10	3-1/2	1	1911000	1951000	1961000	08951000	08961000	09951000
.472	12	4	1-1/4	1911200	1951200	1961200	08951200	08961200	09951200
1/2		4	1-3/8		1951270	1961270	08951270	08961270	09951270
.551	14	4-1/2	1-3/8		1951400	1961400	08951400	08961400	09951400
5/8		4-1/2	1-3/8		1951587	1961587	08951587	08961587	09951587
.630	16	4-1/2	1-3/8	1911600	1951600	1961600	08951600	08961600	09951600
.709	18	5-1/8	1-5/8		1951800	1961800	08951800	08961800	09951800
3/4		5-1/8	1-5/8		1951905	1961905	08951905	08961905	09951905
.787	20	5-1/8	1-5/8	1912000	1952000	1962000	08952000	08962000	09952000
.984	25	5-3/8	1-3/4		1952500	1962500	08952500	08962500	09952500
1		5-3/8	1-3/4		1952540	1962540	08952540	08962540	09952540

Diameters	Tolerance D	Angle	L
.078 - .118	0 + .0002"	± 1°	± .0395
1/8 - .236	0 + .0003"		
1/4 - .394	0 + .0004"		
.472 - 1	0 + .0005"		

Tolerances



SET OF 6 NC-DRILLS

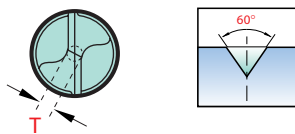
1 piece of each Ø

COMPOSITION

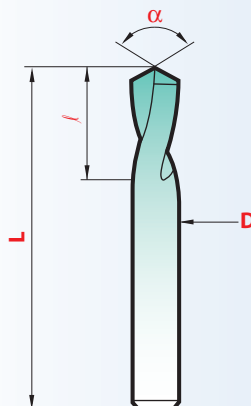
1/8 - 3/16 - 1/4 - .315 - 3/8 - 1/2

TYPE		Cobalt	TIN	Futura
90°	Code	195/6	0895/6	0995/6
120°	Code	196/6	0896/6	0996/6

NC SPOTTING DRILLS

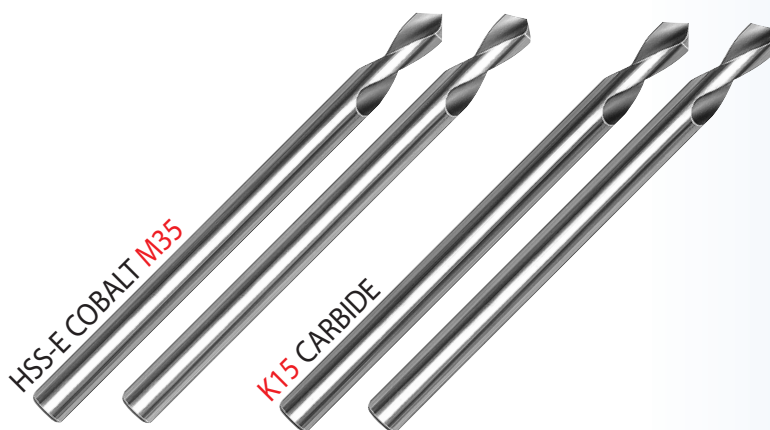


Angle 60°

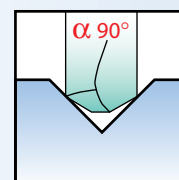


Angle 60°				
D h6	L	\	T	Cobalt 191
4,0	52	12	0,8	1910400
5,0	60	15	0,9	1910500
6,0	66	20	1,0	1910600
8,0	79	25	1,3	1910800
10,0	89	25	1,6	1911000
12,0	102	30	2,0	1911200
16,0	115	35	3,0	1911600
20,0	131	40	3,5	1912000

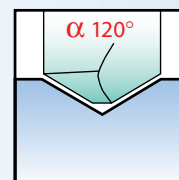
Long series



Angle				90°	120°	90°	120°
Diameter		L	\	Cobalt 197	Cobalt 199	Carbide 8197	Carbide 8199
inch	mm						
.118	3	3-1/8	.400	1970300	1990300		
.157	4	4	.475	1970400	1990400	81970400	81990400
.197	5	4-3/4	.600	1970500	1990500	81970500	81990500
.236	6	5-1/2	.800	1970600	1990600	81970600	81990600
1/4		5-1/2	.870	1970635	1990635	81970635	81990635
.315	8	5-1/2	1	1970800	1990800	81970800	81990800
3/8		6-3/4	1	1970952	1990952	81970952	81990952
.394	10	6-3/4	1	1971000	1991000	81971000	81991000
.472	12	6-3/4	1-3/16	1971200	1991200	81971200	81991200
1/2		6-3/4	1-3/8	1971270	1991270	81971270	81991270
5/8		8	1-3/8	1971587	1991587	81971587	81991587
.630	16	8	1-3/8	1971600	1991600	81971600	81991600
3/4		8	1-5/8	1971905	1991905	81971905	81991950
.787	20	8	1-5/8	1972000	1992000	81972000	81992000
1		8	1-3/4	1972540	1992540		



90 degree angle :
By using the **magafor NC** drill of diameter over the drilling tool, centering and chamfering are obtained in a single operation.



120 and 140 degree angles :
The preliminary hole obtained with the **magafor NC** drill corresponds to the angle at the end of the tool used in drilling and prevents it from deviating.