

**BLUE-MASTER<sup>®</sup>**  
by *celesa*



TWIST DRILLS  
FOR METAL



**FULLY GROUND TWIST DRILLS**



	BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
<b>MATERIAL</b>	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
<b>SHARPENING</b>										
<b>POINT ANGLE</b>	135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
<b>HELIX ANGLE</b>	38° "S"	38° "S"	30° "N"	Ø ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"
<b>COATING</b>	GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT
<b>APPLICATION</b>										
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€
0,20	19 x 2,50									
0,25	19 x 3									
0,30	19 x 3									
0,35	19 x 4									
0,40	20 x 5									
0,45	20 x 5									
0,50	22 x 6									16,43
0,55	24 x 7									
0,60	24 x 7									
0,65	26 x 8									
0,70	28 x 9									
0,75	28 x 9									
0,80	30 x 10									
0,85	30 x 10									
0,90	32 x 11									
0,95	32 x 11									
1,00	34 x 12		3,58	3,22	4,26	6,08				10,34
1,05	34 x 12									
1,10	36 x 14									10,56
1,15	36 x 14									
1,19	3/64"									
1,20	38 x 16				5,63	5,83				10,97
1,25	38 x 16									
1,30	38 x 16									11,31
1,35	40 x 18									
1,40	40 x 18									11,38
1,45	40 x 18									
1,50	40 x 18		3,62	3,07	4,14	6,07				11,52
1,55	43 x 20									

Twist drills for Metal

Pink

Ø 0,20-1,55mm

## FULLY GROUND TWIST DRILLS

Twist drills for Metal

Grey  
PinkDIN  
338

		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
COATING		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
APPLICATION												
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
1,59	1/16"	1,66				3,04						
1,60	43 x 20	1,81	1,81			3,27						2,49
1,65	43 x 20	1,81	1,81									
1,70	43 x 20	1,81	1,81			3,27						2,48
1,75	46 x 22	1,63	1,63			3,18		4,70	2,82	4,57		2,39
1,80	46 x 22	1,62	1,62			3,19						2,34
1,85	46 x 22	1,62	1,62									
1,90	46 x 22	1,62	1,62			3,19						2,34
1,95	48 x 24	1,62										
1,98	5/64"	1,47				2,98						
2,00	49 x 24	1,38	1,38	1,46		2,63		3,89	2,46	2,87	3,87	2,20
2,05	49 x 24	1,41	1,41									
2,10	49 x 24	1,41	1,41			3,10						2,18
2,15	53 x 27	1,41										
2,20	53 x 27	1,41	1,41			3,10						2,17
2,25	53 x 27	1,30	1,30	1,45		2,95		4,70	2,80	3,13		2,11
2,30	53 x 27	1,62	1,62			3,10						2,32
2,35	53 x 27	1,63	1,63									
2,38	3/32"	1,55				2,93						
2,40	57 x 30	1,62	1,62			3,10						2,32
2,45	57 x 30	1,62										
2,50	57 x 30	1,37	1,37	1,53		2,41		3,89	2,30	2,71	3,87	2,18
2,55	57 x 30	1,66	1,66									
2,60	57 x 30	1,66	1,66			2,98						2,33
2,65	57 x 30	1,66										
2,70	61 x 33	1,66	1,66	1,86		2,98						2,33
2,75	61 x 33	1,45	1,45	1,59		2,95		4,70	2,80	3,67		2,27
2,78	7/64"	1,59				2,85						
2,80	61 x 33	1,66	1,66	1,86		2,99						2,33

**FULLY GROUND TWIST DRILLS**



	BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
<b>MATERIAL</b>	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
<b>SHARPENING</b>										
<b>POINT ANGLE</b>	135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
<b>HELIX ANGLE</b>	38° "S"	38° "S"	30° "N"	Ø ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"
<b>COATING</b>	GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT
<b>APPLICATION</b>										
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€
1,59	1/16"									
1,60	43 x 20				4,70					11,90
1,65	43 x 20									
1,70	43 x 20				3,99					12,31
1,75	46 x 22			3,07						
1,80	46 x 22				4,19	5,97				12,37
1,85	46 x 22									
1,90	46 x 22				4,58					12,62
1,95	48 x 24									
1,98	5/64"									
2,00	49 x 24		3,77	3,07	4,11	6,09	5,17	20,75		14,28
2,05	49 x 24									
2,10	49 x 24				4,30			22,32		20,03
2,15	53 x 27									
2,20	53 x 27				4,35	6,45		22,32		21,54
2,25	53 x 27			3,07				22,32		
2,30	53 x 27				4,25			22,32		21,54
2,35	53 x 27									
2,38	3/32"									
2,40	57 x 30				4,36			22,32		21,92
2,45	57 x 30									
2,50	57 x 30		3,49	2,87	3,84	5,65	5,24	20,75		17,30
2,55	57 x 30									
2,60	57 x 30				4,68			22,32		27,05
2,65	57 x 30									
2,70	61 x 33									
2,75	61 x 33				4,45			21,26		27,05
2,75	61 x 33		3,69	2,87				22,32		
2,78	7/64"									
2,80	61 x 33				4,82	9,23		22,32		27,05

Twist drills for Metal

Pink

Ø 1,59-2,80mm

## FULLY GROUND TWIST DRILLS

Twist drills for Metal

Grey  
PinkDIN  
338

		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
<b>MATERIAL</b>		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
<b>SHARPENING</b>												
<b>POINT ANGLE</b>		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
<b>HELIX ANGLE</b>		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
<b>COATING</b>		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
<b>APPLICATION</b>												
<b>Ø mm</b>	<b>L1 x L2</b>	€	€	€	€	€	€	€	€	€	€	€
2,85	61 x 33	1,68										
2,90	61 x 33	1,66	1,66			2,98						2,33
2,95	61 x 33	1,66										
3,00	61 x 33	1,25	1,25	1,37		2,36		3,76	2,27	3,01	3,36	2,06
3,05	65 x 36	1,61										
3,10	65 x 36	1,45	1,45	1,58		2,86		5,03				2,61
3,15	65 x 36	1,61										
3,17	1/8"	1,39				2,72						
3,20	65 x 36	1,45	1,45	1,58		2,86		5,03	2,80			2,61
3,25	65 x 36	1,45	1,45	1,58		2,86		4,62	2,80	3,67		2,61
3,30	65 x 36	1,45	1,45	1,58		2,86		5,03	2,80			2,61
3,35	65 x 36	1,86										
3,40	70 x 39	1,86	1,86	2,06		2,99						2,80
3,45	70 x 39	1,87										
3,50	70 x 39	1,41	1,41	1,58		2,85		4,53	2,74	3,21	4,00	2,58
3,55	70 x 39	1,94										
3,57	9/64"	1,82				3,42						
3,60	70 x 39	1,94	1,94	2,16		3,59						2,81
3,65	70 x 39	1,94										
3,70	70 x 39	1,94	1,94	2,16		3,59						2,82
3,75	70 x 39	1,62	1,62	1,86		3,38		5,49	3,27	4,78		2,72
3,80	75 x 43	1,99	1,99	2,27		3,59						2,86
3,85	75 x 43	1,99										
3,90	75 x 43	1,99	1,99	2,27		3,59						2,85
3,95	75 x 43	1,99										
3,97	5/32"	1,88				3,42						
4,00	75 x 43	1,58	1,58	1,78		3,04		4,91	2,95	3,49	4,37	2,69
4,05	75 x 43	1,99										
4,10	75 x 43	1,78	1,78	1,99		3,38		6,05	3,21			2,79

**FULLY GROUND TWIST DRILLS**



		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
<b>MATERIAL</b>		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
<b>SHARPENING</b>											
<b>POINT ANGLE</b>		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
<b>HELIX ANGLE</b>		38° "S"	38° "S"	30° "N"	0° ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"
<b>COATING</b>		GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT
<b>APPLICATION</b>											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€
2,85	61 x 33										
2,90	61 x 33					4,86			22,32		27,05
2,95	61 x 33										
3,00	61 x 33	2,02	1,92	3,44	2,82	3,73	5,60	5,78	20,64	15,48	20,75
3,05	65 x 36										
3,10	65 x 36					4,50	6,88		21,13		27,30
3,15	65 x 36										
3,17	1/8"										
3,20	65 x 36	2,48	2,36		3,45	4,50	6,93		20,73		27,30
3,25	65 x 36				3,46				21,34		
3,30	65 x 36	2,48	2,36	4,36	3,46	4,50	6,89	7,01	20,94	17,52	24,00
3,35	65 x 36										
3,40	70 x 39					5,24			21,34		29,94
3,45	70 x 39										
3,50	70 x 39	2,47	2,35	4,32	3,40	4,54	6,84	6,20	20,24	16,17	23,67
3,55	70 x 39										
3,57	9/64"										
3,60	70 x 39					5,24			21,13	17,52	31,37
3,65	70 x 39										
3,70	70 x 39					5,24			21,73		31,37
3,75	70 x 39				3,70				21,73		
3,80	75 x 43					5,98	9,94		21,73		32,90
3,85	75 x 43										
3,90	75 x 43					5,72			21,73		32,90
3,95	75 x 43										
3,97	5/32"										
4,00	75 x 43	2,49	2,37	4,46	3,70	4,88	7,21	7,03	20,63	15,74	26,63
4,05	75 x 43										
4,10	75 x 43					5,40	7,77		20,87		34,21

Twist drills for Metal

Pink

Ø 2,85-4,10mm

## FULLY GROUND TWIST DRILLS

Twist drills for Metal

Grey  
PinkDIN  
338

		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
COATING		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
APPLICATION												
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
		70 Kg/mm <sup>2</sup>	70 Kg/mm <sup>2</sup>	Plus	12,70	120 Kg/mm <sup>2</sup>	12,70	120 Kg/mm <sup>2</sup>	Al	BRASS		PRODUCTION
4,15	75 x 43	1,99										
4,20	75 x 43	1,78	1,78	1,99		3,38		6,05	3,21			2,79
4,25	75 x 43	1,78	1,78	1,99		3,38		5,49	3,74	5,18		2,79
4,30	80 x 47	2,36	2,36	2,68		3,59						3,10
4,35	80 x 47	2,34										
4,37	11/64"	2,21				3,42						
4,40	80 x 47	2,36	2,36	2,68		3,59						3,10
4,45	80 x 47	2,36										
4,50	80 x 47	1,86	1,86	2,02		3,48		5,49	3,30	4,26	4,53	2,82
4,55	80 x 47	2,38										
4,60	80 x 47	2,38	2,38			4,00						3,11
4,65	80 x 47	2,38										
4,70	80 x 47	2,38	2,38	2,68		4,00						3,11
4,75	80 x 47	2,11	2,11	2,39		3,80		6,06	4,21	6,27		3,00
4,76	3/16"	2,02				3,55						
4,80	86 x 52	2,68	2,68	2,93		4,03		6,68				3,30
4,85	86 x 52	2,59										
4,90	86 x 52	2,59	2,59	2,86		4,03						3,25
4,95	86 x 52	2,61										
5,00	86 x 52	1,98	1,98	2,20		3,65		5,88	3,53	4,62	4,92	2,88
5,05	86 x 52	2,69	2,69									
5,10	86 x 52	2,68	2,68	2,96		4,37		7,20	4,08		6,83	3,29
5,15	86 x 52	2,69										
5,16	13/64"	2,56				3,76						
5,20	86 x 52	2,68	2,68	2,96		4,37		7,20				3,30
5,25	86 x 52	2,50	2,50	2,84		4,31		6,90	5,03	7,02		3,28
5,30	86 x 52	3,33	3,33	3,68		4,37						3,73
5,35	93 x 57	3,32										
5,40	93 x 57	3,33	3,33			4,37						3,73

**FULLY GROUND TWIST DRILLS**



		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
<b>MATERIAL</b>		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
<b>SHARPENING</b>											
<b>POINT ANGLE</b>		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
<b>HELIX ANGLE</b>		38° "S"	38° "S"	30° "N"	0° ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"
<b>COATING</b>		GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT
<b>APPLICATION</b>											
<b>Ø mm</b>	<b>L1 x L2</b>	€	€	€	€	€	€	€	€	€	€
4,15	75 x 43										
4,20	75 x 43	2,98	2,82	4,69	4,12	5,37	7,75	8,66	20,87	18,33	32,58
4,25	75 x 43			4,69					22,73		
4,30	80 x 47					5,73	8,29		22,73	18,33	40,72
4,35	80 x 47										
4,37	11/64"										
4,40	80 x 47					5,73		22,73	18,33	41,53	
4,45	80 x 47										
4,50	80 x 47	3,05	2,89	4,73	4,12	5,56	7,92	8,12	20,48	15,13	32,56
4,55	80 x 47										
4,60	80 x 47					6,92		21,90			40,50
4,65	80 x 47										
4,70	80 x 47					6,43		21,28			40,50
4,75	80 x 47				4,27			22,73			
4,76	3/16"										
4,80	86 x 52					6,43	8,79	21,90			41,54
4,85	86 x 52										
4,90	86 x 52					7,09		22,73			41,54
4,95	86 x 52										
5,00	86 x 52	4,11	3,91	4,84	4,40	5,80	8,14	8,55	21,01	14,82	36,11
5,05	86 x 52										
5,10	86 x 52					6,93	9,23	22,46	18,14	47,10	
5,15	86 x 52										
5,16	13/64"										
5,20	86 x 52					6,89	9,30	22,36			47,10
5,25	86 x 52				5,58			23,90			
5,30	86 x 52					6,93		23,90			47,10
5,35	93 x 57										
5,40	93 x 57					8,97		23,90			53,32

Twist drills for Metal

Pink

Ø 4,15-5,40mm

## FULLY GROUND TWIST DRILLS

Twist drills for Metal

Grey  
PinkDIN  
338

		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
COATING		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
APPLICATION												
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
		70 Kg/mm <sup>2</sup>	70 Kg/mm <sup>2</sup>	Plus	12,70	120 Kg/mm <sup>2</sup>	12,70	120 Kg/mm <sup>2</sup>	Al	BRASS		PRODUCTION
5,45	93 x 57	3,33										
5,50	93 x 57	2,61	2,61	2,93		4,62		7,43	4,47	5,65	6,50	3,33
5,55	93 x 57	3,52										
5,56	7/32"	3,35				5,22						
5,60	93 x 57	3,53	3,53	3,91		5,49		9,16				3,88
5,65	93 x 57	3,52										
5,70	93 x 57	3,53	3,53	3,91		5,49		9,16				3,88
5,75	93 x 57	3,41	3,41	3,81		5,21		8,30	6,17	8,59		3,84
5,80	93 x 57	3,32	3,32	3,74		5,49		9,16				3,73
5,85	93 x 57	3,33										
5,90	93 x 57	3,32	3,32	3,74		5,49						3,73
5,95	15/64"	3,14				5,71						
6,00	93 x 57	2,72	2,72	3,02		4,97		7,90	4,73	6,08	6,73	3,38
6,05	101 x 63	3,86										
6,10	101 x 63	3,86	3,86	4,36		6,16						6,80
6,15	101 x 63	3,86										
6,20	101 x 63	3,86	3,86	4,36		6,16						6,80
6,25	101 x 63	3,65	3,65	4,08		5,81		9,25	6,17	8,59		6,80
6,30	101 x 63	4,07	4,07			6,16						6,89
6,35	1/4"	2,90				5,85						
6,40	101 x 63	4,19	4,19			6,17						6,99
6,45	101 x 63	4,09										
6,50	101 x 63	3,15	3,15	3,56		5,95		9,22	5,51	6,77	7,82	6,48
6,55	101 x 63	5,09										
6,60	101 x 63	5,06	5,06			7,40						7,54
6,65	101 x 63	5,09										
6,70	101 x 63	5,08	5,08	5,67		7,40		11,81				7,54
6,75	109 x 69	3,82	3,82	4,31		6,94		10,78	7,43	10,36		6,93
6,80	109 x 69	3,82	3,82	4,31		6,94		11,81	6,48			6,94

**FULLY GROUND TWIST DRILLS**



		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
<b>MATERIAL</b>		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
<b>SHARPENING</b>											
<b>POINT ANGLE</b>		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
<b>HELIX ANGLE</b>		38° "S"	38° "S"	30° "N"	Ø ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"
<b>COATING</b>		GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT
<b>APPLICATION</b>											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€
5,45	93 x 57										
5,50	93 x 57	5,21	4,94	5,47	5,58	7,36	9,73	10,44	22,01	15,80	42,15
5,55	93 x 57										
5,56	7/32"										
5,60	93 x 57					8,79			23,39		56,01
5,65	93 x 57										
5,70	93 x 57					10,10			23,37		56,01
5,75	93 x 57				5,93	8,31			24,99		
5,80	93 x 57					8,79	11,14		23,37		56,01
5,85	93 x 57										
5,90	93 x 57					8,79			24,99		56,01
5,95	15/64"										
6,00	93 x 57	5,54	5,26	5,67	5,93	7,89	10,23	11,59	22,79	16,84	47,82
6,05	101 x 63										
6,10	101 x 63				6,25	10,96			26,97		69,37
6,15	101 x 63										
6,20	101 x 63					9,74	16,06		26,97		69,37
6,25	101 x 63				6,75				26,97		69,37
6,30	101 x 63					10,96			26,97		69,37
6,35	1/4"										
6,40	101 x 63					10,96			26,97		69,37
6,45	101 x 63										
6,50	101 x 63	6,47	6,15	10,55	6,93	9,45	15,77	13,80	25,46	17,16	59,38
6,55	101 x 63										
6,60	101 x 63					12,40			27,81		86,24
6,65	101 x 63										
6,70	101 x 63					12,40			27,81		86,24
6,75	109 x 69			11,06	8,06				27,81		
6,80	109 x 69	7,54	7,15	11,06	8,06	11,00	17,35		27,81	20,54	69,62

Twist drills for Metal

Pink

Ø 5,45-6,80mm

## FULLY GROUND TWIST DRILLS

Twist drills for Metal

Grey  
PinkDIN  
338

		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
COATING		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
APPLICATION												
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
6,85	109 x 69	5,64										
6,90	109 x 69	5,65	5,65			7,40						7,86
6,95	109 x 69	5,65										
7,00	109 x 69	3,82	3,82	4,31		6,52		9,65	6,03	7,19	9,55	6,94
7,05	109 x 69	5,94										
7,10	109 x 69	5,93	5,93			9,42						8,14
7,14	9/32"	5,68				8,89						
7,15	109 x 69	5,95										
7,20	109 x 69	5,93	5,93			9,42					10,02	8,14
7,25	109 x 69	4,89	4,89	5,44		8,84		13,12	9,83	13,58		7,60
7,30	109 x 69	5,94	5,94			9,45						8,14
7,35	109 x 69	5,93										
7,40	109 x 69	5,94	5,94	6,65		9,45						8,14
7,45	109 x 69	6,09										
7,50	109 x 69	4,07	4,07	4,54		6,95		10,30	6,45	8,40	10,02	7,10
7,54	19/64"	6,63				10,76						
7,55	117 x 75	7,05										
7,60	117 x 75	6,99	6,99			11,36						8,94
7,65	117 x 75	7,05										
7,70	117 x 75	6,99	6,99			11,33						8,94
7,75	117 x 75	5,40	5,40	6,04		10,70		15,90	12,49	18,12		8,04
7,80	117 x 75	7,10	7,10	7,98		11,33						8,96
7,85	117 x 75	7,11										
7,90	117 x 75	7,10	7,10	7,98		11,39						8,96
7,94	5/16"	6,08				10,74						
7,95	117 x 75	7,10										
8,00	117 x 75	4,64	4,64	5,21		8,16		12,50	7,51	8,93	11,47	7,43
8,05	117 x 75	7,25										
8,10	117 x 75	7,25	7,25			10,86						9,81

**FULLY GROUND TWIST DRILLS**



		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
<b>MATERIAL</b>		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
<b>SHARPENING</b>											
<b>POINT ANGLE</b>		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
<b>HELIX ANGLE</b>		38° "S"	38° "S"	30° "N"	0° ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"
<b>COATING</b>		GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT
<b>APPLICATION</b>											
<b>Ø mm</b>	<b>L1 x L2</b>	€	€	€	€	€	€	€	€	€	€
6,85	109 x 69										
6,90	109 x 69					12,52			27,81	20,54	86,24
6,95	109 x 69										
7,00	109 x 69	7,08	6,73	11,13	7,58	10,25	16,85	16,22	27,74	19,21	69,15
7,05	109 x 69										
7,10	109 x 69					15,16			29,16	22,13	98,64
7,14	9/32"										
7,15	109 x 69										
7,20	109 x 69					14,52	20,95		29,16		98,64
7,25	109 x 69				8,04				29,16		
7,30	109 x 69					15,45			29,16		98,64
7,35	109 x 69										
7,40	109 x 69					15,45			29,16		98,64
7,45	109 x 69										
7,50	109 x 69	7,52	7,14	11,44	8,04	10,96	17,57	18,67	28,64	20,18	73,86
7,54	19/64"										
7,55	117 x 75										
7,60	117 x 75					15,89			31,32		98,64
7,65	117 x 75										
7,70	117 x 75					17,69			31,32		98,64
7,75	117 x 75				8,81				31,32		
7,80	117 x 75					17,69	24,92		31,32		98,64
7,85	117 x 75										
7,90	117 x 75					17,69			31,32		98,64
7,94	5/16"										
7,95	117 x 75										
8,00	117 x 75	8,81	8,36	12,12	9,43	12,85	19,39	19,73	29,17	22,55	84,35
8,05	117 x 75										
8,10	117 x 75					18,63			33,46		114,74

Twist drills for Metal

Pink

Ø 6,85-8,10mm



**FULLY GROUND TWIST DRILLS**



		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
<b>MATERIAL</b>		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
<b>SHARPENING</b>											
<b>POINT ANGLE</b>		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
<b>HELIX ANGLE</b>		38° "S"	38° "S"	30° "N"	0° ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"
<b>COATING</b>		GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT
<b>APPLICATION</b>											
<b>Ø mm</b>	<b>L1 x L2</b>	€	€	€	€	€	€	€	€	€	€
8,15	117 x 75										
8,20	117 x 75					17,37	25,07		33,46		114,74
8,25	117 x 75				9,63				33,46		
8,30	117 x 75					18,46			33,46		114,74
8,33	21/64"										
8,35	117 x 75										
8,40	117 x 75					18,46			33,46		114,74
8,45	117 x 75										
8,50	117 x 75	9,19	8,72	13,58	9,83	13,32	21,07	24,17	31,98	22,55	99,76
8,55	125 x 81										
8,60	125 x 81					18,81			35,93	27,27	133,01
8,65	125 x 81										
8,70	125 x 81					21,89			35,93		133,01
8,73	11/32"										
8,75	125 x 81				11,70				35,93		
8,80	125 x 81					21,40	29,02		35,93		133,01
8,85	125 x 81										
8,90	125 x 81					21,89			35,93		133,01
8,95	125 x 81										
9,00	125 x 81	11,70	11,12	15,03	12,54	17,00	24,78	25,67	31,92	24,45	110,28
9,05	125 x 81										
9,10	125 x 81				12,62	26,93			38,85		146,12
9,13	23/64"										
9,15	125 x 81										
9,20	125 x 81				12,62	26,93	31,27		38,85		146,12
9,25	125 x 81				12,62				38,85		
9,30	125 x 81				12,62	26,93			38,85		146,12
9,35	125 x 81										
9,40	125 x 81					26,93			38,85		146,12
9,45	125 x 81										

Twist drills for Metal

Pink

Ø 8,15-9,45mm

## FULLY GROUND TWIST DRILLS

Twist drills for Metal

Grey  
PinkDIN  
338

		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
<b>MATERIAL</b>		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
<b>SHARPENING</b>												
<b>POINT ANGLE</b>		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
<b>HELIX ANGLE</b>		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
<b>COATING</b>		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
<b>APPLICATION</b>												
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
9,50	125 x 81	6,66	6,66	7,45		11,17		17,18	10,38	12,89	16,42	9,46
9,52	3/8"	6,26				10,64						
9,55	133 x 87	11,51										
9,60	133 x 87	11,36	11,36			17,97						12,58
9,65	133 x 87	11,51										
9,70	133 x 87	11,36	11,36			17,97						12,47
9,75	133 x 87	8,29	8,29	9,39		16,93		26,16	16,97	28,85		10,71
9,80	133 x 87	11,12	11,12			17,97						12,39
9,85	133 x 87	11,24										
9,90	133 x 87	11,24	11,24	12,65		17,97						12,39
9,92	25/64"	10,71				16,97						
9,95	133 x 87	11,23										
10,00	133 x 87	7,18	7,18	8,02	12,08	12,34		18,97	11,48	13,39	17,70	9,80
10,10	133 x 87	9,59	9,59	10,79		20,67						
10,20	133 x 87	8,94	8,94	10,01		17,43		34,31				17,20
10,25	133 x 87	9,98	9,98	12,39	15,92	21,32		34,31	18,85	32,89		17,46
10,30	133 x 87	11,19	11,19	12,50		20,72						
10,32	13/32"	10,71				19,64						
10,40	133 x 87	11,19	11,19			20,67						
10,50	133 x 87	8,92	8,92	9,98	13,52	17,44	26,51	27,91	15,32	16,09	24,19	16,34
10,60	133 x 87	12,33	12,33			24,04						
10,70	142 x 94	12,33	12,33			24,04						
10,72	27/64"	10,98				23,56						
10,75	142 x 94	11,53	11,53	12,75	18,00	24,98		39,92	22,04	30,03		18,01
10,80	142 x 94	13,68	13,68			24,04						
10,90	142 x 94	13,68	13,68			24,09						
11,00	142 x 94	10,41	10,41	11,68	15,32	19,26	28,33	30,78	16,63	17,91	27,73	17,26
11,10	142 x 94	13,96	13,96			27,43						
11,11	7 / 16"	13,28				25,87						
11,20	142 x 94	13,96	13,96			27,43						

**FULLY GROUND TWIST DRILLS**



	BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42	
<b>MATERIAL</b>	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE	
<b>SHARPENING</b>											
<b>POINT ANGLE</b>	135°	135°	135°	130°	135°	135°	118°	118°	135°	135°	
<b>HELIX ANGLE</b>	38° "S"	38° "S"	30° "N"	Ø ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"	
<b>COATING</b>	GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT	
<b>APPLICATION</b>											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	
9,50	125 x 81	12,12	11,52	15,26	12,98	17,65	25,20	29,10	34,81	26,67	122,61
9,52	3/8"										
9,55	133 x 87										
9,60	133 x 87					26,93		41,66		154,97	
9,65	133 x 87										
9,70	133 x 87					26,93		41,66		154,97	
9,75	133 x 87							41,66			
9,80	133 x 87					26,80	34,53	41,66		154,97	
9,85	133 x 87										
9,90	133 x 87					29,10		41,66		154,97	
9,92	25/64"										
9,95	133 x 87										
10,00	133 x 87	13,34	12,66	16,01	14,28	19,46	27,11	32,08	34,90	27,37	132,55
10,10	133 x 87								46,67		
10,20	133 x 87	17,99	17,10	27,58	19,27	29,10	43,78	37,35	44,96	35,42	153,23
10,25	133 x 87				19,28				46,67		
10,30	133 x 87								46,67	35,42	
10,32	13/32"										
10,40	133 x 87								46,67		
10,50	133 x 87	18,00	17,11	27,55	19,28	27,57	43,08	37,88	41,70	35,15	146,86
10,60	133 x 87								49,64		
10,70	142 x 94								49,64		
10,72	27/64"										
10,75	142 x 94				21,17				49,64		
10,80	142 x 94					38,74			49,64		
10,90	142 x 94								49,64		
11,00	142 x 94	19,88	18,88	28,72	21,27	30,49	45,63	40,24	44,81	35,30	174,88
11,10	142 x 94				23,95				53,17		
11,11	7 / 16"										
11,20	142 x 94			23,95	47,03				53,17		

Twist drills for Metal

Pink

Ø 9,50-11,20mm

## FULLY GROUND TWIST DRILLS

Twist drills for Metal

Grey  
PinkDIN  
338

		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
COATING		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
APPLICATION									Al	BRASS		PRODUCTION
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
11,25	142 x 94	11,83	11,83	13,72	19,04	28,45		46,82	29,02	39,55		18,17
11,30	142 x 94	13,68	13,68			27,41						
11,40	142 x 94	13,68	13,68			27,43						
11,50	142 x 94	11,12	11,12	12,49	16,17	23,04	30,63	39,37	19,66	21,53	32,78	17,75
11,51	29/64"	10,59				21,85						
11,60	142 x 94	13,68	13,68			28,31						
11,70	142 x 94	13,68	13,68			28,31						
11,75	142 x 94	11,83	11,83	14,13	20,74	29,42		50,38	28,47	39,55		18,17
11,80	142 x 94	14,99	14,99			28,31						
11,90	151 x 101	14,99	14,99			28,31						
11,91	15/32"	14,27				26,83						
12,00	151 x 101	12,38	12,38	13,95	17,70	24,57	32,84	42,19	21,08	23,32	32,96	18,53
12,10	151 x 101	17,45	17,45			32,90						
12,20	151 x 101	17,45	17,45			32,90						
12,25	151 x 101	15,42	15,42	17,31	22,52	34,04		60,14	39,57	53,91		23,20
12,30	151 x 101	16,43	16,43			32,90						
12,40	151 x 101	16,43	16,43			32,90						
12,50	151 x 101	13,63	13,63	15,27	19,20	30,01	39,96	52,93	23,45	26,45	40,17	22,01
12,60	151 x 101	17,04	17,04			34,20						
12,70	1/2"	15,08				32,57						
12,75	151 x 101	15,15	15,15	17,30	23,21	35,54		62,81	43,67	59,87		23,02
12,80	151 x 101	19,01	19,01			34,20						
12,90	151 x 101	19,01	19,01			34,20						
13,00	151 x 101	14,12	14,12	15,73	19,73	30,70	42,17	53,67	23,79	28,45	41,58	22,35
13,10	151 x 101	19,46	19,46									
13,20	151 x 101	19,46	19,46									
13,25	160 x 108	22,20	22,20		28,22	42,50						
13,30	160 x 108	30,13	30,13									
13,40	160 x 108	30,13	30,13									
13,49	17/32"	19,06				32,23						

**FULLY GROUND TWIST DRILLS**



		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
<b>MATERIAL</b>		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
<b>SHARPENING</b>											
<b>POINT ANGLE</b>		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
<b>HELIX ANGLE</b>		38° "S"	38° "S"	30° "N"	Ø ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"
<b>COATING</b>		GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT
<b>APPLICATION</b>											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€
11,25	142 x 94				23,95				53,17		
11,30	142 x 94				23,95				53,17		
11,40	142 x 94								53,17		
11,50	142 x 94	22,88	21,73	30,50	24,49	36,31	51,32	46,15	51,50	40,57	193,19
11,51	29/64"										
11,60	142 x 94								58,62	44,50	
11,70	142 x 94								58,62		
11,75	142 x 94				25,86				58,62		
11,80	142 x 94					48,51			58,62		
11,90	151 x 101								58,62		
11,91	15/32"										
12,00	151 x 101	24,53	23,30	31,55	26,25	38,74	53,95	48,08	51,23	40,38	230,19
12,10	151 x 101								61,73	46,84	
12,20	151 x 101								61,73		
12,25	151 x 101								61,73		
12,30	151 x 101								61,73		
12,40	151 x 101								61,73		
12,50	151 x 101	29,93	28,45	39,00	32,04	48,57	58,32	54,41	61,43		314,51
12,60	151 x 101								65,21		
12,70	1/2"								65,21		
12,75	151 x 101								65,21		
12,80	151 x 101								65,21		
12,90	151 x 101								65,21		
13,00	151 x 101	30,37	28,85	39,57	32,52	49,92	67,38	58,57	61,32		248,91
13,10	151 x 101										
13,20	151 x 101										
13,25	160 x 108										
13,30	160 x 108										
13,40	160 x 108										
13,49	17/32"										

Twist drills for Metal

Pink

Ø 11,25-13,49mm

## FULLY GROUND TWIST DRILLS

Twist drills for Metal

Grey  
PinkDIN  
338

		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
<b>MATERIAL</b>		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
<b>SHARPENING</b>												
<b>POINT ANGLE</b>		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
<b>HELIX ANGLE</b>		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
<b>COATING</b>		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
<b>APPLICATION</b>												
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
13,50	160 x 108	20,01	20,01	22,45	26,32	33,84	44,78	59,16				27,26
13,60	160 x 108	30,13	30,13									
13,70	160 x 108	30,13	30,13									
13,75	160 x 108	22,45	22,45		30,26	42,50						
13,80	160 x 108	28,72	28,72									
13,89	35/64"	27,48				38,05						
13,90	160 x 108	28,84	28,84									
14,00	160 x 108	21,43	21,43	24,03	27,95	33,44	47,08	58,48				28,17
14,10	169 x 114	30,74										
14,20	169 x 114	30,74										
14,25	169 x 114	25,14	25,14		32,31	55,80						
14,29	9/16"	29,78				42,08						
14,30	169 x 114	31,27										
14,40	169 x 114	31,27										
14,50	169 x 114	23,15	23,15		30,22	47,44	63,18	82,92				29,21
14,60	169 x 114	31,85										
14,68	37/64"	23,94				53,15						
14,70	169 x 114	31,85										
14,75	169 x 114	25,14	25,14		37,11	55,80						
14,80	169 x 114	30,69										
14,90	169 x 114	30,69										
15,00	169 x 114	23,36	23,36	26,17	30,51	48,15	65,98	84,16				29,48
15,08	19/32"	22,25				45,86						
15,25	178 x 120	34,22			38,68	77,03						
15,48	39/64"	33,09				73,36						
15,50	178 x 120	27,36	27,36		35,24	55,69	73,63	97,31				32,06
15,75	178 x 120	34,75			40,08	77,01						
15,88	5/8"	27,08				55,06						
16,00	178 x 120	28,44	28,44		36,52	57,80	75,85	101,15				32,69
16,25	184 x 125	51,10			47,02							

**FULLY GROUND TWIST DRILLS**



	BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
<b>MATERIAL</b>	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
<b>SHARPENING</b>										
<b>POINT ANGLE</b>	135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
<b>HELIX ANGLE</b>	38° "S"	38° "S"	30° "N"	Ø ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"
<b>COATING</b>	GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT
<b>APPLICATION</b>										
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€
13,50	160 x 108							70,19		
13,60	160 x 108									
13,70	160 x 108									
13,75	160 x 108									
13,80	160 x 108									
13,89	35/64"									
13,90	160 x 108									
14,00	160 x 108							71,38		
14,10	169 x 114									
14,20	169 x 114									
14,25	169 x 114									
14,29	9/16"									
14,30	169 x 114									
14,40	169 x 114									
14,50	169 x 114							79,71		
14,60	169 x 114									
14,68	37/64"									
14,70	169 x 114									
14,75	169 x 114									
14,80	169 x 114									
14,90	169 x 114									
15,00	169 x 114							81,72		
15,08	19/32"									
15,25	178 x 120									
15,48	39/64"									
15,50	178 x 120							99,26		
15,75	178 x 120									
15,88	5/8"									
16,00	178 x 120							94,28		
16,25	184 x 125									

Twist drills for Metal

Pink

Ø 13,50-16,25mm

## FULLY GROUND TWIST DRILLS

Twist drills for Metal

Grey  
PinkDIN  
338

		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
<b>MATERIAL</b>		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
<b>SHARPENING</b>												
<b>POINT ANGLE</b>		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
<b>HELIX ANGLE</b>		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
<b>COATING</b>		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
<b>APPLICATION</b>				<i>Plus</i>					Al	BRASS		PRODUCTION
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
16,50	184 x 125	33,09	33,09		40,91	66,00	86,48					
16,75	184 x 125	53,53			46,12							
17,00	184 x 125	33,14	33,14		40,91	66,00	87,05					
17,25	191 x 130	55,54			51,94							
17,50	191 x 130	37,98	37,98		46,56	73,12	95,82					
17,75	191 x 130	61,51			54,79							
18,00	191 x 130	40,23	40,23		49,08	79,66	104,99					
18,25	198 x 135	60,34			66,86							
18,50	198 x 135	44,61	44,61		54,16	87,98	117,15					
18,75	198 x 135	62,01			61,85							
19,00	198 x 135	44,61	44,61		54,16	87,98	116,14					
19,25	205 x 140	81,03			66,02							
19,50	205 x 140	47,98	47,98		58,77	97,58	128,69					
19,75	205 x 140	78,88			73,94							
20,00	205 x 140	54,48	54,48		70,34	104,72	137,87					
20,50	205 x 140				81,59		148,50					
21,00	205 x 140				74,49		150,54					
21,50	209 x 140				86,62		165,65					
22,00	209 x 140				82,35		168,11					
22,50	214 x 140				88,10		179,80					
23,00	214 x 140				90,19		184,26					
23,50	220 x 145				100,12		204,54					
24,00	220 x 145				98,99		207,58					
24,50	225 x 150				106,65		223,65					
25,00	225 x 150				108,25		222,63					
26,00	243 x 157				129,85		323,98					
27,00	243 x 157				139,46		332,70					
28,00	253 x 167				144,28		366,53					
29,00	253 x 167				169,38		394,21					
30,00	258 x 171				178,06		408,02					

**FULLY GROUND TWIST DRILLS**



	BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
<b>MATERIAL</b>	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
<b>SHARPENING</b>										
<b>POINT ANGLE</b>	135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
<b>HELIX ANGLE</b>	38° "S"	38° "S"	30° "N"	Ø ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"
<b>COATING</b>	GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT
<b>APPLICATION</b>										
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€
16,50	184 x 125							137,82		
16,75	184 x 125									
17,00	184 x 125							103,50		
17,25	191 x 130									
17,50	191 x 130							154,54		
17,75	191 x 130									
18,00	191 x 130							113,83		
18,25	198 x 135									
18,50	198 x 135							184,24		
18,75	198 x 135									
19,00	198 x 135							138,34		
19,25	205 x 140									
19,50	205 x 140							209,68		
19,75	205 x 140									
20,00	205 x 140							157,45		
20,50	205 x 140									
21,00	205 x 140									
21,50	209 x 140									
22,00	209 x 140									
22,50	214 x 140									
23,00	214 x 140									
23,50	220 x 145									
24,00	220 x 145									
24,50	225 x 150									
25,00	225 x 150									
26,00	243 x 157									
27,00	243 x 157									
28,00	253 x 167									
29,00	253 x 167									
30,00	258 x 171									

Twist drills for Metal

Pink

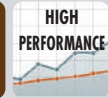
Ø 16,50-30mm

## SOLID CARBIDE REINFORCED SHANK DRILLS WITH &amp; WITHOUT INTERNAL COOLING

NEW

Ref. BC84  
Ref. BC97SOLID  
CARBIDETOL D<sub>1</sub>  
m7TOL D<sub>2</sub>  
h6

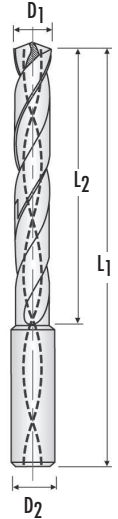
TiAlN

HARDOX  
450HIGH  
PERFORMANCE

3xD



5xD



Recommended for HARDOX 450

BC84

DIN 6537K	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
BC840100	1,00	3	47	6,0	52,37
BC840110	1,10	3	47	6,6	52,37
BC840120	1,20	3	47	7,2	55,67
BC840130	1,30	3	47	7,8	55,67
BC840140	1,40	3	47	8,4	55,67
BC840150	1,50	3	47	9,0	55,67
BC840160	1,60	3	47	9,6	58,71
BC840170	1,70	3	47	10,2	58,71
BC840180	1,80	3	52	10,8	58,71
BC840190	1,90	3	52	11,4	58,71
BC840200	2,00	4	59	12,0	66,44
BC840210	2,10	4	59	12,6	66,44
BC840220	2,20	4	59	13,2	66,44
BC840230	2,30	4	59	13,8	66,44
BC840240	2,40	4	59	14,4	71,62
BC840250	2,50	4	59	15,0	71,62
BC840260	2,60	4	59	15,6	71,62
BC840270	2,70	4	59	16,2	71,62
BC840280	2,80	4	59	16,8	74,15
BC840290	2,90	4	59	17,4	74,15

BC97

DIN 6537L	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
BC970100	1,00	3	47	8,0	53,11
BC970110	1,10	3	47	8,8	55,67
BC970120	1,20	3	52	10,8	58,71
BC970130	1,30	3	52	11,7	60,76
BC970140	1,40	3	52	12,6	60,76
BC970150	1,50	3	52	13,5	60,76
BC970160	1,60	3	52	14,4	66,44
BC970170	1,70	3	52	15,3	66,44
BC970180	1,80	3	52	16,2	66,44
BC970190	1,90	3	52	17,1	66,44
BC970200	2,00	4	63	18,0	74,15
BC970210	2,10	4	63	18,9	74,15
BC970220	2,20	4	63	19,8	74,15
BC970230	2,30	4	63	20,7	75,46
BC970240	2,40	4	63	21,6	77,99
BC970250	2,50	4	63	22,5	77,99
BC970260	2,60	4	67	23,4	80,52
BC970270	2,70	4	67	24,3	80,52
BC970280	2,80	4	67	25,2	83,14
BC970290	2,90	4	67	26,1	83,14

**SOLID CARBIDE REINFORCED SHANK DRILLS WITH & WITHOUT INTERNAL COOLING**

Ref. BC84  
Ref. BC83

**3xD**

**DIN  
6537K**

**SOLID  
CARBIDE**

**TOL D1  
m7**

**TOL D2  
h6**



**TiAIN**



**HARDOX  
450**



Twist drills for Metal

Pink

Recommended for HARDOX 450

	BC84					BC83			BC84					BC83	
	D1 mm	D2 mm	L1 mm	L2 mm	€	€	D1 mm		D2 mm	L1 mm	L2 mm	€	€		
BC840300	3,00	6	62	20	49,57	BC830300	87,80	BC840940	9,4	10	89	47	66,90	BC830940	116,83
BC840310	3,10	6	62	20	49,57	BC830310	87,80	BC840950	9,5	10	89	47	66,90	BC830950	116,83
BC840320	3,20	6	62	20	49,57	BC830320	87,80	BC840960	9,6	10	89	47	66,90	BC830960	116,83
BC840340	3,40	6	62	20	49,57	BC830300	87,80	BC840970	9,7	10	89	47	66,90	BC830970	116,83
BC840350	3,50	6	62	20	49,57	BC830350	87,80	BC840980	9,8	10	89	47	66,90	BC830980	116,83
BC840380	3,80	6	66	24	49,57	BC830380	87,80	BC840990	9,9	10	89	47	66,90	BC830990	116,83
BC840400	4,00	6	66	24	49,57	BC830400	87,80	BC841000	10,0	10	89	47	66,90	BC831000	116,83
BC840420	4,20	6	66	24	49,57	BC830420	87,80	BC841020	10,2	12	102	55	100,34	BC831020	166,96
BC840425	4,25	6	66	24	49,57	BC830425	87,80	BC841040	10,4	12	102	55	100,34	BC831040	166,96
BC840440	4,40	6	66	24	49,54	BC830440	87,80	BC841050	10,5	12	102	55	100,34	BC831050	166,96
BC840450	4,50	6	66	24	49,57	BC830450	87,80	BC841060	10,6	12	102	55	100,34	BC831060	166,96
BC840470	4,70	6	66	24	49,57	BC830470	87,80	BC841070	10,7	12	102	55	100,34	BC831070	166,96
BC840480	4,80	6	66	28	49,57	BC830480	87,80	BC841080	10,8	12	102	55	100,34	BC831080	166,96
BC840490	4,90	6	66	28	49,57	BC830490	87,80	BC841100	11,0	12	102	55	100,34	BC831100	166,96
BC840500	5,00	6	66	28	49,57	BC830500	87,80	BC841110	11,1	12	102	55	100,34	BC831110	166,96
BC840520	5,20	6	66	28	49,57	BC830520	87,80	BC841120	11,2	12	102	55	100,34	BC831120	166,96
BC840550	5,50	6	66	28	49,57	BC830550	87,80	BC841130	11,3	12	102	55	100,34	BC831130	166,96
BC840560	5,60	6	66	28	49,57	BC830560	87,80	BC841150	11,5	12	102	55	100,34	BC831150	166,96
BC840570	5,70	6	66	28	49,57	BC830570	87,80	BC841170	11,7	12	102	55	100,34	BC831170	166,96
BC840580	5,80	6	66	28	49,57	BC830580	87,80	BC841180	11,8	12	102	55	100,34	BC831180	166,96
BC840590	5,90	6	66	28	49,57	BC830590	87,80	BC841200	12,0	12	102	55	100,34	BC831200	166,96
BC840600	6,00	6	66	28	49,57	BC830600	87,80	BC841210	12,1	14	107	60	133,80	BC831210	232,31
BC840610	6,10	8	79	34	58,05	BC830610	104,30	BC841230	12,3	14	107	60	133,80	BC831230	232,31
BC840620	6,20	8	79	34	58,05	BC830620	104,30	BC841240	12,4	14	107	60	133,80	BC831240	232,31
BC840630	6,30	8	79	34	58,05	BC830630	104,30	BC841250	12,5	14	107	60	133,80	BC831250	232,31
BC840650	6,50	8	79	34	58,05	BC830650	104,30	BC841270	12,7	14	107	60	133,80	BC831270	232,31
BC840660	6,60	8	79	34	58,05	BC830660	104,30	BC841280	12,8	14	107	60	133,80	BC831280	232,31
BC840670	6,70	8	79	34	58,05	BC830670	104,30	BC841300	13,0	14	107	60	133,80	BC831300	232,31
BC840680	6,80	8	79	34	58,05	BC830680	104,30	BC841310	13,1	14	107	60	133,80	BC831310	232,31
BC840690	6,90	8	79	34	58,05	BC830690	104,30	BC841330	13,3	14	107	60	133,80	BC831330	232,31
BC840700	7,00	8	79	34	58,05	BC830700	104,30	BC841350	13,5	14	107	60	133,80	BC831350	232,31
BC840710	7,10	8	79	41	58,05	BC830710	104,30	BC841370	13,7	14	107	60	133,80	BC831370	232,31
BC840740	7,40	8	79	41	58,05	BC830740	104,30	BC841380	13,8	14	107	60	133,80	BC831380	232,31
BC840750	7,50	8	79	41	58,05	BC830750	104,30	BC841400	14,0	14	107	60	133,80	BC831400	232,31
BC840780	7,80	8	79	41	58,05	BC830780	104,30	BC841450	14,5	16	115	65	167,53	BC831450	287,49
BC840790	7,90	8	79	41	58,05	BC830790	104,30	BC841470	14,7	16	115	65	167,53	BC831470	287,49
BC840800	8,00	8	79	41	58,05	BC830800	104,30	BC841480	14,8	16	115	65	167,53	BC831480	287,49
BC840810	8,10	10	89	47	66,90	BC830810	116,83	BC841500	15,0	16	115	65	167,53	BC831500	287,49
BC840820	8,20	10	89	47	66,90	BC830820	116,83	BC841550	15,5	16	115	65	167,53	BC831550	287,49
BC840830	8,30	10	89	47	66,90	BC830830	116,83	BC841600	16,0	16	115	65	167,53	BC831600	287,49
BC840840	8,40	10	89	47	66,90	BC830840	116,83	BC841650	16,5	18	123	73	256,09	BC831650	453,30
BC840850	8,50	10	89	47	66,90	BC830850	116,83	BC841700	17,0	18	123	73	256,09	BC831700	453,30
BC840860	8,60	10	89	47	66,90	BC830860	116,83	BC841750	17,5	18	123	73	256,09	BC831750	453,30
BC840870	8,70	10	89	47	66,90	BC830870	116,83	BC841800	18,0	18	123	73	256,09	BC831800	453,30
BC840880	8,80	10	89	47	66,90	BC830880	116,83	BC841850	18,5	20	131	79	312,68	BC831850	498,14
BC840890	8,90	10	89	47	66,90	BC830890	116,83	BC841900	19,0	20	131	79	312,68	BC831900	498,14
BC840900	9,00	10	89	47	66,90	BC830900	116,83	BC841950	19,5	20	131	79	312,68	BC831950	498,14
BC840910	9,10	10	89	47	66,90	BC830910	116,83	BC842000	20,0	20	131	79	312,68	BC832000	498,14
BC840930	9,30	10	89	47	66,90	BC830930	116,83								



**SOLID CARBIDE REINFORCED SHANK DRILLS WITH & WITHOUT INTERNAL COOLING**

Twist drills for Metal

Pink

Ref. BC97  
Ref. BC89

**5xD**

**DIN 6537L**

**SOLID CARBIDE**

**TOL D1 m7**

**TOL D2 h6**



**TiAIN**

**HARDOX 450**



Recommended for HARDOX 450



	BC97					BC89		BC97					BC89		
	D1 mm	D2 mm	L1 mm	L2 mm	€		€		D1 mm	D2 mm	L1 mm	L2 mm	€		€
BC970300	3,0	6	66	28	57,57	BC890300	99,25	BC970900	9,0	10	103	61	81,94	BC890900	129,25
BC970310	3,1	6	66	28	57,57	BC890310	99,25	BC970910	9,1	10	103	61	81,94	BC890910	129,25
BC970320	3,2	6	66	28	57,57	BC890320	99,25	BC970920	9,2	10	103	61	81,94	BC890920	129,25
BC970340	3,4	6	66	28	57,57	BC890340	99,25	BC970930	9,3	10	103	61	81,94	BC890930	129,25
BC970350	3,5	6	66	28	57,57	BC890350	99,25	BC970940	9,4	10	103	61	81,94	BC890940	129,25
BC970360	3,6	6	66	28	57,57	BC890360	99,25	BC970950	9,5	10	103	61	81,94	BC890950	129,25
BC970380	3,8	6	74	36	57,57	BC890380	99,25	BC970960	9,6	10	103	61	81,94	BC890960	129,25
BC970390	3,9	6	74	36	57,57	BC890390	99,25	BC970970	9,7	10	103	61	81,94	BC890970	129,25
BC970400	4,0	6	74	36	57,57	BC890400	99,25	BC970980	9,8	10	103	61	81,94	BC890980	129,25
BC970420	4,2	6	74	36	57,57	BC890420	99,25	BC970990	9,9	10	103	61	81,94	BC890990	129,25
BC970440	4,4	6	74	36	57,57	BC890440	99,25	BC971000	10,0	10	103	61	81,94	BC891000	129,25
BC970450	4,5	6	74	36	57,57	BC890450	99,25	BC971010	10,1	12	118	71	117,96	BC891010	184,04
BC970460	4,6	6	74	36	57,57	BC890460	99,25	BC971020	10,2	12	118	71	117,96	BC891020	184,04
BC970470	4,7	6	74	36	57,57	BC890470	99,25	BC971040	10,4	12	118	71	117,96	BC891040	184,04
BC970480	4,8	6	82	44	57,57	BC890480	99,25	BC971050	10,5	12	118	71	117,96	BC891050	184,04
BC970490	4,9	6	82	44	57,57	BC890490	99,25	BC971060	10,6	12	118	71	117,96	BC891060	184,04
BC970500	5,0	6	82	44	57,57	BC890500	99,25	BC971070	10,7	12	118	71	117,96	BC891070	184,04
BC970520	5,2	6	82	44	57,57	BC890520	99,25	BC971080	10,8	12	118	71	117,96	BC891080	184,04
BC970530	5,3	6	82	44	57,57	BC890530	99,25	BC971100	11,0	12	118	71	117,96	BC891100	184,04
BC970540	5,4	6	82	44	57,57	BC890540	99,25	BC971110	11,1	12	118	71	117,96	BC891110	184,04
BC970550	5,5	6	82	44	57,57	BC890550	99,25	BC971120	11,2	12	118	71	117,96	BC891120	184,04
BC970560	5,6	6	82	44	57,57	BC890560	99,25	BC971130	11,3	12	118	71	117,96	BC891130	184,04
BC970570	5,7	6	82	44	57,57	BC890570	99,25	BC971140	11,4	12	118	71	117,96	BC891140	184,04
BC970580	5,8	6	82	44	57,57	BC890580	99,25	BC971150	11,5	12	118	71	117,96	BC891150	184,04
BC970590	5,9	6	82	44	57,57	BC890590	99,25	BC971160	11,5	12	118	71	117,96	BC891160	184,04
BC970600	6,0	6	82	44	57,57	BC890600	99,25	BC971170	11,5	12	118	71	117,96	BC891170	184,04
BC970610	6,1	8	91	53	63,06	BC890610	111,20	BC971180	11,8	12	118	71	117,96	BC891180	184,04
BC970620	6,2	8	91	53	63,06	BC890620	111,20	BC971200	12,0	12	118	71	117,96	BC891200	184,04
BC970630	6,3	8	91	53	63,06	BC890630	111,20	BC971210	12,1	14	124	77	155,06	BC891210	249,97
BC970640	6,4	8	91	53	63,06	BC890640	111,20	BC971230	12,3	14	124	77	155,06	BC891230	249,97
BC970650	6,5	8	91	53	63,06	BC890650	111,20	BC971240	12,4	14	124	77	155,06	BC891240	249,97
BC970660	6,6	8	91	53	63,06	BC890660	111,20	BC971250	12,5	14	124	77	155,06	BC891250	249,97
BC970670	6,7	8	91	53	63,06	BC890670	111,20	BC971270	12,7	14	124	77	155,06	BC891270	249,97
BC970680	6,8	8	91	53	63,06	BC890680	111,20	BC971300	13,0	14	124	77	155,06	BC891300	249,97
BC970690	6,9	8	91	53	63,06	BC890690	111,20	BC971310	13,1	14	124	77	155,06	BC891310	249,97
BC970700	7,0	8	91	53	63,06	BC890700	111,20	BC971330	13,3	14	124	77	155,06	BC891330	249,97
BC970710	7,1	8	91	53	63,06	BC890710	111,20	BC971350	13,5	14	124	77	155,06	BC891350	249,97
BC970720	7,2	8	91	53	63,06	BC890720	111,20	BC971370	13,7	14	124	77	155,06	BC891370	249,97
BC970730	7,3	8	91	53	63,06	BC890730	111,20	BC971380	13,8	14	124	77	155,06	BC891380	249,97
BC970740	7,4	8	91	53	63,06	BC890740	111,20	BC971400	14,0	14	124	77	155,06	BC891400	249,97
BC970750	7,5	8	91	53	63,06	BC890750	111,20	BC971450	14,5	16	133	83	194,38	BC891450	313,48
BC970760	7,6	8	91	53	63,06	BC890760	111,20	BC971470	14,7	16	133	83	194,38	BC891470	313,48
BC970770	7,7	8	91	53	63,06	BC890770	111,20	BC971480	14,8	16	133	83	194,38	BC891480	313,48
BC970780	7,8	8	91	53	63,06	BC890780	111,20	BC971500	15,0	16	133	83	194,38	BC891500	313,48
BC970790	7,9	8	91	53	63,06	BC890790	111,20	BC971550	15,5	16	133	83	194,38	BC891550	313,48
BC970800	8,0	8	91	53	63,06	BC890800	111,20	BC971580	15,8	16	133	83	194,38	BC891580	313,48
BC970810	8,1	10	103	61	81,94	BC890810	129,25	BC971600	16,0	16	133	83	194,38	BC891600	313,48
BC970830	8,3	10	103	61	81,94	BC890830	129,25	BC971650	16,5	18	143	93	323,79	BC891650	494,93
BC970840	8,4	10	103	61	81,94	BC890840	129,25	BC971700	17,0	18	143	93	323,79	BC891700	494,93
BC970850	8,5	10	103	61	81,94	BC890850	129,25	BC971750	17,5	18	143	93	323,79	BC891750	494,93
BC970860	8,6	10	103	61	81,94	BC890860	129,25	BC971800	18,0	18	143	93	323,79	BC891800	494,93
BC970870	8,7	10	103	61	81,94	BC890870	129,25	BC971850	18,5	20	153	101	353,91	BC891850	540,99
BC970880	8,8	10	103	61	81,94	BC890880	129,25	BC971900	19,0	20	153	101	353,91	BC891900	540,99
BC970890	8,9	10	103	61	81,94	BC890890	129,25	BC971950	19,5	20	153	101	353,91	BC891950	540,99
								BC972000	20,0	20	153	101	353,91	BC892000	540,99

**SOLID CARBIDE REINFORCED SHANK DRILLS WITH INTERNAL COOLING**

Ref. BC96

**7xD**

**SOLID CARBIDE**

**TOL D1  
m7**

**TOL D2  
h6**

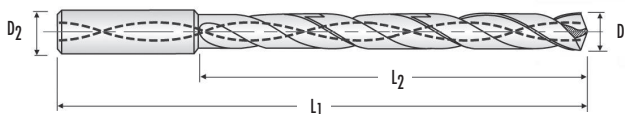


**TiAIN**

**HARDOX  
450**



Recommended for HARDOX 450



	BC96				
	D1 mm	D2 mm	L1 mm	L2 mm	€
BC960300	3,00	6	72	34	187,74
BC960320	3,20	6	72	34	187,74
BC960350	3,50	6	72	34	187,74
BC960380	3,80	6	81	43	187,74
BC960400	4,00	6	81	43	187,74
BC960420	4,20	6	81	43	187,74
BC960450	4,50	6	81	43	187,74
BC960480	4,80	6	95	57	187,74
BC960500	5,00	6	95	57	187,74
BC960520	5,20	6	95	57	187,74
BC960550	5,50	6	95	57	187,74
BC960560	5,60	6	95	57	187,74
BC960570	5,70	6	95	57	187,74
BC960580	5,80	6	95	57	187,74
BC960590	5,90	6	95	57	187,74
BC960600	6,00	6	95	57	187,74
BC960610	6,10	8	114	76	204,52
BC960620	6,20	8	114	76	204,52
BC960630	6,30	8	114	76	204,52
BC960650	6,50	8	114	76	204,52
BC960660	6,60	8	114	76	204,52
BC960680	6,80	8	114	76	204,52
BC960690	6,90	8	114	76	204,52
BC960700	7,00	8	114	76	204,52
BC960710	7,10	8	114	76	204,52
BC960740	7,40	8	114	76	204,52
BC960750	7,50	8	114	76	204,52
BC960780	7,80	8	114	76	204,52
BC960800	8,00	8	114	76	204,52
BC960810	8,10	10	142	95	276,93
BC960840	8,40	10	142	95	276,93
BC960850	8,50	10	142	95	276,93
BC960860	8,60	10	142	95	276,93
BC960870	8,70	10	142	95	276,93
BC960880	8,80	10	142	95	276,93
BC960900	9,00	10	131	87	276,93
BC960930	9,30	10	142	95	276,93
BC960950	9,50	10	142	95	276,93
BC960960	9,60	10	142	95	276,93
BC960980	9,80	10	142	95	276,93
BC961000	10,00	10	142	95	276,93
BC961020	10,20	12	162	114	365,08
BC961040	10,40	12	162	114	365,08
BC961050	10,50	12	162	114	365,08
BC961060	10,60	12	162	114	365,08
BC961080	10,80	12	162	114	365,08
BC961100	11,00	12	162	114	365,08
BC961120	11,20	12	162	114	365,08
BC961150	11,50	12	162	114	365,08
BC961180	11,80	12	162	114	365,08
BC961200	12,00	12	162	114	365,08



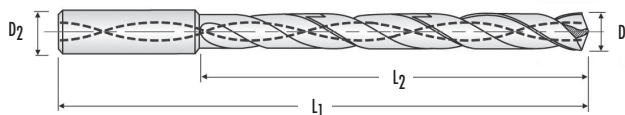
**SOLID CARBIDE REINFORCED SHANK DRILLS WITH INTERNAL COOLING**
**12xD**

Ref. BXX

**DIN  
6537L**
**SOLID  
CARBIDE**
**TOL D<sub>1</sub>  
m7**
**TOL D<sub>2</sub>  
h6**

**TiAIN**
**HARDOX  
450**


Recommended for HARDOX 450



	BXX				
	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
BXX0300	3,0	6	92	54	206,08
BXX0320	3,2	6	92	54	206,08
BXX0330	3,3	6	92	54	206,08
BXX0350	3,5	6	92	54	206,08
BXX0370	3,7	6	92	54	206,08
BXX0380	3,8	6	102	64	206,08
BXX0390	3,9	6	102	64	206,08
BXX0400	4,0	6	102	64	206,08
BXX0420	4,2	6	102	64	206,08
BXX0430	4,3	6	102	64	206,08
BXX0440	4,4	6	102	64	219,84
BXX0450	4,5	6	102	64	219,84
BXX0460	4,6	6	102	64	219,84
BXX0470	4,7	6	102	64	219,84
BXX0480	4,8	6	116	78	219,84
BXX0490	4,9	6	116	78	219,84
BXX0500	5,0	6	116	78	219,84
BXX0510	5,1	6	116	78	219,84
BXX0520	5,2	6	116	78	219,84
BXX0530	5,3	6	116	78	219,84
BXX0540	5,4	6	116	78	219,84
BXX0550	5,5	6	116	78	219,84
BXX0560	5,6	6	116	78	219,84
BXX0570	5,7	6	116	78	219,84
BXX0580	5,8	6	116	78	219,84
BXX0590	5,9	6	116	78	219,84
BXX0600	6,0	6	116	78	219,84
BXX0610	6,1	8	146	108	269,31
BXX0620	6,2	8	146	108	269,31
BXX0650	6,5	8	146	108	269,31
BXX0660	6,6	8	146	108	269,31
BXX0670	6,7	8	146	108	269,31
BXX0680	6,8	8	146	108	285,77
BXX0690	6,9	8	146	108	285,77
BXX0700	7,0	8	146	108	285,77

	BXX				
	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
BXX0740	7,4	8	146	108	285,77
BXX0750	7,5	8	146	108	285,77
BXX0770	7,7	8	146	108	285,77
BXX0780	7,8	8	146	108	315,42
BXX0800	8,0	8	146	108	319,58
BXX0820	8,2	10	162	120	357,27
BXX0850	8,5	10	162	120	357,27
BXX0880	8,8	10	162	120	357,27
BXX0900	9,0	10	162	120	357,27
BXX0950	9,5	10	162	120	357,27
BXX0980	9,8	10	162	120	357,27
BXX0990	9,9	10	162	120	357,27
BXX1000	10,0	10	162	120	357,27
BXX1010	10,1	12	204	156	500,15
BXX1020	10,2	12	204	156	500,15
BXX1030	10,3	12	204	156	500,15
BXX1050	10,5	12	204	156	500,15
BXX1080	10,8	12	204	156	500,15
BXX1100	11,0	12	204	156	500,15
BXX1120	11,2	12	204	156	500,15
BXX1140	11,4	12	204	156	500,15
BXX1150	11,5	12	204	156	500,15
BXX1180	11,8	12	204	156	500,15
BXX1200	12,0	12	204	156	500,15
BXX1250	12,5	14	230	182	654,04
BXX1280	12,8	14	230	182	654,04
BXX1300	13,0	14	230	182	654,04
BXX1350	13,5	14	230	182	654,04
BXX1380	13,8	14	230	182	654,04
BXX1400	14,0	14	230	182	654,04
BXX1450	14,5	16	260	208	851,85
BXX1500	15,0	16	260	208	851,85
BXX1550	15,5	16	260	208	851,85
BXX1600	16,0	16	260	208	851,85



**SOLID CARBIDE REINFORCED SHANK DRILLS WITH INTERNAL COOLING**

Ref. BXL  
Ref. BXXL

**DIN  
6537L**

**SOLID  
CARBIDE**

**TOL D1  
m7**

**TOL D2  
h6**

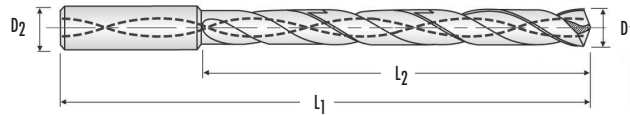


**TiAIN**

**HARDOX  
450**



Recommended for HARDOX 450



**15xD**

	D1 mm	D2 mm	L1 mm	L2 mm	BXL €
BXL0300	3,0	6	100	60	279,60
BXL0320	3,2	6	100	60	279,60
BXL0330	3,3	6	100	60	279,60
BXL0350	3,5	6	100	60	279,60
BXL0380	3,8	6	108	68	279,60
BXL0390	3,9	6	108	68	279,60
BXL0400	4,0	6	108	68	279,60
BXL0420	4,2	6	115	78	311,34
BXL0450	4,5	6	115	78	311,34
BXL0500	5,0	6	125	84	320,02
BXL0550	5,5	6	130	92	325,63
BXL0590	5,9	6	140	100	325,63
BXL0600	6,0	6	140	100	325,63
BXL0650	6,5	8	145	108	427,81
BXL0680	6,8	8	170	130	486,52
BXL0700	7,0	8	170	130	486,52
BXL0750	7,5	8	170	130	486,52
BXL0780	7,8	8	170	130	486,52
BXL0800	8,0	8	170	130	486,52
BXL0850	8,5	10	208	163	659,68
BXL0900	9,0	10	208	163	659,68
BXL0950	9,5	10	208	163	659,68
BXL0980	9,8	10	208	163	659,68
BXL1000	10,0	10	208	163	659,68
BXL1050	10,5	12	245	195	847,76
BXL1100	11,0	12	245	195	847,76
BXL1150	11,5	12	245	195	847,76
BXL1180	11,8	12	245	195	847,76
BXL1200	12,0	12	245	195	847,76
BXL1250	12,5	14	280	230	1.161,34
BXL1300	13,0	14	280	230	1.161,34
BXL1400	14,0	14	280	230	1.161,34
BXL1500	15,0	16	310	260	1.414,23

**20xD**

	D1 mm	D2 mm	L1 mm	L2 mm	BXXL €
BXXL0300	3,0	6	110	70	307,56
BXXL0350	3,5	6	136	96	307,56
BXXL0400	4,0	6	136	96	307,56
BXXL0450	4,5	6	158	118	342,47
BXXL0500	5,0	6	158	118	352,02
BXXL0510	5,1	6	180	140	358,19
BXXL0550	5,5	6	180	140	358,19
BXXL0600	6,0	6	180	140	358,19
BXXL0650	6,5	8	202	162	470,59
BXXL0700	7,0	8	202	162	535,17
BXXL0750	7,5	8	223	183	535,17
BXXL0800	8,0	8	223	183	535,17
BXXL0850	8,5	10	249	205	725,65
BXXL0900	9,0	10	249	205	725,65
BXXL1000	10,0	10	271	227	725,65



BXL

BXXL

## MICRO DRILLS WITH REINFORCED SHANK

Ref. BC30

HSS



Ø 2,30mm



118°

30°  
"N"

5xD



BC30				
	D1 mm	L1 mm	L2 mm	€
BC300050	0,50	43	5	3,37
BC300060	0,60	43	7	3,37
BC300070	0,70	43	7	3,37
BC300075	0,75	43	7	3,37
BC300080	0,80	43	7	3,37
BC300090	0,90	43	7	3,37
BC300095	0,95	43	7	3,37
BC300100	1,00	43	7	3,37
BC300110	1,10	43	7	3,37
BC300120	1,20	43	10	3,37
BC300125	1,25	43	10	3,37
BC300130	1,30	43	10	3,37

BC30				
	D1 mm	L1 mm	L2 mm	€
BC300140	1,40	43	10	3,37
BC300150	1,50	43	10	3,37
BC300160	1,60	43	10	3,37
BC300170	1,70	43	10	3,37
BC300175	1,75	43	10	3,37
BC300180	1,80	43	10	3,37
BC300190	1,90	43	10	3,37
BC300200	2,00	43	10	3,37
BC300210	2,10	43	10	3,37
BC300220	2,20	43	10	3,37
BC300225	2,25	43	10	3,37
BC300235	2,35	43	10	3,37
BC300240	2,40	43	10	3,37

Ref. BC79

SOLID  
CARBIDE

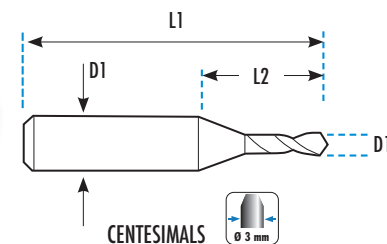
Ø 3,17mm



118°

30°  
"N"HIGH  
PERFORMANCE

5xD



CENTESIMALS



BC79				
	D1 mm	L1 mm	L2 mm	€
BC790025	0,25	38	5	28,84
BC790030	0,30	38	5	28,84
BC790035	0,35	38	5	28,84
BC790040	0,40	38	5	20,96
BC790045	0,45	38	5	20,96
BC790050	0,50	38	5	15,29
BC790055	0,55	38	5	15,29
BC790060	0,60	38	5	15,29
BC790065	0,65	38	5	13,80
BC790070	0,70	38	10	13,80
BC790075	0,75	38	10	13,80
BC790080	0,80	38	10	13,80
BC790085	0,85	38	10	13,80
BC790090	0,90	38	10	13,80
BC790095	0,95	38	10	13,80
BC790100	1,00	38	10	13,80
BC790105	1,05	38	10	13,80
BC790110	1,10	38	10	13,80
BC790115	1,15	38	10	13,80
BC790120	1,20	38	10	13,80
BC790125	1,25	38	10	13,80
BC790130	1,30	38	10	13,80
BC790135	1,35	38	10	13,80
BC790140	1,40	38	10	13,80
BC790145	1,45	38	10	13,80
BC790150	1,50	38	10	13,80
BC790155	1,55	38	10	13,80
BC790160	1,60	38	10	13,80
BC790165	1,65	38	10	17,33
BC790170	1,70	38	10	17,33

BC79				
	D1 mm	L1 mm	L2 mm	€
BC790175	1,75	38	10	17,33
BC790180	1,80	38	10	17,33
BC790185	1,85	38	10	17,33
BC790190	1,90	38	10	17,33
BC790195	1,95	38	10	17,33
BC790200	2,00	38	10	17,33
BC790205	2,05	38	10	17,33
BC790210	2,10	38	10	17,33
BC790215	2,15	38	10	17,33
BC790220	2,20	38	10	17,33
BC790225	2,25	38	10	17,33
BC790230	2,30	38	10	17,33
BC790235	2,35	38	10	17,33
BC790240	2,40	38	10	17,33
BC790245	2,45	38	10	17,33
BC790250	2,50	38	10	17,33
BC790255	2,55	38	10	17,33
BC790260	2,60	38	10	17,33
BC790265	2,65	38	10	17,33
BC790270	2,70	38	10	17,33
BC790275	2,75	38	10	17,33
BC790280	2,80	38	10	17,33
BC790285	2,85	38	10	17,33
BC790290	2,90	38	10	17,33
BC790295	2,95	38	10	17,33
BC790300	3,00	38	10	17,33
BC790305	3,05	38	10	17,33
BC790310	3,10	38	10	17,33
BC790315	3,15	38	10	17,33

BC79	
D1 mm	€
0,10 - 0,39	28,84
0,41 - 0,89	21,51
0,91 - 1,19	21,51
1,21 - 1,39	23,22
1,41 - 1,89	23,22
1,91 - 2,19	23,22
2,21 - 2,39	24,20
2,41 - 2,89	24,20
2,91 - 2,99	24,20



**SOLID CARBIDE DRILLS FOR HARDENED AND HIGH RESISTANCE STEEL**

Ref. BC85

**70  
HRC**

**SOLID  
CARBIDE**

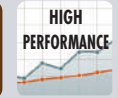
**TOL D1  
h7**

**TOL D2  
h6**

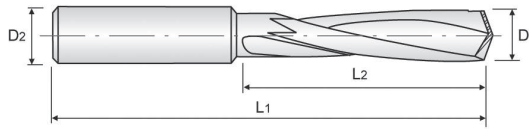


**TiAIN**

**HARDOX  
600**



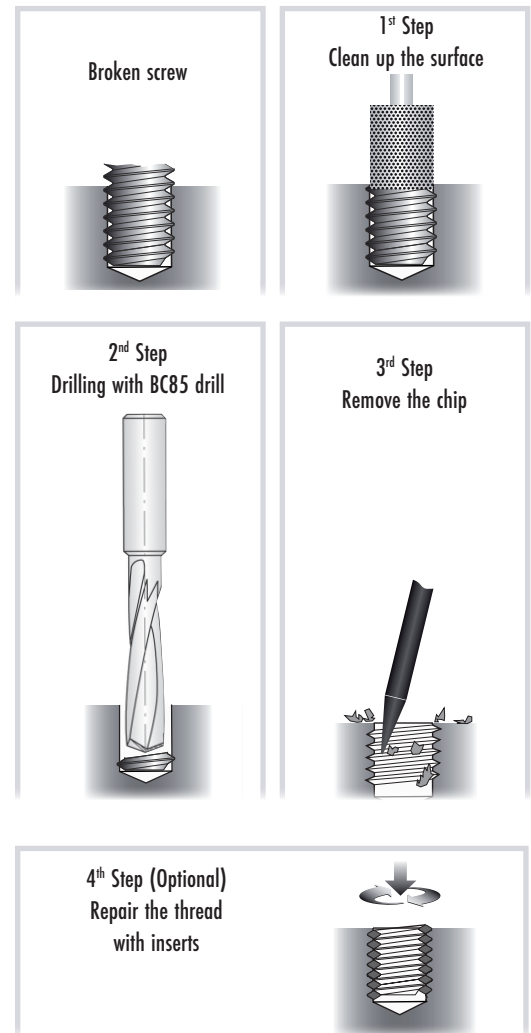
Recommended for HARDOX 600



BC85					
	D1 mm	D2 mm	L1 mm	L2 mm	€
BC850300	3,0	3	46	16	49,79
BC850330	3,3	4	48	18	57,14
BC850340	3,4	4	50	20	57,14
BC850350	3,5	4	50	20	57,14
BC850400	4,0	4	52	22	58,30
BC850420	4,2	6	65	25	82,78
BC850430	4,3	6	68	28	82,78
BC850440	4,4	6	68	28	82,78
BC850450	4,5	6	68	28	82,78
BC850500	5,0	6	72	32	82,78
BC850510	5,1	6	72	32	82,78
BC850520	5,2	6	72	32	82,78
BC850550	5,5	6	75	35	82,78
BC850600	6,0	6	75	35	82,78
BC850630	6,3	8	80	40	102,69*
BC850650	6,5	8	80	40	102,69
BC850680	6,8	8	85	45	102,69
BC850690	6,9	8	85	45	102,69
BC850700	7,0	8	85	45	102,69
BC850750	7,5	8	85	45	102,69
BC850800	8,0	8	98	50	102,69
BC850850	8,5	10	98	50	156,94
BC850860	8,6	10	105	57	156,94
BC850880	8,8	10	105	57	156,94
BC850900	9,0	10	105	57	156,94
BC850950	9,5	10	105	57	156,94
BC851000	10,0	10	111	63	156,94
BC851020	10,2	12	111	63	203,26
BC851030	10,3	12	111	63	238,49
BC851040	10,4	12	111	63	238,49
BC851050	10,5	12	111	63	238,49
BC851080	10,8	12	119	71	238,49
BC851100	11,0	12	119	71	238,49
BC851150	11,5	12	119	71	238,49
BC851200	12,0	12	119	71	238,49
BC851400	14,0	14	125	77	271,01

\* Till end of stock

**DRILLING THROUGH BROKEN SCREWS**



## STEP CUT DRILL FOR EASY DRILLING IN CURVED AND UNSTABLE SURFACES

DIN  
338

HSS

 $\varnothing \geq 2,5\text{mm}$  $\varnothing \geq 4$ 

Al



Cu-Ni-Zn



PVC



Ref. TK02

Twist drills for Metal

Pink



STEP CUT



HSS Helical drill with STEP CUT point geometry, cut in steps.

NEW STEP CUT: its step geometry allows an easy penetration.

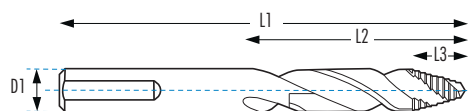
Work in a comfortable, fast and accurate way in curved, unstable or sloping surfaces.

Higher accuracy due to the centering point that avoids the slipping at the start of the drilling.

STEP CUT Geometry: With the Step Cut the holes are more rounded, accurate and centered .

Triple Flat ANTISLIP shank to transmit the power to the drill in a properly way.

Enables to make through holes in steel, aluminium, copper, nickel, zinc, PVC, fiberglass, wood...



	TK02					
	D1 mm	L1 mm	L2 mm	L3 mm		€
TK020100	1,0	34	12	-	10	3,42
TK020150	1,5	40	18	-	10	3,52
TK020200	2,0	49	24	-	10	3,67
TK020250	2,5	57	30	1,6	10	4,27
TK020300	3,0	61	33	1,9	10	4,48
TK020320	3,2	65	36	2,1	10	5,36
TK020330	3,3	65	36	2,2	10	5,36
TK020350	3,5	70	39	2,1	10	5,36
TK020400	4,0	75	43	2,9	10	6,34
TK020410	4,1	75	43	3,0	10	6,97
TK020420	4,2	75	43	3,0	10	6,97
TK020450	4,5	80	47	3,3	10	6,97
TK020490	4,9	76	52	3,8	10	6,97
TK020500	5,0	76	52	3,9	10	7,87
TK020510	5,1	76	52	4,0	10	8,26
TK020520	5,2	76	52	4,2	10	8,26
TK020550	5,5	93	57	4,6	10	8,33
TK020600	6,0	93	57	5,3	10	9,08
TK020650	6,5	101	63	5,8	10	10,59
TK020680	6,8	109	69	5,9	10	11,57
TK020700	7,0	109	69	6,4	10	12,11
TK020750	7,5	109	69	6,9	10	14,16
TK020800	8,0	117	75	7,6	10	14,63
TK020850	8,5	117	75	8,2	10	17,36
TK020900	9,0	125	81	8,8	10	19,17
TK020950	9,5	125	81	9,3	10	20,68
TK021000	10,0	133	87	10,0	10	22,05
TK021020	10,2	133	87	9,9	10	23,33
TK021050	10,5	133	87	10,7	10	24,02
TK021100	11,0	142	94	11,3	6	26,52
TK021150	11,5	142	94	12,0	6	28,85
TK021200	12,0	151	101	12,6	6	31,48
TK021250	12,5	151	101	13,8	6	33,50
TK021300	13,0	151	101	14,7	6	36,11



**STEP CUT DRILL FOR EASY DRILLING IN CURVED AND UNSTABLE SURFACES**

Ref. TK05

**DIN  
338**

**HSSCo  
5%**



**INOX**



**CAST  
IRON**



Twist drills for Metal

Pink



**STEP CUT**

High Performance Helical Drill HSSCo 5% .

NEW STEP CUT: its step geometry allows an easy penetration.

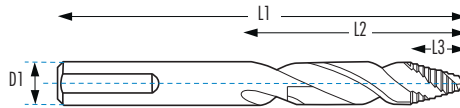
Work in a comfortable, fast and accurate way in curved, unstable or sloping surfaces.

Higher accuracy due to the centering point that avoids the slipping at the start of the drilling.

STEP CUT Geometry: With the Step Cut the holes are more rounded, accurate and centered .

Triple Flat ANTISLIP shank to transmit the power to the drill in a properly way.

Enables to make through holes in stainless steel, cast iron, copper, nickel, zinc, PVC, fiberglass, ...



	D1 mm	L1 mm	L2 mm	L3 mm		TK05 €
TK050100	1,0	34	12	-	10	4,61
TK050150	1,5	40	18	-	10	4,76
TK050200	2,0	49	24	-	10	4,95
TK050250	2,5	57	30	1,6	10	5,77
TK050300	3,0	61	33	1,9	10	6,06
TK050350	3,5	70	39	2,1	10	7,23
TK050400	4,0	75	43	2,9	10	8,57
TK050450	4,5	80	47	3,3	10	9,41
TK050500	5,0	76	52	3,9	10	10,62
TK050550	5,5	93	57	4,6	10	11,25
TK050600	6,0	93	57	5,3	10	11,35
TK050650	6,5	101	63	5,8	10	13,24
TK050700	7,0	109	69	6,4	10	15,14
TK050750	7,5	109	69	6,9	10	17,71
TK050800	8,0	117	75	7,6	10	18,28
TK050850	8,5	117	75	8,2	10	21,70
TK050900	9,0	125	81	8,8	10	23,96
TK050950	9,5	125	81	9,3	10	25,85
TK051000	10,0	133	87	10,0	10	25,36
TK051050	10,5	133	87	10,7	10	27,61
TK051100	11,0	142	94	11,3	6	30,51
TK051150	11,5	142	94	12,0	6	33,18
TK051200	12,0	151	101	12,6	6	36,19
TK051250	12,5	151	101	13,8	6	38,51
TK051300	13,0	151	101	14,7	6	41,53



## STEP CUT TOOLS FOR EASY DRILLING IN CURVED AND UNSTABLE SURFACES

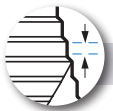
NEW

HSS

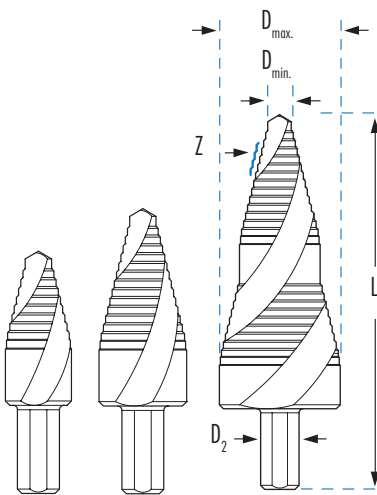
Twist drills for Metal

Pink

## HSS STEP CUT MICRO STEP DRILL

NEW  
STEP CUT

STEP 2 mm



AV40BM37

AV40BM38

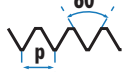
AV40BM36

							AV40BM	
	D min. mm	D max. mm	D2 mm	L1 mm	Z	Ø Z mm min - max	HSS	
							€	
AV40BM37B	6,0	15,0	9,5	55	11	6-7-8-9-10-11-12-13-14-14,5-15	27,75	
AV40BM38B	6,0	20,0	9,5	65	16	6-7-8-9-10-11-12-13-14-15-16-17-18-19-19,5-20	41,49	
AV40BM36B	6,0	30,0	9,5	93	27	6-7-8-9-10-11-12-13-14-15-16-17-18-19 19,5-20-21-22-23-24-25-26-27-28-29-29,5-30	102,31	

## HSSCo STEP CUT DRILL-TAP WITH COUNTERSINK

NEW

DIN 13



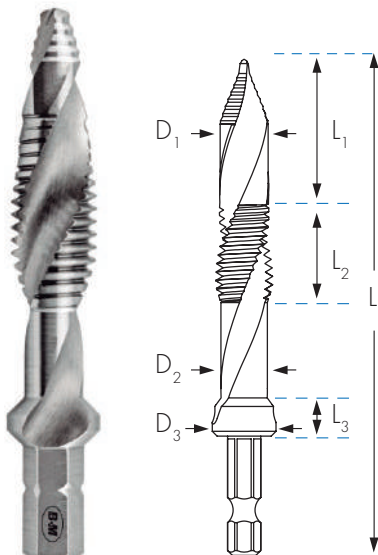
60°

HSSCo  
5%

BRIGHT

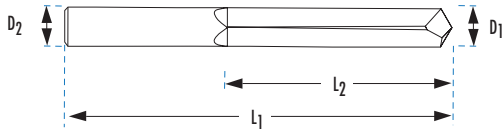
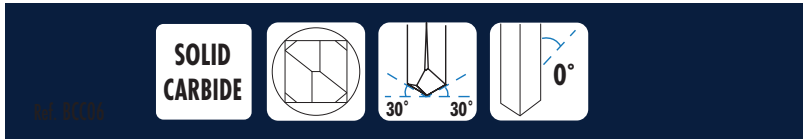
TOL  
6HD  
REDUCED  
SHANK

STEP CUT



									MTKM	
			L1 mm	L2 mm	L3 mm	L mm	D1 mm	D2 mm	D3 mm	€
M	3x0,50	D	7,5	6,0	6,0	52,0	2,5	2,2	7,3	28,21
M	4x0,70	D	10,0	8,4	6,0	56,4	3,3	3,0	7,3	28,21
M	5x0,80	D	13,0	9,5	6,0	63,5	4,2	3,7	7,3	29,44
M	6x1,00	D	15,0	12,0	6,0	68,0	5,0	4,5	7,3	30,66
M	8x1,25	D	20,0	15,0	6,0	81,0	6,8	6,3	9,4	42,38
M	10x1,50	D	25,0	18,0	6,0	89,0	8,5	8,0	11,4	51,14
M	12x1,75	D	30,0	21,0	8,0	104,0	10,3	9,8	13,4	56,36

**CARBIDE DRILLS FOR CYLINDER**



\* Suitable to drill cylinder with Anti-drilling pins



BCC06					
	D1 mm	D2 mm	L2 mm	L1 mm	€
BCC06X60MD	6	6	33	60	61,93

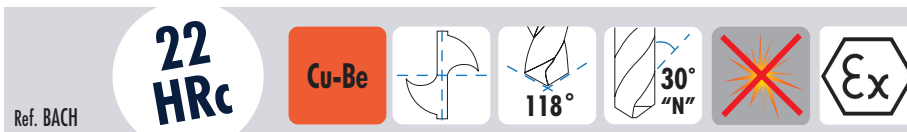
\* For antidrilling pins cylinder we recommend to drill at 300 RPM.



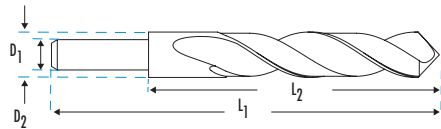
Twist drills for Metal

Pink

**NON-SPARKING DRILL BIT (ATEX)**



Ref. BACH



- \* Made of Copper-Beryllium according to Q/ZBF-312 Standard.
- \* Certificates and security sheets available.
- \* Suitable for machining in explosive atmospheres.

BACH					
	D1 mm	D2 mm	L1 mm	L2 mm	€
BACH0600	6,0	6,0	100	60	475,85
BACH0700	7,0	7,0	120	80	495,62
BACH0800	8,0	8,0	140	80	526,13
BACH0900	9,0	9,0	160	86	548,58
BACH1000	10,0	10,0	180	108	579,11
BACH1100	11,0	11,0	200	125	598,86
BACH1200	12,0	12,0	220	135	618,62
BACH1300	13,0	12,0	240	150	641,96
BACH1400	14,0	12,0	260	160	661,71
BACH1500	15,0	12,0	280	190	681,45
BACH1600	16,0	12,0	300	195	725,45
BACH1700	17,0	12,0	300	195	760,46
BACH1800	18,0	12,0	320	195	827,80
BACH1900	19,0	12,0	320	205	860,12
BACH2000	20,0	12,0	330	205	908,60

\* Special lengths available on request



Due to its hardness (inferior compared with HSS Tools), non-sparking drill bits can not be guaranteed against deformation or breaking. We'll only accept to replace only non-sparking drill bits with hardness less than 35 HRC.

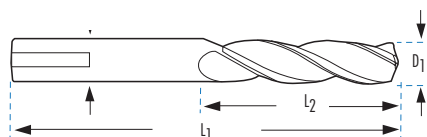
**3 FLUTE DELTABIT DRILL BIT**
**3Z**

Ref. BTT33

**DIN  
338**
**HSSCo  
5%**

**135°**

**30°  
"N"**
**TOL  
H8**

**HIGH  
PERFORMANCE**


- Greater accuracy of the holes.
- Holes better rounded and aligned.
- Anti-slip triangle shank, better clamping to the drill-chuck.

**BTT33**

	D1 mm	L1 mm	L2 mm	€
BTT330300	3,0	61	33	2,63
BTT330330	3,3	65	36	3,40
BTT330350	3,5	70	39	3,40
BTT330400	4,0	75	43	3,99
BTT330420	4,2	75	43	4,92
BTT330450	4,5	80	47	4,92
BTT330500	5,0	86	52	5,62
BTT330550	5,5	93	57	6,98
BTT330600	6,0	93	57	8,06
BTT330650	6,5	101	63	9,27
BTT330680	6,8	109	69	10,67
BTT330700	7,0	109	69	10,67
BTT330750	7,5	109	69	12,17
BTT330800	8,0	117	75	14,55
BTT330850	8,5	117	75	16,19
BTT330900	9,0	125	81	18,78
BTT330950	9,5	125	81	20,45
BTT331000	10,0	133	87	23,04
BTT331020	10,2	133	87	25,66
BTT331050	10,5	133	87	25,66
BTT331100	11,0	142	94	29,54
BTT331150	11,5	142	94	31,95
BTT331200	12,0	151	101	36,96
BTT331250	12,5	151	101	39,55
BTT331300	13,0	151	101	42,14



**SPECIAL DRILL FOR HARDOX AND WEAR-RESISTANCE SHEETS**

Ref. BHA

**3xD**

**DIN  
338**

**HSSCo  
8%**



**135°**



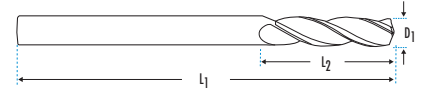
**HARDTOP**

**HARDOX  
400**

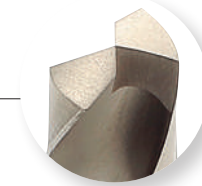
**HARDOX  
450**

**HARDOX  
600**

Special point geometry, with Split point and double facet relief.  
**HARDTOP** coating that improves the slip of the chips and avoids their adherence to the cutting edge.  
 Improves the mechanical resistance and protects the drill reducing the friction coefficient.  
 Its low depth flute generates a reinforced core that facilitates the tooling stability.  
 Maximum performance in high resistance materials.



	BHA			
	D1 mm	L1 mm	L2 mm	€
BHA0100	1,0	34	6	12,02
BHA0150	1,5	40	9	12,02
BHA0200	2,0	49	12	12,49
BHA0250	2,5	57	14	12,73
BHA0300	3,0	61	16	12,84
BHA0320	3,2	65	18	13,67
BHA0330	3,3	65	18	13,67
BHA0350	3,5	70	20	13,67
BHA0400	4,0	75	22	14,52
BHA0420	4,2	75	22	18,93
BHA0450	4,5	80	24	18,93
BHA0500	5,0	86	26	17,94
BHA0550	5,5	93	28	24,24
BHA0600	6,0	93	28	22,71
BHA0650	6,5	101	31	26,18
BHA0680	6,8	109	34	30,41
BHA0700	7,0	109	34	28,03
BHA0750	7,5	109	34	33,57
BHA0800	8,0	117	37	36,50
BHA0850	8,5	117	37	36,50
BHA0900	9,0	125	40	43,70
BHA0950	9,5	125	40	49,33
BHA1000	10,0	133	43	47,85
BHA1020	10,2	133	43	55,67
BHA1050	10,5	133	43	60,13
BHA1100	11,0	142	47	62,57
BHA1150	11,5	142	47	70,45
BHA1200	12,0	151	51	65,62
BHA1250	12,5	151	51	86,20
BHA1300	13,0	151	51	93,94



135° Point Angle to provide an excellent centering.



NARROW GUIDE for a total reduction of the friction out of the cutting area.

**HARDTOP**

Increases the chip slipping over the cutting area avoiding the adherence and improving a fast slip along the flute.

**HSSCo  
8%**

M42 Quality Steel HSSCo 8%  
 Allows the tooling of high resistance and hardened materials at high temperature.

DIN 338 Norm

	BHA			
	Hardox® HiTuf	Hardox® 400	Hardox® 450	Hardox® 600
Cutting speed (m/min)	11	8	6	4
Ø	f(mm/rev.)	f(mm/rev.)	f(mm/rev.)	f(mm/rev.)
2,5	0,035/1400	0,025/1000	0,015/770	0,005/500
3	0,04/1200	0,03/850	0,02/640	0,01/430
4	0,05/900	0,04/650	0,03/480	0,02/320
5	0,06/700	0,05/510	0,04/400	0,03/255
6	0,07/590	0,06/430	0,05/320	0,04/220
7	0,08/500	0,07/370	0,06/280	0,05/190
8	0,09/440	0,08/320	0,07/240	0,06/160
10	0,11/350	0,10/260	0,09/200	0,08/130
13	0,14/270	0,13/200	0,12/150	0,1/100

TWIST DRILLS, LONG AND EXTRA SHORT SERIES

Twist drills for Metal

Pink

DIN  
340



DIN  
1897



		BC4	BC47	BC40	BC44	BC48	BC78										
MATERIAL		HSS	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED		BC3	BC31	BC37	BC33	BC35	BC77	BC43	BC17	BC38
SHARPENING																	
POINT ANGLE		118°	135°	118°	135°	135°	118°		135°	135°	135°	135°	118°	118°	135°	135°	135°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	38° "5"	38° "5"	30° "N"		30° "N"	30° "N"	30° "N"	38° "5"	38° "N"	30° "N"	35° "N"	30° "N"	30° "N"
COATING		OX	GOLD	TiN	BRIGHT	TiAlN	BRIGHT		OX	GOLD	TiN	BRIGHT	TiAlN	BRIGHT	BRIGHT	OX	GOLD
APPLICATION																	
Ø mm	L1 x L2	€	€	€	€	€	€	L1 x L2	€	€	€	€	€	€	€	€	€
0,50	32x13	6,94						23x5									14,86
0,60	37x17	5,64						23x5									14,86
0,70	42x21	5,64						23x5									14,86
0,80	47x23	5,62						23x5									14,86
0,90	51x25	5,62						23x5									
1,00	56x33	5,68						26x6	1,44	2,47	3,00	4,18			10,39		
1,10	56x33	5,52						26x6	1,69								
1,20	60x37	5,52						26x6	1,69								
1,25	65x41	5,71						30x8	1,26	2,88	2,81						
1,30	65x41	5,52						30x8	1,69								
1,40	70x45	5,52						30x9	1,69								
1,50	70x45	4,06		5,30				30x9	1,26	2,34	2,81	5,10			11,90		
1,60	76x50	5,52			10,48			34x10	1,44	3,03	3,00						
1,70	76x50	5,51			10,52			36x11	1,67								
1,75	80x53	4,56						36x11	1,44	2,88	3,00						
1,80	80x53	4,40			9,96			36x11	1,44	3,03	3,00						
1,90	80x53	4,40			10,52			38x12	1,50								
2,00	85x56	2,90	5,84	4,32	9,27	11,69	36,36	38x12	1,24	2,34	2,79	4,48	5,38	21,09	9,55	2,35	
2,10	85x56	4,12			8,95			38x12	1,35	2,86	2,89				11,23		
2,20	90x59	4,12			9,57			40x13	1,35	2,86	2,89				11,23		
2,25	90x59	3,30						40x13	1,15	2,82	2,71						
2,30	90x59	3,98			9,25			40x13	1,35	2,86	2,89				11,23		
2,40	95x62	3,98			11,79			43x14	1,35	2,86	2,89				11,23		
2,50	95x62	3,01	5,45	4,27	8,69	10,86	36,01	43x14	1,05	1,98	2,61	3,92	5,04	21,09	10,59	2,34	
2,60	95x62	3,99			10,82			43x14	1,28	2,31	2,83			21,60	11,23		
2,70	100x66	3,99			9,73			46x16	1,28	2,32	2,83				14,75		

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DIN  
1897

		BC4	BC47	BC40	BC44	BC48	BC78			BC3	BC31	BC37	BC33	BC35	BC77	BC43	BC17	BC38
MATERIAL		HSS	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED		HSS	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	SOLID CARBIDE	HSS	HSSCo 5%	
SHARPENING																		
POINT ANGLE		118°	135°	118°	135°	135°	118°		135°	135°	135°	135°	118°	118°	135°	135°	135°	
HELIX ANGLE		30° "N"	30° "N"	30° "N"	38° "55"	38° "55"	30° "N"		30° "N"	30° "N"	30° "N"	38° "55"	38° "55"	30° "N"	35° "N"	30° "N"	30° "N"	
COATING		OX	GOLD	TiN	BRIGHT	TiAlN	BRIGHT		OX	GOLD	TiN	BRIGHT	TiAlN	BRIGHT	BRIGHT	OX	GOLD	
APPLICATION				PRODUCTION	INOX	INOX	CAST IRON				PRODUCTION	INOX	INOX Plus	CAST IRON	HIGH PERFORMANCE			
Ø mm	L1 x L2	€	€	€	€	€	€	L1 x L2	€	€	€	€	€	€	€	€	€	€
2,75	100x66	4,10						46x16	1,10	2,39	2,66							
2,80	100x66	3,99			10,82			46x16	1,29	2,32	2,84					14,75		
2,90	100x66	3,99			10,80			46x16	1,29	2,32	2,84					14,75		
3,00	100x66	2,78	5,45	4,10	8,64	10,95	32,34	46x16	1,10	1,98	2,66	3,76	4,89	19,15	13,39	2,05		
3,10	106x69	3,09	6,16	4,78	9,91	12,85		49x18	1,19	2,07	3,04	4,19			14,99	2,05		
3,20	106x69	3,09	6,17		9,94	12,77		49x18	1,19	2,07	3,04	4,19			14,99	2,05		
3,25	106x69	3,09	6,16	4,78				49x18	1,19	2,07	3,04			25,20		2,05	2,95	
3,30	106x69	3,09			9,96	12,74		49x18	1,21	2,07	3,05	4,19	6,05		14,99	2,05		
3,40	112x73	4,00			12,61			52x20	1,35	2,55	3,19	4,06		25,20	16,12	2,30		
3,50	112x73	2,93	6,43	4,57	10,27	13,13	30,97	52x20	1,19	2,07	3,04	4,43	6,02	19,15	15,03	2,30	3,65	
3,60	112x73	4,00			11,97			52x20	1,50	2,55	3,35	5,10			17,73			
3,70	112x73	4,00			12,41			52x20	1,50	2,55	3,35	5,10	6,73		17,73			
3,75	112x73	4,13	7,33	5,80				52x20	1,32	2,64	3,17						2,62	
3,80	119x78	4,96			14,91			55x22	1,50	2,55	3,35	5,11			19,07	2,52		
3,90	119x78	4,96	7,32		13,17			55x22	1,50	2,55	3,35	5,11			19,07			
4,00	119x78	3,17	6,63	4,84	10,54	13,47	32,09	55x22	1,32	2,34	3,17	4,90	6,27	19,11	17,82	2,33	3,74	
4,10	119x78	4,14	7,44		11,69	14,50		55x22	1,57	2,79	3,42	5,34			20,02	2,52		
4,20	119x78	4,14	7,44		11,71	14,61		55x22	1,57	2,79	3,42	5,40	6,87	22,40	20,02	2,52		
4,25	119x78	4,14	7,30	5,80				55x22	1,57	2,79	3,42					2,52		
4,30	126x82	5,38		5,80	13,04	15,81		58x24	1,79	3,18	3,65	5,73			21,24			
4,40	126x82	5,38			13,58			58x24	1,79	3,18	3,65	5,92			21,24			
4,50	126x82	3,78	8,15	5,49	12,93	15,92	32,80	58x24	1,57	2,79	3,42	5,50	6,97	20,93	20,62	2,62		
4,60	126x82	5,34			17,46			58x24	2,03	3,34	3,88	6,60			21,24			
4,70	126x82	5,34			12,96			58x24	2,03	3,34	3,88	6,34			22,76			
4,75	126x82	5,58	8,18	7,25				58x24	1,74	3,10	3,59					4,21		
4,80	132x87	6,19	8,32		13,58			62x26	2,03	3,34	3,88	6,46			22,76			
4,90	132x87	6,19			18,83			62x26	2,03	3,34	3,88	6,60			22,76			
5,00	132x87	4,07	8,15	5,72	13,12	15,92	33,10	62x26	1,74	3,09	3,59	6,00	7,34	22,63	21,82	2,99	4,77	
5,10	132x87	6,19	8,98		15,23	18,08		62x26	2,22	3,79	4,08	6,91		28,79	22,76	4,05		
5,20	132x87	6,19			15,27		35,91	62x26	2,21	3,76	4,07	7,12			29,48	4,05		
5,25	132x87	6,46	9,67	8,09				62x26	1,93	3,44	3,78					4,21		
5,30	132x87	6,74			15,86	18,72		62x26	2,24	3,76	4,09	7,29			29,48			
5,40	139x91	6,74			22,10			66x28	2,24	3,76	4,09	7,51			29,48			
5,50	139x91	5,36	11,20	6,99	17,71	20,56	35,92	66x28	1,93	3,44	3,78	7,13	8,55	27,05	28,61	3,61		
5,60	139x91	6,75			18,19			66x28	2,55	4,01	4,41	7,89			31,32			
5,70	139x91	6,75		8,64	14,45			66x28	2,58	4,01	4,43	8,15		30,05	31,32			
5,75	139x91	7,01	11,27	8,64				66x28	2,16	4,16	4,01					5,01		
5,80	139x91	7,41	11,26		18,54			66x28	2,55	4,01	4,41	7,90			31,32			
5,90	139x91	7,41			18,88			66x28	2,58	4,01	4,43	7,88			31,32			
6,00	139x91	4,94	11,20	6,56	17,79	20,72	35,89	66x28	2,20	3,91	4,06	7,61	8,97	29,57	31,87	4,07		
6,10	148x97	7,41			24,88			70x31	3,01	5,06	5,82	9,29		30,83	39,00			
6,20	148x97	7,41			23,24			70x31	3,01	5,06	5,82	9,15			39,00			
6,25	148x97	7,71		10,11				70x31	2,62	5,22	5,42							
6,30	148x97	7,50						70x31	3,01	5,06	5,82	9,50			39,00			
6,40	148x97	7,50						70x31	3,01	5,03	5,82	9,51			39,00			
6,50	148x97	6,37	12,86	10,74	20,53	28,07	38,63	70x31	2,61	4,67	7,56	9,17	13,68	30,91	37,50			
6,60	148x97	7,50						74x34	3,50	6,31	8,47	10,69			45,88			
6,70	148x97	7,50			19,29			74x34	3,50	6,31	8,47	10,69			45,88			
6,75	156x102	7,81	14,81	12,12				74x34	2,98	6,51	7,93							
6,80	156x102	7,77			23,84	31,53		74x34	3,04	6,49	8,00	10,51	16,88	39,00	45,88			
6,90	156x102	7,96						74x34	3,34					34,39	45,88			

Twist drills for Metal  
Pink

TWIST DRILLS, LONG AND EXTRA SHORT SERIES

Twist drills for Metal

Pink

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1897



		BC4	BC47	BC40	BC44	BC48	BC78											BC3	BC31	BC37	BC33	BC35	BC77	BC43	BC17	BC38
MATERIAL		HSS	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED		HSS	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	SOLID CARBIDE	HSS	HSSCo 5%									
SHARPENING																										
POINT ANGLE		118°	135°	118°	135°	135°	118°		135°	135°	135°	135°	118°	118°	135°	135°	135°									
HELIX ANGLE		30° "N"	30° "N"	30° "N"	38° "5"	38° "5"	30° "N"		30° "N"	30° "N"	30° "N"	38° "5"	38° "N"	30° "N"	35° "N"	30° "N"	30° "N"									
COATING		OX	GOLD	TiN	BRIGHT	TiAlN	BRIGHT		OX	GOLD	TiN	BRIGHT	TiAlN	BRIGHT	BRIGHT	OX	GOLD									
APPLICATION				PRODUCTION	INOX	INOX	CAST IRON				PRODUCTION	INOX	INOX Plus	CAST IRON	HIGH PERFORMANCE											
Ø mm	L1 x L2	€	€	€	€	€	€	L1 x L2	€	€	€	€	€	€	€	€	€									
7,00	156x102	7,41	15,01	11,86	23,94	32,01	38,63	74x34	3,04	5,35	8,00	10,49	14,71	33,96	44,07	5,30										
7,10	156x102	7,96			29,09			74x34							55,89											
7,20	156x102	7,96						74x34	3,93						54,82											
7,25	156x102	8,30						74x34	3,44	6,97	8,39															
7,30	156x102	8,14			29,08			74x34		6,96					55,89											
7,40	156x102	8,14						74x34							55,89											
7,50	156x102	7,90	15,94	12,29	25,52	33,48	44,01	74x34	3,44	6,51	8,39	12,50	17,41	35,69	49,44											
7,60	165x109	8,14						79x37		7,54					61,87											
7,70	165x109	8,14						79x37		7,54					63,08											
7,75	165x109	8,46		11,92				79x37	3,79	7,54	8,76															
7,80	165x109	9,11			35,08			79x37	4,34	7,78	9,29	13,61	26,38		61,87											
7,90	165x109	9,11						79x37		7,78					61,87											
8,00	165x109	8,72	17,66	13,24	28,34	36,06	44,01	79x37	3,75	6,74	8,70	13,09	17,20	38,07	57,98	6,54										
8,10	165x109	9,11						79x37						42,34	75,44											
8,20	165x109	9,11			31,87			79x37							76,92											
8,25	165x109	9,46						79x37	4,51	8,88	9,47															
8,30	165x109	13,88						79x37							76,92											
8,40	165x109	14,00						79x37							76,92											
8,50	165x109	9,80	19,79	14,98	31,35	40,93	55,69	79x37	4,51	7,97	9,47	15,24	20,38	41,78	74,35											
8,60	175x115	14,00						84x40		9,65				43,38	81,86											
8,70	175x115	14,00						84x40							83,45											
8,75	175x115	14,54		15,30				84x40	4,92	9,64	9,89															
8,80	175x115	14,30			34,04			84x40							81,86											
8,90	175x115	14,30						84x40							83,45											
9,00	175x115	10,62	21,43	15,75	34,42	43,63	48,67	84x40	4,88	8,76	10,67	16,56	21,62	44,52	70,20											





**TWIST DRILLS, EXTRA-LONG SERIES, DIN 1869 I/II/III**

**DIN  
1869  
I/II/III**



Ref. BC8



Ref. BC88

		BC8	BC88
<b>MATERIAL</b>		HSS	HSSCo 5%
<b>SHARPENING</b>			
<b>POINT ANGLE</b>		118°	135°
<b>HELIX ANGLE</b>		30° "N"	38° "UG"
<b>COATING</b>		OX	BRIGHT
<b>APPLICATION</b>			
		70 Kg/mm <sup>2</sup>	INOX
Ø mm	L1 x L2	€	€
0,50	50x25	13,35	
0,60	60x30	13,35	
0,70	60x30	13,49	
0,70	80x50	15,30	
0,80	60x30	13,76	
0,80	80x50	15,56	
0,80	120x60	19,94	
1,00	80x50	16,10	
1,00	100x70	17,46	
1,00	150x75	18,91	
1,50	100x70	12,73	
1,50	140x100	14,10	
2,00	100x70	12,50	
2,00	125x85	13,54	18,53
2,00	150x100	16,74	
2,00	160x125		29,90
2,00	200x135		35,67
2,25	135x90		23,59
2,50	140x95	14,27	18,53
2,50	180x130		33,31
2,50	225x150		39,34
2,75	150x100		25,85
3,00	150x100	14,66	21,05
3,00	190x130	17,02	25,88
3,00	240x160		42,88
3,25	155x105		25,85
3,25	200x135		31,92
3,50	165x115	16,64	21,34
3,50	210x145	19,12	27,41
3,50	265x180	27,25	37,18
3,75	165x115		29,94
3,75	210x145		31,92
3,75	265x180		42,15
4,00	175x120	16,48	21,34
4,00	220x150	19,58	27,41
4,00	280x190	27,91	37,18
4,25	175x120		31,71
4,25	220x150	34,09	40,99
4,25	280x190		51,29
4,50	185x125	18,45	24,97
4,50	235x160	22,96	32,57
4,50	295x220	32,81	46,28

		BC8	BC88
Ø mm	L1 x L2	€	€
4,75	185x125		32,65
4,75	235x160		40,99
4,75	295x200		51,29
5,00	195x135	19,34	33,53
5,00	245x170	24,68	37,90
5,00	315x210	30,41	43,73
5,25	195x135		33,10
5,25	245x170		45,78
5,25	315x210		54,86
5,50	205x140	23,00	26,74
5,50	260x180	32,77	40,45
5,50	330x225	38,00	49,73
5,75	205x140	27,77	33,10
5,75	260x180	38,41	45,78
5,75	330x225	47,03	55,56
6,00	205x140	22,97	26,73
6,00	260x180	32,96	40,45
6,00	330x225	37,85	49,89
6,25	215x150		38,80
6,25	275x190		47,91
6,25	350x235		61,84
6,50	215x150	27,24	33,11
6,50	275x190	35,26	44,64
6,50	350x235	43,92	56,97
6,75	225x155		42,15
6,75	290x200		55,32
6,75	370x250		78,43
7,00	225x155	28,97	41,10
7,00	290x200	40,31	49,89
7,00	370x250	54,48	73,48
7,25	225x155		53,68
7,25	290x200		66,19
7,25	370x250		88,43
7,50	225x155	32,58	45,34
7,50	290x200	43,45	59,44
7,50	370x250	63,26	83,44
7,75	240x165		55,32
7,75	305x210		66,19
7,75	390x265		97,81
8,00	240x165	36,02	46,28
8,00	305x210	49,94	57,89
8,00	390x265	65,08	85,71
8,25	240x165		72,55
8,25	305x210		96,32
8,25	390x265		117,00
8,50	240x165	48,97	62,78
8,50	305x210	66,86	87,54
8,50	390x265	91,28	107,21
8,75	240x165		77,52
8,75	320x220		96,32
8,75	410x280		123,16

		BC8	BC88
Ø mm	L1 x L2	€	€
9,00	250x175	46,80	66,98
9,00	320x220	61,47	84,18
9,00	410x280	90,74	113,83
9,25	250x175		90,65
9,25	320x220		115,60
9,25	410x280		144,56
9,50	250x175	54,88	77,53
9,50	320x220	75,86	100,65
9,50	410x280	101,97	133,79
9,75	265x185		92,50
9,75	340x235		120,45
9,75	430x295		155,24
10,00	265x185	54,61	70,28
10,00	340x235	71,02	92,54
10,00	430x295	98,66	130,43
10,25	265x185		137,06
10,25	340x235		148,59
10,25	430x295		158,01
10,50	265x185	100,62	118,82
10,50	340x235	109,05	128,80
10,50	430x295	115,98	136,97
10,75	280x195		137,06
10,75	365x250		148,59
10,75	455x310		158,01
11,00	280x195	68,90	89,10
11,00	365x250	97,91	115,65
11,00	455x310	114,62	135,35
11,25	280x195		127,66
11,25	365x250		171,38
11,25	455x310		177,03
11,50	280x195	93,68	110,67
11,50	365x250	125,78	148,58
11,50	455x310	129,96	153,48
11,75	280x195		127,66
11,75	365x250		171,38
11,75	455x310		177,03
12,00	295x205	90,64	100,65
12,00	375x260	110,47	130,43
12,00	480x330	134,42	158,73
12,25	295x205		148,59
12,25	375x260		166,40
12,25	480x330		201,96
12,50	295x205	109,05	128,80
12,50	375x260	122,12	144,23
12,50	480x330	148,22	175,05
12,75	295x205		148,59
12,75	375x260		166,40
12,75	480x330		201,96
13,00	295x205	109,05	128,80
13,00	375x260	125,80	148,58
13,00	480x330	149,62	176,70

\* Special lengths available on request

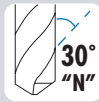
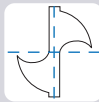
## EXTRA-LONG SERIES CARBIDE TIPPED DRILL FOR AIRCRAFT INDUSTRY

Twist drills for Metal

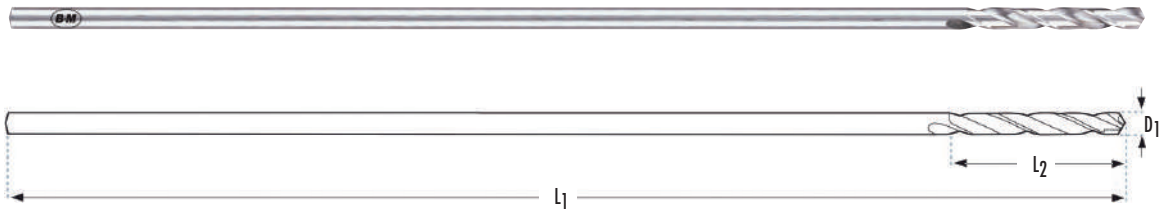
Pink

Ref. BC08

HSS



AIRCRAFT



150 mm

				BC08
	D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
BC080225150	2,25	150	25	14,82
BC080250150	2,50	150	25	14,31
BC080320150	3,20	150	26	14,28
BC080325150	3,25	150	36	14,07
BC080400150	4,00	150	43	14,55

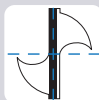
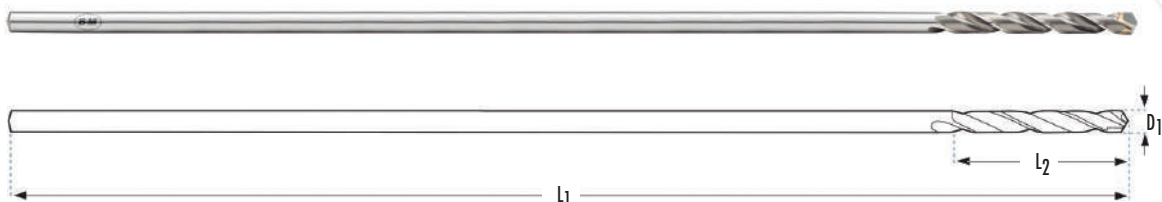
300 mm

				BC08
	D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
BC080225300	2,25	300	25	15,74
BC080250300	2,50	300	25	14,88
BC080320300	3,20	300	26	14,91
BC080325300	3,25	300	36	14,86
BC080400300	4,00	300	43	16,63

\* Others diameters available on request

## EXTRA-LONG SERIES CARBIDE TIPPED DRILL FOR AIRCRAFT INDUSTRY

Ref. BC08PMD

CARBIDE  
TIPPEDAIRCRAFT  
MD

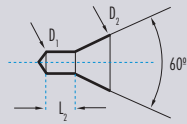
85°

\* MD AirCraft series available. Special sizes available on request

**HSS & SOLID CARBIDE CENTRE DRILLS**

Ref. BC10  
Ref. BC10Co  
Ref. BC65

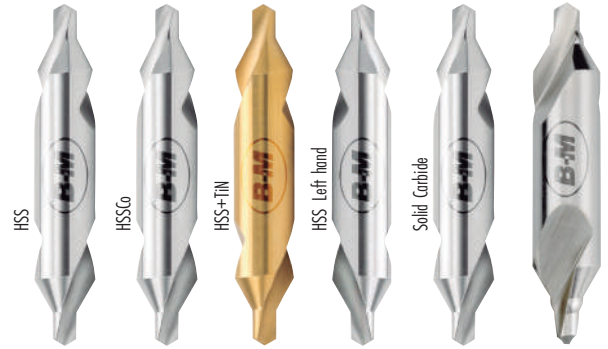
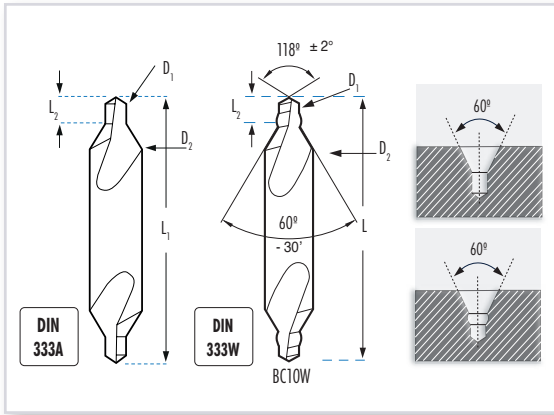
Ref. BC10I  
Ref. BC10MD  
Ref. BC10W



**DIN  
333A**



**DIN  
333W**



D1 x D2 mm	L1 x L2 mm	BC10	BC10Co	BC65	BC10I	BC10MD	BCW10
		HSS	HSSCo 5%	TiN	HSS	SOLID CARBIDE	HSS
		€	€	€	€	€	€
0,50 x 3,00	31 x 1	14,42		19,88			17,30
0,50 x 3,15*	25 x 1	8,47	9,21	14,10			10,16
0,63 x 3,15*	25 x 1	8,47		14,10		65,83	
0,80 x 3,15*	25 x 1	8,32	9,21	13,97			9,99
1,00 x 3,15	31 x 1	6,16	9,21	11,88		62,70	7,39
1,25 x 3,15	33 x 1	6,16	9,21	11,88		62,70	7,39
0,75 x 3,50	35 x 1	8,99	9,21	14,63			
1,00 x 4,00	35 x 1	7,74	9,21	13,41		70,29	9,28
1,25 x 4,00	35 x 1	6,54		12,69			7,85
1,50 x 5,00	40 x 2	7,45	9,91	14,32		71,71	8,94
1,60 x 4,00	37 x 2	6,16	9,21	12,34	11,12	66,96	7,39
1,60 x 5,00	40 x 2	6,51		13,40			7,81
2,00 x 5,00	42 x 2	6,62	9,91	13,51	11,95	76,30	7,95
2,00 x 6,00	45 x 2	7,45	10,44	14,79		81,35	8,94
2,00 x 6,30	45 x 2	6,68		14,54	12,68		8,84
2,50 x 6,30	47 x 3	7,36	11,01	14,72	13,28	86,94	8,84
2,50 x 8,00	50 x 3	8,12	11,01	15,43	14,66	102,42	9,74
3,00 x 8,00	50 x 3	8,13	11,61	15,46		102,42	9,75
3,15 x 8,00	52 x 4	8,10	12,10	15,43	14,63	97,55	9,71
3,00 x 10,00	55 x 4	10,57	16,05	18,34		121,54	12,68
3,15 x 10,00	56 x 4	9,58		20,10	17,28		11,49
4,00 x 10,00	59 x 5	11,24	16,05	20,82	20,29	121,54	13,48
4,00 x 12,00	63 x 5	18,16	25,30	26,87			21,79
4,00 x 12,50	63 x 5	13,08		26,87	23,63		21,79
5,00 x 12,00	63 x 5	18,16	25,30	26,87		196,88	21,79
5,00 x 12,50	66 x 6	19,70	26,44	28,49	35,59	202,99	23,64
5,00 x 14,00	69 x 6	31,21	34,94	40,82			37,45
5,00 x 16,00	71 x 6	31,21		37,15	56,36		37,45
6,30 x 16,00	74 x 8	26,96	37,84	37,15		324,26	32,35
6,30 x 18,00	77 x 8	47,51		60,50			57,02
6,30 x 20,00	80 x 8	47,51		60,50			61,77
8,00 x 20,00	81 x 27	52,04	103,55	75,17			62,44
8,00 x 25,00	100 x 10	113,49		144,34			
10,00 x 25,00	100 x 31	80,74	113,97	112,55			96,89
10,00 x 31,50	125 x 12	239,51		288,78			
12,50 x 31,50	125 x 33	192,06	249,61	243,72			



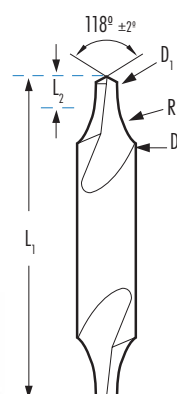
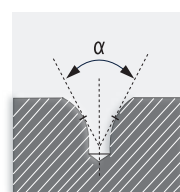
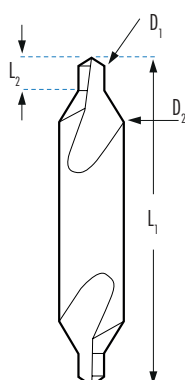
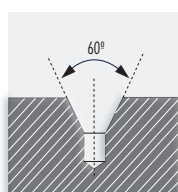
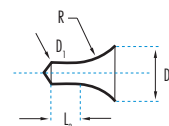
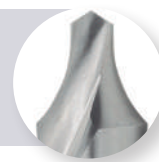
## HSS &amp; SOLID CARBIDE CENTRE DRILLS

Ref. BC64  
Ref. BC68DIN  
333A

LONG SERIES



Ref. BC62

DIN  
333R

D1 x D2 mm	L1 x L2 mm	BC64	BC68
		HSS €	TiN €
1,00 x 4,00	60 x 1	21,10	32,00
1,00 x 4,00	120 x 1	42,62	81,40
1,50 x 5,00	60 x 2	21,53	32,41
1,50 x 5,00	120 x 2	43,45	72,02
2,00 x 5,00	200 x 2	88,86	159,07
2,00 x 6,00	80 x 2	22,42	35,20
2,00 x 6,00	120 x 2	33,96	71,18
2,50 x 6,30	200 x 2	87,27	157,48
2,50 x 8,00	80 x 3	27,28	45,77
2,50 x 8,00	120 x 3	41,31	84,37
3,00 x 8,00	80 x 4	27,28	45,77
3,00 x 8,00	120 x 4	41,31	84,37
3,15 x 8,00	200 x 4	82,50	152,72
3,00 x 10,00	100 x 4	35,23	57,58
3,00 x 10,00	120 x 4	42,67	95,50
4,00 x 10,00	100 x 5	35,27	57,58
4,00 x 10,00	120 x 5	42,73	95,50
4,00 x 10,00	200 x 5	90,44	160,66
4,00 x 12,00	100 x 5	47,50	85,96
4,00 x 12,00	120 x 5	57,54	121,58
5,00 x 14,00	120 x 6	80,57	146,54

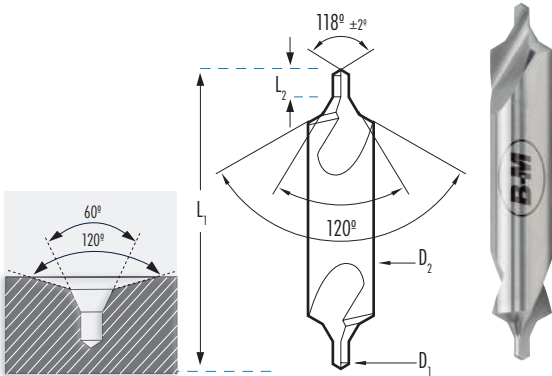
D1 x D2 mm	L1 x L2 mm	BC62	BC62MDI
		HSS €	SOLID CARBIDE €
0,50 x 3,00	31 x 2,3	10,12	
0,50 x 3,15	25 x 2,3	6,73	46,26
0,80 x 3,15	25 x 2,6	6,73	
1,00 x 3,15	31 x 3,0	6,73	48,27
1,25 x 3,15	31 x 3,3	6,73	48,27
0,50 x 3,50	35 x 2,7	10,12	
0,75 x 3,50	35 x 2,8	6,73	
1,00 x 4,00	35 x 3,3	6,73	
1,25 x 4,00	35 x 3,7	6,73	
1,60 x 4,00	37 x 4,0	6,73	52,29
1,50 x 5,00	40 x 4,5	7,36	
1,60 x 5,00	40 x 4,5	7,59	
2,00 x 5,00	42 x 5,0	7,32	62,34
2,00 x 6,00	45 x 5,4	8,20	
2,00 x 6,30	45 x 6,0	8,49	
2,50 x 6,30	47 x 6,0	8,14	74,41
2,50 x 8,00	50 x 7,0	8,94	
3,00 x 8,00	50 x 8,0	8,94	
3,15 x 8,00	52 x 8,0	8,94	90,50
3,00 x 10,00	55 x 8,9	11,64	
3,15 x 10,00	56 x 9,0	11,64	
4,00 x 10,00	56 x 10,0	11,64	123,88
4,00 x 12,00	63 x 10,7	18,39	
5,00 x 12,00	63 x 11,4	18,39	
4,00 x 12,50	63 x 11,0	19,41	
5,00 x 12,50	66 x 13,0	19,46	197,09
5,00 x 14,00	69 x 12,8	25,09	
5,00 x 16,00	71 x 15,0	27,61	
6,30 x 16,00	74 x 17,0	27,95	
6,00 x 18,00	77 x 16,6	41,57	
6,30 x 20,00	80 x 19,0	49,55	
8,00 x 20,00	80 x 21,0	53,11	
10,00 x 25,00	100 x 26,0	87,98	
12,50 x 31,50	125 x 33,0	200,70	

**HSS & SOLID CARBIDE CENTRE DRILLS**

Ref. BC63

**DIN 333B**

**HSS**

		BC63
D1 x D2 mm	L1 x L2 mm	€
0,50 x 3,00	31,00 x 0,6	12,59
0,75 x 4,00	35,00 x 1,0	11,28
1,00 x 4,00	37,50 x 1,60	11,28
1,25 x 5,00	42,00 x 1,90	11,28
1,50 x 5,00	40,00 x 2,00	12,05
1,00 x 6,00	45,00 x 1,30	12,05
2,00 x 6,00	45,00 x 2,50	12,05
1,60 x 6,30	47,00 x 2,40	11,28
1,50 x 8,00	50,00 x 2,00	12,64
2,00 x 8,00	52,00 x 2,90	11,83
2,50 x 8,00	50,00 x 3,10	13,75
3,00 x 8,00	50,00 x 3,90	14,14
2,00 x 10,00	55,00 x 2,50	14,42
2,50 x 10,00	59,00 x 3,60	13,69
3,00 x 10,00	55,00 x 3,90	16,35
4,00 x 10,00	55,00 x 5,00	16,46
3,15 x 11,20	63,00 x 4,40	15,82
2,50 x 12,00	63,00 x 3,10	21,27
4,00 x 12,00	63,00 x 5,00	21,85
5,00 x 12,00	63,00 x 6,30	23,23
3,00 x 14,00	69,00 x 3,90	26,70
4,00 x 14,00	70,00 x 5,60	24,33
5,00 x 14,00	69,00 x 6,30	31,63
4,00 x 16,00	71,00 x 5,00	34,03
4,00 x 18,00	77,00 x 5,00	37,50
5,00 x 18,00	78,00 x 6,90	33,63
6,00 x 18,00	77,00 x 8,00	44,74
5,00 x 20,00	80,00 x 6,30	63,54
6,30 x 20,00	83,00 x 8,60	49,06
6,00 x 25,00	100,00 x 8,00	113,06
6,30 x 25,00	100,00 x 8,00	113,06
8,00 x 25,00	100,00 x 26,00	108,36
10,00 x 31,50	125,00 x 30,00	214,71

**HSSCo & SOLID CARBIDE POINTING DRILLS FOR CNC**

Ref. BC75  
Ref. BI75  
Ref. BC76

**HSSCo 5%**

**TiAlN**

**DIN 1412A** D<sub>2</sub>

**TOL h6**

Used for the previous centering in drilling works. Guides the drill when it starts to plunge. Increases the drilling speed attack.




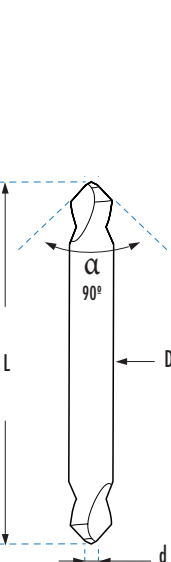
D mm	L1 x L2 mm	BC75	BI75	BC76	BH75
		90°	90°	120°	142°
		€	€	€	€
2,0	49 x 8	19,11		19,11	
3,0	50 x 10	22,10	68,14	22,10	27,90
4,0	52 x 12	22,10	72,70	22,10	27,90
5,0	60 x 15	24,93	77,24	24,93	31,46
6,0	66 x 20	24,93	81,77	24,93	31,46
8,0	79 x 25	28,15	90,86	28,15	35,53
10,0	89 x 25	28,15	102,22	28,15	35,53
12,0	102 x 30	38,83	113,58	38,83	49,01
16,0	115 x 35	53,41		53,41	67,41
20,0	131 x 40	105,10		105,10	132,65

Ref. DP75


**DOUBLE POINTING DRILL**

**HSSCo 5%**

**TiAlN**

		DP75
D x d mm	L mm	90°
		€
3,0 x 0,5	40	27,58
4,0 x 1,0	45	27,70
6,0 x 2,0	55	31,42
8,0 x 2,5	65	36,28
10,0 x 3,0	75	38,93
12,0 x 3,5	85	48,03
16,0 x 4,0	90	73,98
20,0 x 5,0	100	121,36



Twist drills for Metal  
Pink

HSSCo & SOLID CARBIDE POINTING DRILLS FOR CNC

Used for the previous centering in drilling works. Guides the drill when it starts to plunge. Increases the drilling speed attack.

DIN  
1412A

D<sub>2</sub>

TOL  
h6

SOLID CARBIDE POINTING DRILL

MULTI-FUNCTION POINTING DRILL

Ref. BC92  
Ref. BC93

SOLID CARBIDE

DIN 1412A

D<sub>2</sub> TOL h6

D<sub>2</sub> DIN 6535HB



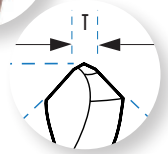
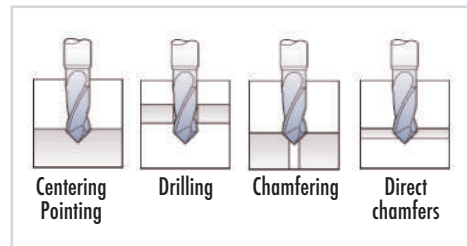
Ref. BN75

HSSCo 5%

120 Kg/mm<sup>2</sup>



D mm	L1 x L2 mm	BC92		BC93	
		90°	120°	90°	120°
		€	€		
1,0	26 x 6	29,29			
1,5	32 x 9	29,73			
2,0	38 x 12	30,03			
3,0	45 x 12	30,46	31,33		
4,0	50 x 15	30,77	31,65		
5,0	50 x 18	36,66	37,70		
6,0	50 x 13	47,54	48,90		
8,0	60 x 23	66,93	68,83		
10,0	70 x 24	94,88	97,59		
12,0	70 x 24	122,50	126,00		
14,0	70 x 27	184,48	189,75		
16,0	75 x 29	225,44	219,00		
18,0	100 x 33	335,96	345,55		
20,0	100 x 35	397,83	388,31		



	D mm	L1 x L2 mm	T* mm	BN75	
				90°	€
BN750300	3,0	50 x 6	0,3	32,64	
BN750400	4,0	52 x 8	0,4	35,39	
BN750500	5,0	60 x 10	0,5	38,43	
BN750600	6,0	66 x 12	0,6	41,19	
BN750800	8,0	79 x 14	0,8	49,72	
BN751000	10,0	89 x 16	1,0	59,48	
BN751200	12,0	102 x 18	1,2	77,79	
BN751400	14,0	115 x 21	1,4	109,81	
BN751600	16,0	115 x 24	1,6	122,01	



T\*: Core Thickness


MORSE TAPER SHANK POINTING DRILL LARGE SERIES

Ref. BL75

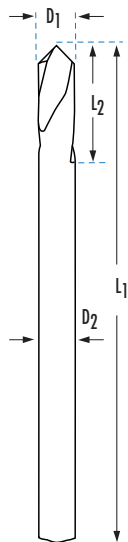
HSSCo 5%

TiAlN

90°



BL75		
D1 mm	L1 x L2 mm	€
3,0	80 x 10	45,43
4,0	100 x 12	49,97
5,0	120 x 15	54,52
6,0	140 x 20	59,06
8,0	140 x 25	65,87
10,0	170 x 25	81,77
12,0	170 x 30	99,95
16,0	200 x 35	134,02
20,0	200 x 40	170,36




MORSE TAPER SHANK POINTING DRILL

Ref. BP11

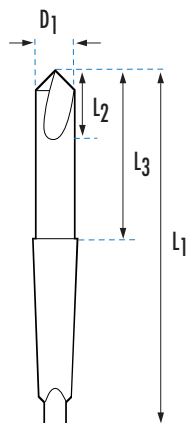
HSSCo 5%

120 Kg/mm<sup>2</sup>

90°

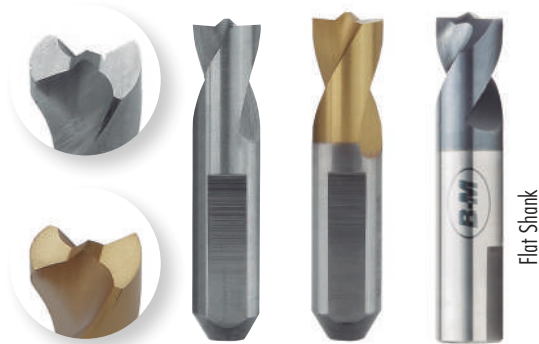


BP11					
D1 mm	L1 mm	L2 mm	L3 mm	MT	€
10,0	130	25	64	1	136,30
12,0	130	30	64	1	147,65
16,0	148	35	68	2	181,72
20,0	148	40	68	2	227,16
25,0	171	45	72	3	306,66



**HSSCo & SOLID CARBIDE DRILLS TO REMOVE WELDING SPOTS**

**SHORT DRILLS FOR PNEUMATIC DRILLING MACHINES**



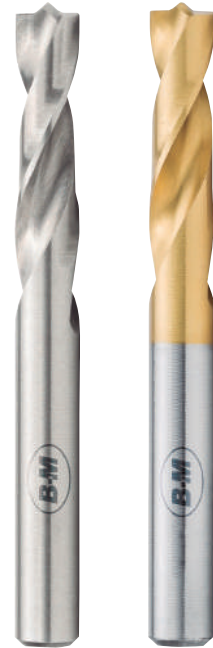
Flat Shank

D1 mm	D2 mm	L1 x L2 mm	BC70	BC71	BC70MD*
			HSSCo 8%	HSSCo 8%	SOLID CARBIDE
			€	TiN €	TiAlN €
6,0	8,0	45 x 18	26,33	35,70	
6,5	6,5	40 x 18	27,45	40,88	66,97
8,0	8,0	38 x 18	21,58	35,70	
8,0	8,0	45 x 18	24,07	40,88	81,71
9,0	8,0	45 x 18	26,00	42,48	
10,0	8,0	45 x 18	28,49	48,19	

\* SOLID CARBIDE SPECIAL DRILL BC70MD COATED WITH TiAlN

- Special drill for boron weldings.
- Use with electric drilling machines.
- 1200 RPM.
- Important pushing strength.
- Use always "CUT-MAGIC" lubricant.

**TO BE USED WITH STANDARD DRILLING MACHINES**



Ø mm	L1 x L2 mm	BC60	BC69
		HSSCo 5%	HSSCo 5%
		€	TiN €
6,0	66 x 26	13,02	22,84
7,0	74 x 34	18,67	29,73
8,0	79 x 36	17,26	32,21
10,0	89 x 44	21,31	34,02

Twist drills for Metal

Pink

**CUTTING SET: ARBOR, HOLE SAW & PILOT DRILL**



**EBC70-1**  
24,80 €

**HOLE SAW: 9,5 mm**



**EBC70-2**  
17,93 €

**PILOT DRILL**



**EBC70-3**  
1,09 €



**EBC70**

Composition:

- 1 Cutting set Ref. EBC70-1
- 5x9,5 mm Hole saws Ref. EBC70-2
- 2 Pilot drills Ref. EBC70-3
- 1 Drill bit Ref. BC60 Ø 8 mm

**112,46 €**

## DRILL MILLS

FOR METAL, WOOD AND PLASTIC WORKING



\* For bodywork

Ø mm	L1 x L2 mm	BC80	BC81
		HSS €	TiN €
6,0	90 x 60	18,16	28,51
8,0	90 x 60	23,36	36,49

## SOLID CARBIDE DRILL MILLS

Ref. BC91

SOLID  
CARBIDE

## CHARACTERISTICS:

Can be successfully used to complete different operations:  
Drilling, Pointing and Chamfering.50  
HRc

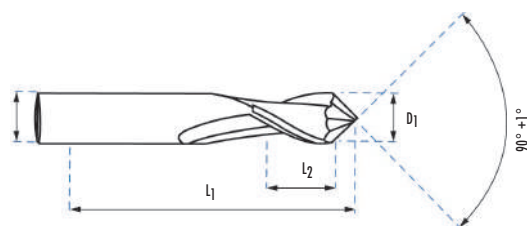
Ti

INC

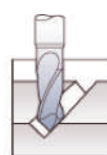
Ni

INOX

PVC

D2  
TOL h6D1  
TOL h9

BC91			
D1 mm	D2 mm	L1 x L2 mm	€
3,0	3,0	50 x 6	61,94
4,0	4,0	50 x 8	70,42
5,0	5,0	50 x 10	80,48
6,0	6,0	60 x 12	87,14
8,0	8,0	70 x 16	121,03
10,0	10,0	70 x 18	168,35
12,0	12,0	70 x 20	168,35
14,0	14,0	88 x 30	200,83
16,0	16,0	80 x 26	240,47
20,0	20,0	100 x 32	424,83

Centering  
Pointing

V-grooving



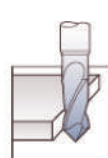
Machining



Drilling



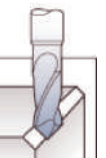
Chamfering



Contouring

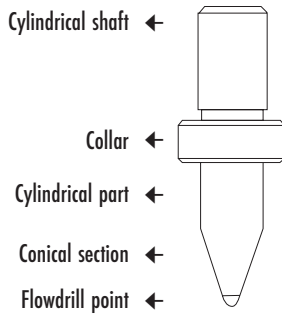
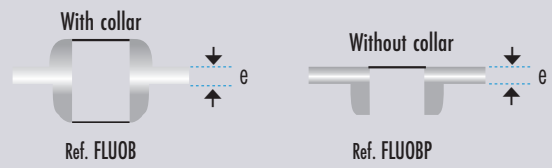


Longitudinal chamfering

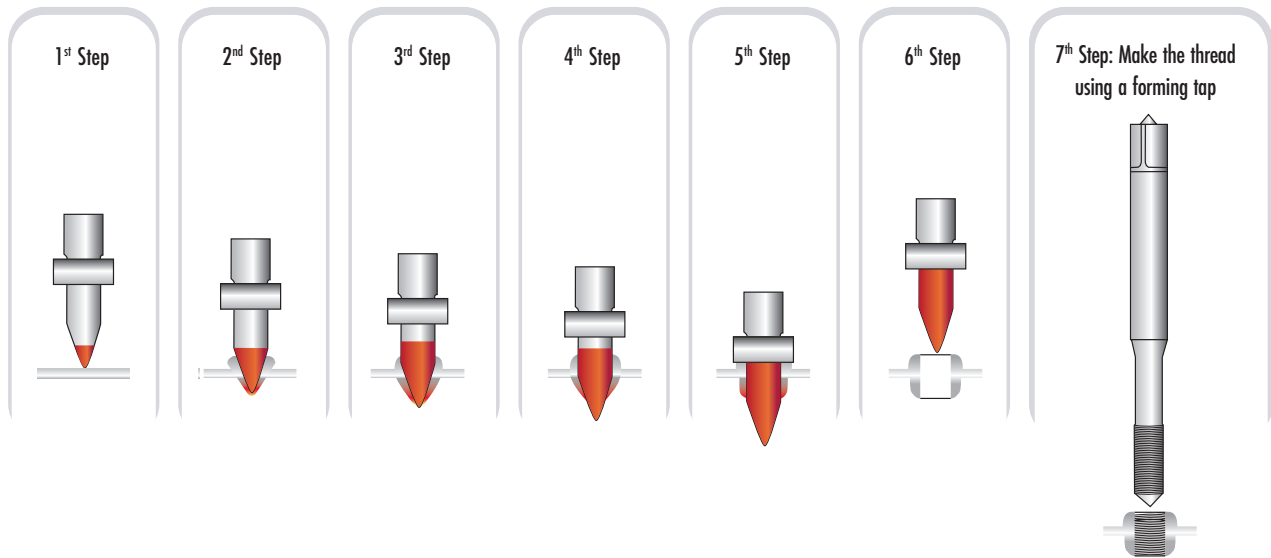
Direct  
chamfers

Engraving

**FLOWDRILL FOR THREADING METAL SHEET**



	e max. mm	D1 mm	D2 mm	R.P.M.	FLUOB		FLUOBP	
						€		€
M3x0,50	1,7	6	2,7	3000	FLUOBM03	138,52	FLUOBPM03	193,94
M4x0,70	1,7	6	3,7	2600	FLUOBM04	143,56	FLUOBPM04	200,99
M5x0,80	2,0	8	4,5	2500	FLUOBM05	149,94	FLUOBPM05	217,86
M6x1,00	2,0	8	5,3	2400	FLUOBM06	159,83	FLUOBPM06	232,19
M8x1,25	2,4	8	7,3	2200	FLUOBM08	197,18	FLUOBPM08	286,49
M10x1,50	2,6	10	9,2	2000	FLUOBM10	223,46	FLUOBPM10	324,67
M12x1,75	3,0	12	10,9	1800	FLUOBM12	239,60	FLUOBPM12	329,23
M16x2,00	3,4	16	14,8	1200	FLUOBM16	330,48	FLUOBPM16	422,10
M20x2,50	3,8	18	18,7	800	FLUOBM20	466,49	FLUOBPM20	595,04



**FLOW-DRILLING LUBRICANT (250ml. & 750ml.)**

		PACKAGING UNIT	PASTY
			€
ACPU00250	0,250 l.	1 Can	28,92
ACPU00750	0,750 l.	1 Can	43,76

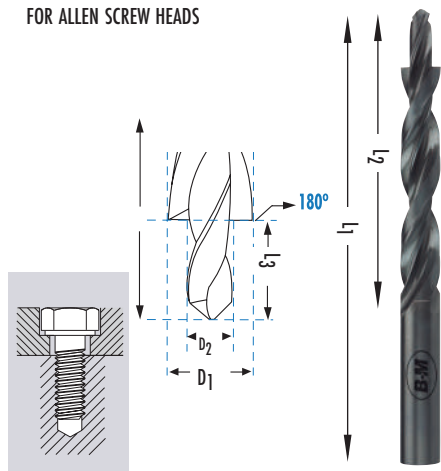


**HSS SUBLAND TWIST DRILLS STRAIGHT AND TAPER SHANK**

Ref. BC26

**HSS** **DIN 8376** **180°**

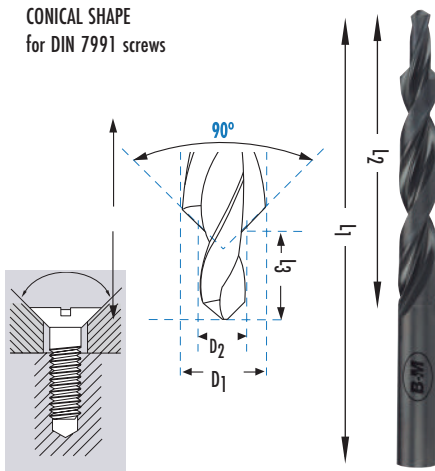
FOR ALLEN SCREW HEADS


**BC26**

	D2 mm	D1 mm	L1 x L2 mm	L3 mm	€
M3	3,4	6	93 x 57	9	61,86
M4	4,5	8	117 x 75	11	64,88
M5	5,5	10	133 x 87	13	77,11
M6	6,6	11	142 x 94	15	87,13
M8	9,0	15	169 x 114	19	107,05
M10	11,0	18	191 x 130	23	212,73

Ref. BC24

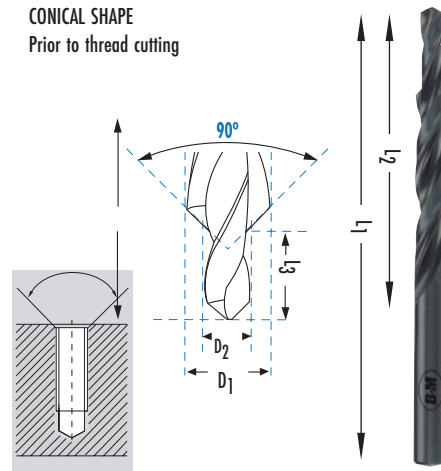
**HSS** **DIN 8374** **90°**

 CONICAL SHAPE  
 for DIN 7991 screws

**BC24**

	D2 mm	D1 mm	L1 x L2 mm	L3 mm	€
M3	3,2	6,0	93 x 57	9	72,17
M4	4,3	8,0	117 x 75	11	75,69
M5	5,3	10,0	133 x 87	13	89,96
M6	6,4	11,5	142 x 94	15	102,77
M8	8,4	15,0	169 x 114	19	140,56
M10	10,5	19,0	198 x 135	23	217,04

Ref. BC28

**HSS** **DIN 8378** **90°**

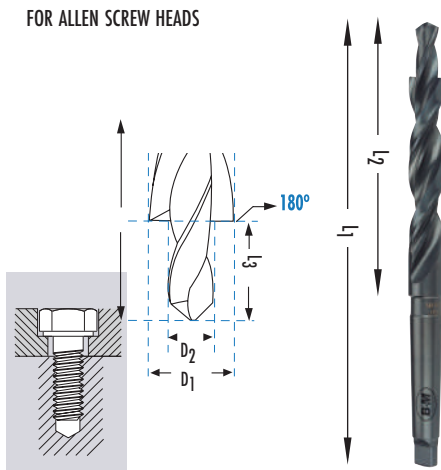
 CONICAL SHAPE  
 Prior to thread cutting

**BC28**

	D2 mm	D1 mm	L1 x L2 mm	L3 mm	€
M3	2,5	3,4	70 x 39	8,8	55,49
M4	3,3	4,5	80 x 47	11,8	59,70
M5	4,2	5,5	93 x 57	13,6	64,30
M6	5,0	6,6	101 x 63	16,5	73,17
M8	6,8	9,0	125 x 81	21,0	87,19
M10	8,5	11,0	142 x 94	25,5	101,70
M12	10,2	13,5	160 x 108	30,0	126,62

Ref. BC27

**HSS** **DIN 8377** **180°**

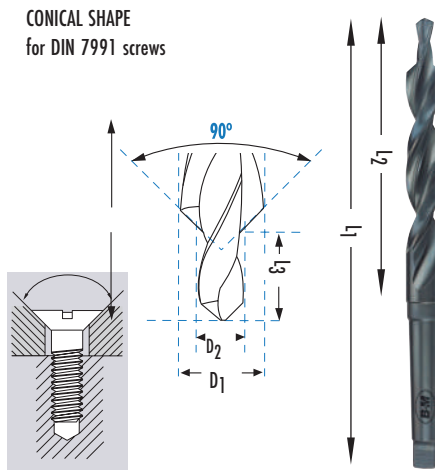
FOR ALLEN SCREW HEADS


**BC27**

	D2 mm	D1 mm	L1 x L2 mm	L3 mm	MT	€
M6	6,6	11	175 x 94	15	1	155,02
M8	9,0	15	212 x 114	19	2	160,08
M10	11,0	18	228 x 130	23	2	180,49
M12	13,5	20	238 x 140	27	2	201,89
M14	15,5	24	281 x 160	31	3	286,29
M16	17,5	26	286 x 165	35	3	408,22
M18	20,0	30	296 x 175	39	3	456,48
M20	22,0	33	334 x 185	43	4	516,15

Ref. BC25

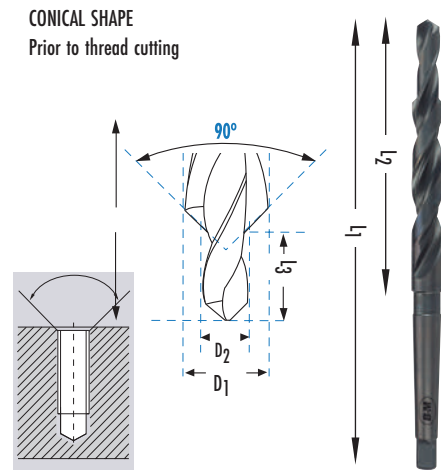
**HSS** **DIN 8375** **90°**

 CONICAL SHAPE  
 for DIN 7991 screws

**BC25**

	D2 mm	D1 mm	L1 x L2 mm	L3 mm	MT	€
M5	5,5	11,0	175 x 94	13	1	154,86
M6	6,6	13,0	182 x 101	15	1	157,97
M8	9,0	17,2	228 x 130	19	2	188,27
M10	11,0	21,5	248 x 150	23	2	222,90

Ref. BC29

**HSS** **DIN 8379** **90°**

 CONICAL SHAPE  
 Prior to thread cutting

**BC29**

	D2 mm	D1 mm	L1 x L2 mm	L3 mm	MT	€
M8	6,8	9,0	162 x 81	21,0	1	142,03
M10	8,5	11,0	175 x 94	25,5	1	154,76
M12	10,2	13,5	189 x 108	30,0	1	182,79
M14	12,0	15,5	218 x 120	34,5	2	195,06
M16	14,0	17,5	228 x 130	38,5	2	210,51
M18	15,5	20,0	238 x 140	43,5	2	235,45
M20	17,5	22,0	248 x 150	47,5	2	284,69

**EXTRA SHORT SERIES SUBLAND TWIST DRILLS**

Ref. BC36

**HSSCo 5%** **90°**

**BC36**

	D1 mm	D2 mm	D3 mm	L1 x L2 mm	L3 mm	€
M3	3,4	2,5	3,4	52 x 20	8	30,05
M4	4,5	3,3	4,5	58 x 24	11	31,47
M5	5,5	4,2	5,5	66 x 28	13	32,90
M6	6,6	5,0	6,6	70 x 31	16	35,75
M8	9,0	6,8	9,0	84 x 40	20	42,91
M10	11,0	8,5	11,0	95 x 47	24	56,50
M12	14,0	10,2	14,0	107 x 54	29	75,80
M14	16,0	12,0	16,0	115 x 56	32	193,08
M16	18,0	14,0	18,0	135 x 60	34	243,14

Ref. BCMD36

**SOLID CARBIDE** **90°** **TiAlN**

**BCMD36**

	D1 mm	D2 mm	D3 mm	L1 x L2 mm	L3 mm	€
M3	6,0	2,5	6,0	66 x 20	8,8	57,21
M4	6,0	3,3	6,0	66 x 24	11,4	66,74
M5	6,0	4,2	6,0	66 x 28	13,6	71,51
M6	8,0	5,0	8,0	79 x 31	16,5	83,44
M8	10,0	6,8	10,0	89 x 40	21,0	114,42
M10	12,0	8,5	12,0	102 x 47	25,5	154,94
M12	14,0	10,2	14,0	107 x 54	30,0	214,54

Ref. BC74

**HSSCo 5%** **180°**

**BC74**

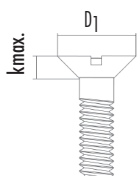
	D1 mm	D2 mm	D3 mm	L1 x L2 mm	L3 mm	€
M2	4,3	2,4	4,3	45 x 12	6	20,74
M3	6,0	3,4	6,0	45 x 18	9	21,09
M4	8,0	4,5	8,0	50 x 22	11	25,04
M5	10,0	5,5	10,0	55 x 26	13	27,89
M6	11,0	6,6	11,0	63 x 30	15	35,05
M8	15,0	9,0	12,5	100 x 34	19	65,80
M10	18,0	11,0	12,5	110 x 42	23	95,83
M12	20,0	14,0	12,5	110 x 34	28	125,86
M14	24,0	16,0	12,5	120 x 42	34	254,59

Ref. BC34

**HSSCo 5%** **90°**

**BC34**

	D1 mm	D2 mm	D3 mm	L1 x L2 mm	L3 mm	€
M2	4,6	2,2	4,6	45 x 12	6	20,74
M3	6,5	3,2	6,5	45 x 18	9	21,09
M4	8,6	4,3	8,6	50 x 26	11	25,04
M5	10,4	5,3	10,4	55 x 30	13	27,89
M6	12,4	6,4	12,4	63 x 34	15	35,05
M8	16,4	8,4	12,5	100 x 42	19	65,80
M10	20,4	10,5	12,5	110 x 34	23	95,83
M12	25,0	13,0	12,5	120 x 42	28	254,59



**DIN 7991**

	M2	M2.5	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
Kmax.	1,2	1,5	1,7	2,3	2,8	3,3	4,4	5,5	6,5	7	7,5	8	8,5
D1	4	5	6	8	10	12	16	20	24	27	30	33	36

## MORSE TAPER SHANK DRILLS DIN 345

DIN  
345

For drilling holes over 25mm we recommend to drill a previous hole of about a third part of the final diameter. For example: if you are going to use a 30mm drill, you should drill a previous hole of 10mm.

			BC11	BC22	BC32	BC21	BC13								
			€	€	€	€	€	€	€	€	€	€	€	€	€
10,75	175 x 94	1	40,87												
11,00	175 x 94	1	35,31	103,90			50,50	94,31							
11,25	175 x 94	1	42,67												
11,50	175 x 94	1	37,12	108,19			51,82	94,31							
11,75	175 x 94	1	42,68												
12,00	182 x 101	1	37,31	111,59			38,32	98,46							
12,25	182 x 101	1	47,52												
12,50	182 x 101	1	39,93	116,81			53,46	98,66							
12,75	182 x 101	1	47,53												
13,00	182 x 101	1	41,64	114,31	86,71	54,59	112,30								
13,25	189 x 101	1	52,61												
13,50	189 x 101	1	43,94	149,73	104,78	56,33	111,99								
13,75	189 x 101	1	52,61												
14,00	189 x 108	1	43,97	146,98	99,61	45,24	122,02								
14,25	212 x 114	2	56,98												
14,50	212 x 114	2	49,49	162,65	122,24	75,56	122,00								
14,75	212 x 114	2	56,96												
15,00	212 x 114	2	49,49	149,91	116,19	75,56	138,06								
15,25	218 x 120	2	58,60												
15,50	218 x 120	2	50,94	165,75	119,92	77,78	147,02								
15,75	218 x 120	2	58,60	204,42	149,89										
16,00	218 x 120	2	51,23	157,72	119,92	51,30	146,95								
16,25	223 x 125	2	66,25												
16,50	223 x 125	2	57,90	167,47	127,27	79,35	147,41								
16,75	223 x 125	2	66,25												
17,00	223 x 125	2	57,89	164,95	127,27	78,94	156,17								
17,25	228 x 130	2	73,36												
17,50	228 x 130	2	64,02	174,90	134,63	85,05	155,97								
17,75	228 x 130	2	73,36	238,52	179,86										
18,00	228 x 130	2	61,48	171,58	143,89	58,56	168,81								
18,25	233 x 135	2	80,66												
18,50	233 x 135	2	70,47	188,28	149,43	87,13	197,30								
18,75	233 x 135	2	81,19												
19,00	233 x 135	2	70,70	184,15	149,43	73,34	197,01								
19,25	238 x 140	2	87,82												
19,50	238 x 140	2	76,46	212,80	156,79	93,36	221,25								
19,75	238 x 140	2	88,43												
20,00	238 x 140	2	76,49	205,69	156,79	77,13	221,79								
20,25	243 x 145	2	91,48												
20,50	243 x 145	2	79,28	236,91	182,62	94,77	225,36								
20,75	243 x 145	2	91,48												
21,00	243 x 145	2	79,28	239,58	182,62	94,34	225,36								
21,25	248 x 150	2	100,94												
21,50	248 x 150	2	87,43	269,90	199,22	99,81	245,73								
21,75	248 x 150	2	100,94	349,01	249,03										
22,00	248 x 150	2	87,60	243,41	199,22	89,83	245,73								
22,00*	265 x 150	3	119,07												
22,25	248 x 150	2	110,48												
22,50	253 x 155	2	95,86	301,87	210,28	108,68	246,11								
22,75	253 x 155	2	110,48												
23,00	253 x 155	2	95,63	283,57	228,72	107,89	266,92								
23,25	276 x 155	3	121,85												
23,50	276 x 155	3	106,13	301,28	275,75	130,01	266,75								
23,75	281 x 160	3	122,00												
24,00	281 x 160	3	105,90	305,16	254,57	111,30	293,42								

\* Morse taper

**MORSE TAPER SHANK DRILLS DIN 345**

**DIN  
345**



For drilling holes over 25mm we recommend to drill a previous hole of about a third part of the final diameter. For example: if you are going to use a 30mm drill, you should drill a previous hole of 10mm.

			BC11	BC22	BC32	BC21	BC13
Ø mm	L1 x L2 mm	MT	€	€	€	€	€
31,00	301x180	3	191,53	449,13		207,93	
31,25	301x180	3	233,06				
31,50	301x180	3	201,41	689,91			
31,75	306x185	3	233,06		604,12		
32,00	334x185	4	201,75	519,57	483,28	217,56	559,55*
32,00	334x185	3	375,70				
32,25	334x185	4	272,02				
32,50	334x185	4	231,75				
32,75	334x185	4	272,02				
33,00	334x185	4	230,37	594,01		236,79	689,59*
33,25	334x185	4	284,14				
33,50	334x185	4	251,32				
33,75	339x190	4	285,69				
34,00	339x190	4	250,55	669,29		336,48	690,75*
34,25	339x190	4	312,21				
34,50	339x190	4	273,66				
34,75	339x190	4	312,21	727,66			
35,00	339x190	4	275,02	703,28	662,16	371,01	
35,25	339x190	4	334,61				
35,50	339x190	4	293,58				
35,75	344x195	4	343,59				
36,00	344x195	4	294,30	755,59		385,08	1.109,34*
36,25	344x195	4	361,12				
36,50	344x195	4	311,26				
36,75	344x195	4	361,07				
37,00	344x195	4	310,85	706,22		396,30	1.198,18*
37,25	344x195	4	384,85				
37,50	344x195	4	387,17				
37,75	344x195	4	417,53				
38,00	349x200	4	326,47	815,02		407,63	
38,25	349x200	4	406,71				
38,50	349x200	4	347,40				
38,75	349x200	4	406,71				
39,00	349x200	4	347,69	833,98		422,89	1.324,94*
39,25	349x200	4	409,09				
39,50	349x200	4	368,23				
39,75	349x200	4	409,09				
40,00	349x200	4	367,75	873,94		436,63	1.366,77*
40,50	354x205	4	385,50				
41,00	354x205	4	385,98	918,69			
41,50	354x205	4	410,27				
42,00	354x205	4	409,43	961,94			
42,50	354x205	4	430,29				
43,00	359x210	4	430,30	1.008,64			
43,50	359x210	4	450,51				
44,00	359x210	4	450,79	1.047,33			
44,50	359x210	4	471,46				
45,00	359x210	4	471,82	1.095,28			
45,50	364x215	4	490,24				
46,00	364x215	4	488,18				
46,50	364x215	4	510,25				
47,00	364x215	4	510,01	1.183,45			
47,50	364x215	4	527,38				
48,00	369x220	4	527,01	1.233,05			
48,50	369x220	4	548,31				

	BC11	BC22	BC32	BC21	BC13
<b>MATERIAL</b>	HSS	HSSCo 5%	HSSCo 5%	HSS	CARBIDE TIPPED
<b>SHARPENING</b>					
<b>POINT ANGLE</b>	118°	135°	135°	118°	118°
<b>HELIX ANGLE</b>	30° "N"	30° "N"	38° "SC"	30° "N"	30° "N"
<b>COATING</b>	OX	OX	OX	TiN	BRIGHT
<b>APPLICATION</b>	70 Kg/mm²	120 Kg/mm²	INOX	PRODUCTION	CAST IRON
Ø mm	L1 x L2	MT*	€	€	€
24,25	281x160	3	132,47		
24,50	281x160	3	115,59	325,46	300,61
24,75	281x160	3	132,92	321,44	137,31
25,00	281x160	3	115,13	319,70	122,43
25,25	286x165	3	144,97		300,72
25,50	286x165	3	125,97	397,92	155,06
25,75	286x165	3	144,57	352,52	356,87
26,00	286x165	3	125,26	377,91	128,61
26,25	286x165	3	156,55	298,82	338,27
26,50	286x165	3	135,61	418,29	160,88
26,75	291x170	3	156,55	352,50	392,12
27,00	291x170	3	135,74	419,46	134,74
27,25	291x170	3	167,55	320,93	359,60
27,50	291x170	3	145,19	500,22	168,98
27,75	291x170	3	167,55	464,44	431,96
28,00	291x170	3	145,63	464,67	141,12
28,25	296x175	3	179,71	332,05	398,69
28,50	296x175	3	155,67	490,14	177,44
28,75	296x175	3	179,74	161,35	470,65
29,00	296x175	3	155,65	452,46	424,38
29,25	296x175	3	197,63	361,55	470,65
29,50	296x175	3	171,41	501,27	211,86
29,75	296x175	3	197,63	497,98	513,37
30,00	296x175	3	171,50	459,17	167,53
30,25	301x180	3	219,99	379,97	451,11
30,50	301x180	3	191,35	664,87	
30,75	301x180	3	220,09		

\* Morse taper

\* Till end of stock

## MORSE TAPER SHANK DRILLS DIN 345

Twist drills for Metal

Grey

Ref. BC11

DIN  
345

HSS



OX



BC11			
Ø mm	L1 x L2 mm	MT*	€
49,00	369x220	4	546,01
49,50	369x220	4	563,18
50,00	369x220	4	569,22
50,50	369x220	4	815,08
51,00	412x225	5	667,49
51,50	412x225	5	894,63
52,00	412x225	5	713,37
52,50	412x225	5	916,41
53,00	412x225	5	764,01
53,50	412x225	5	958,63
54,00	417x230	5	840,75
54,50	417x230	5	949,03
55,00	417x230	5	832,30
56,00	417x230	5	936,50
57,00	422x235	5	994,89
58,00	422x235	5	1.003,40
59,00	422x235	5	1.033,53
60,00	422x235	5	978,36
61,00	427x240	5	1.147,56
62,00	427x240	5	1.195,22
63,00	427x240	5	1.264,00
64,00	432x245	5	1.333,61
65,00	432x245	5	1.276,93
66,00	432x245	5	1.439,68
67,00	432x245	5	1.486,10
68,00	437x250	5	1.524,65
69,00	437x250	5	1.572,05
70,00	437x250	5	1.419,57
71,00	437x250	5	1.638,94
72,00	442x255	5	1.672,89
73,00	442x255	5	1.716,68
74,00	442x255	5	1.766,91
75,00	442x255	5	1.664,38
76,00	447x260	5	1.959,80
77,00	514x260	6	2.103,11
78,00	514x260	6	2.144,21
79,00	514x260	6	2.187,42
80,00	514x260	6	2.753,24
81,00	519x265	6	3.032,29
82,00	519x265	6	3.108,06
83,00	519x265	6	3.167,67
84,00	519x265	6	3.234,92
85,00	519x265	6	3.314,83
86,00	524x270	6	3.387,20
87,00	524x270	6	3.459,14
88,00	524x270	6	3.548,03
89,00	524x270	6	3.616,71
90,00	524x270	6	3.720,22
91,00	529x275	6	3.923,75
92,00	529x275	6	3.946,37
93,00	529x275	6	4.087,10
94,00	529x275	6	4.170,16
95,00	529x275	6	4.255,85
96,00	534x280	6	4.396,03
97,00	534x280	6	4.432,91
98,00	534x280	6	4.531,80
99,00	534x280	6	4.613,75
100,00	534x280	6	4.701,77



Ref. EXPBC11MC

## DIN 345 MORSE TAPER SHANK DRILLS DISPLAY, 15 PCS

Morse taper shank n° 1	14	15	16	17	18	DIN 345
	1	1	1	1	1	
n° 2	19	20	21	22	23	
	1	1	1	1	1	
n° 3	24	25	26	28	30	
	1	1	1	1	1	

Dimensions: Width 280 x depth 212/50 x height 155 mm.

1.337,18 €

## ADDITIONAL FEES FOR REDUCING THE MORSE TAPER SHANKS



n° 2-1

n° 2-0

n° 3-2

n° 3-1

n° 4-3

n° 4-2

€ NET

53,30

79,95

\* Morse taper

370mm maximum length to reduce taper shank.

**M42 8% COBALT MORSE TAPER SHANK DRILLS FOR HARDENED AND RESISTANT MATERIALS**

Ref. BC73

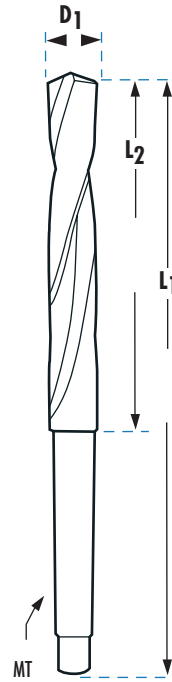
**HSSCo**  
**8%**



**OX**

**HARDOX**  
**450**

BC73					
	D1 mm	L1 mm	L2 mm	MT*	€
BC731000	10,00	175	76	2	59,19
BC731020	10,20	175	76	2	59,19
BC731100	11,00	175	76	2	59,19
BC731200	12,00	179	81	2	64,83
BC731250	12,50	179	81	2	64,83
BC731300	13,00	179	81	2	64,83
BC731400	14,00	184	86	2	69,01
BC731450	14,50	187	89	2	69,92
BC731500	15,00	187	89	2	70,36
BC731550	15,50	187	89	2	79,93
BC731600	16,00	187	89	2	83,73
BC731650	16,50	190	92	2	87,59
BC731700	17,00	190	92	2	89,25
BC731800	18,00	190	92	2	90,59
BC731850	18,50	213	95	3	100,97
BC731900	19,00	213	95	3	102,94
BC732000	20,00	213	95	3	109,43
BC732100	21,00	219	102	3	119,18
BC732200	22,00	222	105	3	137,01
BC732400	24,00	222	105	3	147,61
BC732500	25,00	225	108	3	174,90
BC732600	26,00	270	124	4	207,25
BC732700	27,00	270	124	4	222,89
BC732800	28,00	270	124	4	231,43
BC733000	30,00	270	124	4	257,43
BC733200	32,00	280	133	4	299,61
BC733500	35,00	292	136	4	374,36
BC733600	36,00	292	146	4	393,74
BC734000	40,00	298	152	4	481,24
BC734500	45,00	298	152	4	654,48
BC735000	50,00	356	152	5	768,86
BC735500	55,00	360	156	5	913,46
BC736000	60,00	360	156	5	1.114,81



\* Morse taper

Recommended for HARDOX 450



For drilling holes over 25mm we recommend to drill a previous hole of about a third part of the final diameter. For example: if you are going to use a 30mm drill, you should drill a previous hole of 10mm.

Twist drills for Metal

Pink

Ref. BC22...FT

**DIN**  
**345**

**HSSCo**  
**5%**

**TiN**



**DIN 1412D**

**130°**



**30°**  
**"N"**



**120**  
**Kg/mm²**

**HARDOX**  
**450**

BC22...FT					
	D1 mm	L1 mm	L2 mm	MT*	€
BC221600FT	16,00	218	120	2	101,49
BC221800FT	18,00	228	130	2	110,40
BC222000FT	20,00	238	140	2	132,36
BC222200FT	22,00	248	150	2	156,63
BC222400FT	24,00	281	160	3	196,36
BC222500FT	25,00	281	160	3	205,71
BC222600FT	26,00	286	165	3	243,17
BC222800FT	28,00	291	170	3	299,00
BC223000FT	30,00	296	175	3	295,47
BC223200FT	32,00	334	185	4	334,33
BC223400FT	34,00	339	190	4	430,66
BC223600FT	36,00	344	195	4	486,19

\* Morse taper



- The best solution to drill large diameter holes in hardened metals.
- Special sharpening for very hard materials.
- This drill has been used historically to drill railway rails.

Recommended for HARDOX 450





**MORSE TAPER SHANK DRILLS, EXTRA LONG SERIES, DIN 1870 I/II**

**DIN  
1870  
I/II**

Ref. BC14



Ref. BC41



			BC14	BC41				BC14	BC41				BC14	BC41
MATERIAL			HSS	HSSCo 5%				€	€				€	€
SHARPENING								€	€				€	€
POINT ANGLE			 118°	 135°				€	€				€	€
HELIX ANGLE			 30° "N"	 38° "S"				€	€				€	€
COATING			OX	BRIGHT				€	€				€	€
APPLICATION			 70 Kg/mm²	 120 Kg/mm²				€	€				€	€
Ø mm	L1 x L2	MT*	€	€	Ø mm	L1 x L2	MT*	€	€	Ø mm	L1 x L2	MT*	€	€
8,00	265x165	1	88,34		29,00	460x305	3	491,37	1.148,82					
8,00	330x210	1	110,12		29,00	580x385	3	704,53	1.559,41					
8,50	265x165	1	97,02		17,50	370x245	2	231,46	416,08					
8,50	330x210	1	112,58		17,50	465x310	2	278,49	562,69					
9,00	275x175	1	99,86		18,00	370x245	2	231,46	404,91					
9,00	345x220	1	126,93		18,00	465x310	2	278,49	533,62					
9,50	275x175	1	106,86		18,50	370x245	2	251,10	467,89					
9,50	345x220	1	128,31		18,50	465x310	2	300,99	638,46					
10,00	285x185	1	109,79		19,00	370x245	2	250,97	466,79					
10,00	360x235	1	135,41		19,00	465x310	2	300,99	595,98					
10,50	285x185	1	116,61		19,50	385x260	2	268,04	522,03					
10,50	360x235	1	139,57		19,50	490x325	2	325,73	668,48					
11,00	300x195	1	121,73		20,00	385x260	2	267,99	512,89					
11,00	375x250	1	144,76		20,00	490x325	2	325,73	668,13					
11,50	300x195	1	133,30		20,50	385x260	2	303,49	682,64					
11,50	375x250	1	166,49		20,50	490x325	2	364,44	786,02					
12,00	310x205	1	136,43	303,48	21,00	385x260	2	303,49	626,95					
12,00	395x260	1	170,00		21,00	490x325	2	364,44	778,87					
12,50	310x205	1	145,19		21,50	405x270	2	323,66	738,43					
12,50	395x260	1	189,73		21,50	515x345	2	391,11	922,37					
13,00	310x205	1	145,19	324,69	22,00	405x270	2	323,66	669,58					
13,00	395x260	1	189,73		22,00	515x345	2	391,11	899,15					
13,50	325x220	1	158,95		22,50	405x270	2	368,82	786,02					
13,50	410x275	1	194,86		22,50	515x345	2	441,52	976,21					
14,00	325x220	1	159,00	309,92	23,00	405x270	2	368,82	766,59					
14,00	410x275	1	194,86	434,21	23,00	515x345	2	441,52	922,37					
14,50	340x220	2	174,12	339,02	23,50	425x270	3	405,24	960,65					
14,50	425x275	2	212,21	476,09	23,50	535x345	3	491,37	1.171,69					
15,00	340x220	2	174,12	325,69	24,00	440x290	3	405,24	877,18					
15,00	425x275	2	212,21	462,41	24,00	555x365	3	491,37	1.073,38					
15,50	355x230	2	195,20	378,76	24,50	440x290	3	419,96	1.036,44					
15,50	445x295	2	234,06	510,33	24,50	555x365	3	517,86	1.231,92					
16,00	355x230	2	195,20	359,71	25,00	440x290	3	419,96	924,40					
16,00	445x295	2	234,06	497,37	25,00	555x365	3	517,86	1.101,78					
16,50	355x230	2	210,15	378,76	25,50	440x290	3	434,07	1.102,86					
16,50	445x295	2	252,91	516,18	25,50	555x365	3	572,06	1.436,19					
					26,00	440x290	3	434,07	999,46					
					26,00	555x365	3	572,06	1.292,33					
					26,50	440x290	3	444,51	1.119,90					
					26,50	555x365	3	590,23	1.541,97					
					27,00	460x305	3	444,51	1.038,81					
					27,00	580x385	3	590,23	1.367,92					
					27,50	460x305	3	474,18	1.218,40					
					27,50	580x385	3	638,52	1.632,81					
					28,00	460x305	3	474,18	1.100,50					
					28,00	580x385	3	638,52	1.486,55					
					28,50	460x305	3	491,37	1.292,69					
					28,50	580x385	3	704,53	1.700,52					

\* Morse taper

MORSE TAPER SHANK HSS DRILLS WITH INTERNAL COOLING DIN 341

Twist drills for Metal

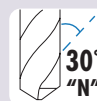
Pink

Ref. BC87



DIN 341

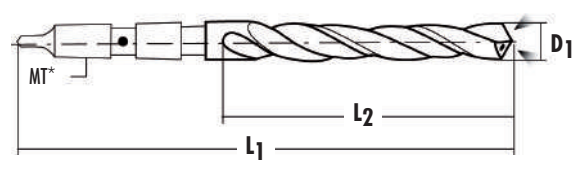
HSS



OX



SPECIAL 170° POINT FOR PERFECT CENTERING



BC87					
	D1 mm	L1 mm	L2 mm	MT*	€
BC871000	10,0	268	116	3	507,50
BC871050	10,5	268	116	3	514,49
BC871100	11,0	278	125	3	514,49
BC871200	12,0	287	134	3	525,73
BC871300	13,0	287	134	3	525,73
BC871350	13,5	285	142	3	525,73
BC871400	14,0	285	142	3	525,73
BC871450	14,5	245	147	2	543,65*
BC871500	15,0	300	147	3	543,65
BC871550	15,5	251	153	2	561,92*
BC871600	16,0	306	153	3	561,92
BC871650	16,5	257	159	2	561,92*
BC871700	17,0	311	159	3	561,92
BC871750	17,5	318	165	3	597,72
BC871800	18,0	318	165	3	597,72
BC871900	19,0	324	171	3	616,10
BC872000	20,0	330	177	3	652,26
BC872100	21,0	343	184	3	688,74
BC872200	22,0	350	191	3	731,86

BC87					
	D1 mm	L1 mm	L2 mm	MT*	€
BC872300	23,0	357	198	3	724,86
BC872400	24,0	365	206	3	724,86
BC872500	25,0	365	206	3	739,86
BC872600	26,0	373	214	3	815,73
BC872700	27,0	375	222	4	851,88
BC872800	28,0	375	222	4	934,95
BC872900	29,0	375	230	4	997,10
BC873000	30,0	375	230	4	1.065,75
BC873100	31,0	375	239	4	1.268,67
BC873200	32,0	375	248	4	1.268,67
BC873300	33,0	375	248	4	1.482,42
BC873400	34,0	375	257	4	1.482,42
BC873500	35,0	375	257	4	1.667,13
BC873600	36,0	375	257	4	1.667,13
BC873700	37,0	375	257	4	1.884,62
BC873800	38,0	375	277	4	1.884,62
BC873900	39,0	375	277	4	2.102,30
BC874000	40,0	375	277	4	2.102,30

\* Till end of stock

**TWIST DRILLS IN METAL AND PLASTIC BOXES**



Ref. PT6010

**Blue Plastic**

- Light, rigid and robust
- Transparent window
- Reinforced plastic and shock-resistant rubber

**P** References beginning with "P" are supplied in a plastic case



Ref. P6011

Ref. PP6010

**Metal Classic**

- High resistance metal drill box



Ref. DC011



Ref. DC010

Ref. BC2



Ref. BC02



BC2		Ref.	U.		CONTENT	€
DIN 338	HSS	D0010	19	M	Ø 1-10 x 0,50 mm	64,45
		D0011	25	M	Ø 1-13 x 0,50 mm	134,09
		P6010	19	P	Ø 1-10 x 0,50 mm	64,45
		P6011	25	P	Ø 1-13 x 0,50 mm	134,09
<b>Quarters</b>		AD001	37	M	Ø 1-10 x 0,25 mm	175,59
		AD002	49	M	Ø 1-13 x 0,25 mm	315,15
<b>Tenths</b>		D0014	50	M	Ø 1-5,90 x 0,10 mm	119,62
		D0015	41	M	Ø 6-10 x 0,10 mm	311,41
		D0022	81	M	Ø 2-10 x 0,10 mm	549,38
<b>Half + Prior holes</b>		D0017	23	M	Ø 1-10 x 0,50 + Ø PH*	122,85
		D0035	29	M	Ø 1-13 x 0,50 + Ø PH*	203,06
<b>Additional Compositions</b>		D0007	10	M	Ø 1-10 x 1 mm	52,45
		D0009	13	M	Ø 1,5-6,5x0,5 (+3,2 & 4,8) mm	24,90
		D0008	13	M	Ø 1-7 x 0,50 mm	25,91
		D0006	12	M	Ø 2-7 x 0,50 + 8 mm	47,56

BC02		Ref.	U.		CONTENT	€
DIN 338	Plus	DP010	19	M	Ø 1-10 x 0,50 mm	72,86
		DP011	25	M	Ø 1-13 x 0,50 mm	150,74
		PP6010	19	P	Ø 1-10 x 0,50 mm	72,86
		PP6011	25	P	Ø 1-13 x 0,50 mm	150,74
<b>Quarters</b>		ADP01	37	M	Ø 1-10 x 0,25 mm	210,39
		ADP02	49	M	Ø 1-13 x 0,25 mm	374,30
<b>Tenths</b>		On request	50	M	Ø 1-5,90 x 0,10 mm	
		On request	41	M	Ø 6-10 x 0,10 mm	
		On request	81	M	Ø 2-10 x 0,10 mm	
<b>Half + Prior holes</b>		DP017	23	M	Ø 1-10 x 0,50 + Ø PH*	123,02
		DP035	29	M	Ø 1-13 x 0,50 + Ø PH*	211,63
<b>Additional Compositions</b>		DP007	10	M	Ø 1-10 x 1 mm	68,82
		DP009	13	M	Ø 1,5-6,5x0,5 (+3,2 & 4,8) mm	29,28
		DP008	13	M	Ø 1-7 x 0,50 mm	29,32
		DP006	12	M	Ø 2-7 x 0,50 + 8 mm	49,21

Ref. BC5



Ref. BC18



BC5		Ref.	U.		CONTENT	€
DIN 338	HSSCo 5%	DC010	19	M	Ø 1-10 x 0,50 mm	107,70
		DC011	25	M	Ø 1-13 x 0,50 mm	252,58
		PC6010	19	P	Ø 1-10 x 0,50 mm	107,70
		PC6011	25	P	Ø 1-13 x 0,50 mm	252,58
<b>Quarters</b>		ADC01	37	M	Ø 1-10 x 0,25 mm	253,93
		ADC02	49	M	Ø 1-13 x 0,25 mm	568,31
<b>Tenths</b>		DC014	50	M	Ø 1-5,90 x 0,10 mm	187,11
		DC015	41	M	Ø 6-10 x 0,10 mm	461,32
		DC022	81	M	Ø 2-10 x 0,10 mm	750,64
<b>Half + Prior holes</b>		DC017	23	M	Ø 1-10 x 0,50 + Ø PH*	172,41
		DC035	29	M	Ø 1-13 x 0,50 + Ø PH*	330,31
<b>Additional Compositions</b>		DC007	10	M	Ø 1-10 x 1 mm	89,62
		DC009	13	M	Ø 1,5-6,5x0,5 (+3,2 & 4,8) mm	43,64
		DC008	13	M	Ø 1-7 x 0,50 mm	45,72
		DC006	12	M	Ø 2-7 x 0,50 + 8 mm	68,54

BC18		Ref.	U.		CONTENT	€
HSS	TiN	DT010	19	M	Ø 1-10 x 0,50 mm	95,13
		DT011	25	M	Ø 1-13 x 0,50 mm	208,09
		PT6010	19	P	Ø 1-10 x 0,50 mm	95,13
		PT6011	25	P	Ø 1-13 x 0,50 mm	208,09
<b>Quarters</b>		ADT01	37	M	Ø 1-10 x 0,25 mm	216,82
		ADT02	49	M	Ø 1-13 x 0,25 mm	442,93
<b>Tenths</b>		On request	50	M	Ø 1-5,90 x 0,10 mm	
		On request	41	M	Ø 6-10 x 0,10 mm	
		On request	81	M	Ø 2-10 x 0,10 mm	
<b>Half + Prior holes</b>		On request	23	M	Ø 1-10 x 0,50 + Ø PH*	
		On request	29	M	Ø 1-13 x 0,50 + Ø PH*	
<b>Additional Compositions</b>		DT007	10	M	Ø 1-10 x 1 mm	74,44
		DT009	13	M	Ø 1,5-6,5x0,5 (+3,2 & 4,8) mm	38,93
		DT008	13	M	Ø 1-7 x 0,50 mm	42,57
		DT006	12	M	Ø 2-7 x 0,50 + 8 mm	62,29

\* Prior holes: From M3 to M12 ( Ø3,30 - Ø4,20 - Ø6,80 - Ø10,20)

**TWIST DRILLS IN METAL AND PLASTIC BOXES**

Twist drills for Metal

Grey  
Pink
**Metal Classic**

- High resistance metal drill box

**M**
**Blue Plastic**

- Light, rigid and robust
- Transparent window
- Reinforced plastic and shock-resistant rubber

**P** References beginning with "P" are supplied in a plastic case


Ref. PTTX011

Ref. BC95



Ref. BC58



BC95		Ref.	U.	CONTENT	€
HSSCo 5%		DC9510	19 M	Ø 1-10 x 0,50 mm	122,78
		DC9511	25 M	Ø 1-13 x 0,50 mm	277,54
		PC9510	19 P	Ø 1-10 x 0,50 mm	122,78
		PC9511	25 P	Ø 1-13 x 0,50 mm	277,54

BC58		Ref.	U.	CONTENT	€
DIN 338	HSSCo 8%	DC810	19 M	Ø 1-10 x 0,50 mm	155,84
		DC811	25 M	Ø 1-13 x 0,50 mm	367,65
<b>Quarters</b>		ADC81	37 M	Ø 1-10 x 0,25 mm	359,11
		ADC82	49 M	Ø 1-13 x 0,25 mm	842,65
<b>Half + Prior holes</b>		DC817	23 M	Ø 1-10 x 0,50 + Ø PH*	231,25
		DC835	29 M	Ø 1-10 x 0,50 + Ø PH*	454,71
<b>Additional Compositions</b>		DC806	12 M	Ø 2-7 x 0,50 + 8 mm	90,32
		DC807	10 M	Ø 1-10 x 1 mm	113,51

Ref. BC82



BC82		Ref.	U.	CONTENT	€
DIN 338	HSS	D8210	19 M	Ø 1-10 x 0,50 mm	64,81
		D8211	25 M	Ø 1-13 x 0,50 mm	134,09

Ref. BTX



BTX		Ref.	U.	CONTENT	€
Ø ≥ 3	HSSCo 5%	PTX010	19 P	Ø 1-10 x 0,50 mm	118,13
		PTX011	25 P	Ø 1-13 x 0,50 mm	259,84

Ref. TTX



TTX		Ref.	U.	CONTENT	€
Ø ≥ 3	HSS	PTTX010	19 P	Ø 1-10 x 0,50 mm	106,31
	TiAlSiN	PTTX011	25 P	Ø 1-13 x 0,50 mm	233,86

Ref. TK02



TK02		Ref.	U.	CONTENT	€
DIN 338	HSS	TK02010	19 P	Ø 1-10 x 0,50 mm	198,38
Ø ≥ 4		TK02011	25 P	Ø 1-13 x 0,50 mm	353,91

Ref. TK05



TK05		Ref.	U.	CONTENT	€
DIN 338	HSSCo 5%	TK05010	19 P	Ø 1-10 x 0,50 mm	247,97
Ø ≥ 5		TK05011	25 P	Ø 1-13 x 0,50 mm	442,39

**TWIST DRILLS IN METAL BOXES (additional compositions)**

**HSS TWIST DRILLS FOR ALUMINIUM**

Ref. BC16



BC16		Ref.	U.		CONTENT	€
DIN 338	HSS	D16010	19	M	Ø 1-10 x 0,50 mm	102,04
		D16011	25	M	Ø 1-13 x 0,50 mm	223,87

**HSSCo "S" TYPE FLUTED TWIST DRILLS**

Ref. BC55



BC55		Ref.	U.		CONTENT	€
DIN 338	HSSCo 5%	D55010	18	M	Ø 1,50-10 x 0,50 mm	208,50
		D55011	24	M	Ø 1,50-13 x 0,50 mm	474,79

**CARBIDE TIPPED TWIST DRILLS FOR HARDENED STEELS, CAST IRON, ETC**

Ref. BC7



BC7		Ref.	U.		CONTENT	€
DIN 338	CARBIDE TIPPED	DPMD010	17	M	Ø 2-10 x 0,50 mm	419,43
		DPMD011	23	M	Ø 2-13 x 0,50 mm	721,74

**SOLID CARBIDE TWIST DRILLS FOR HARD MATERIALS**

Ref. BC42



BC42		Ref.	U.		CONTENT	€
DIN 338	SOLID CARBIDE	D42010	17	M	Ø 2-10 x 0,50 mm	1.148,36
		D42011	23	M	Ø 2-13 x 0,50 mm	2.600,00

**TWIST DRILLS FOR STAINLESS STEEL**

Ref. BC50



BC50		Ref.	U.		CONTENT	€
DIN 338	HSSCo 5%	D50010	19	M	Ø 1-10 x 0,50 mm	363,18
		D50011	25	M	Ø 1-13 x 0,50 mm	624,54

**LEFT HAND CUT TWIST DRILLS**

Ref. BC15



BC15		Ref.	U.		CONTENT	€
DIN 338	HSS	D0010I	19	M	Ø 1-10 x 0,50 mm	189,56
		D0011I	25	M	Ø 1-13 x 0,50 mm	399,56
		DR9312I	10	P	Ø 1-10 x 1 mm	94,23

**EMPTY BOXES**

Ref.	U.		CONTENT	€
D0010V	19	M	Ø 1-10 x 0,50 mm	19,98
D0011V	25	M	Ø 1-13 x 0,50 mm	27,87
AD001V	37	M	Ø 1-10 x 0,25 mm	73,21
AD002V	49	M	Ø 1-13 x 0,25 mm	85,03
D0014V	50	M	Ø 1-5,9 x 0,10 mm	64,85
D0015V	41	M	Ø 6-10 x 0,10 mm	129,57
D0022V	81	M	Ø 2-10 x 0,10 mm	248,50
D0006V	12	M	Ø 2-7 x 0,50 + 8 mm	27,11
D0007V	10	M	Ø 1-10 x 1 mm	46,50
D0017V	23	M	Ø 1-10 x 0,50 mm + PH*	53,95
D0035V	29	M	Ø 1-13 x 0,50 mm + PH*	76,30
DE10V	19	M	Ø 1-10 x 0,50 mm	47,19
DE11V	25	M	Ø 1-13 x 0,50 mm	57,65

DIN 1897

\* Prior holes: From M3 to M12 ( Ø3,30 - Ø4,20 - Ø6,80 - Ø10,20)



TWIST DRILLS IN METAL BOXES

LONG SERIES DIN 340 TWIST DRILLS IN METAL BOXES

Ref. BC4



BC4		Ref.	U.	CONTENT	€	
DIN 340	HSS	D0004	19	M	Ø 1-10 x 0,50 mm	111,36

Ref. BC47

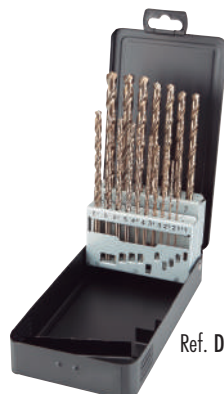


BC47		Ref.	U.	CONTENT	€	
DIN 340	HSSCo 5%	DC004	x17	M	Ø 2-10 x 0,50 mm	237,09

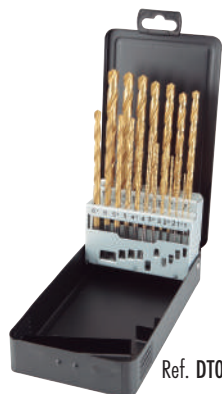
Ref. BC40



BC40		Ref.	U.	CONTENT	€	
HSS	TiN	DT004	19	M	Ø 1-10 x 0,50 mm	171,55



Ref. DC004



Ref. DT004

EXTRA-SHORT SERIES DIN 1897

Ref. BC3



BC3		Ref.	U.	CONTENT	€	
DIN 1897	HSS	D3010	19	M	Ø 1-10 x 0,50 mm	74,88
		D3011	25	M	Ø 1-13 x 0,50 mm	143,58

Ref. BC31



BC31		Ref.	Ref.	U.	CONTENT	€
DIN 1897	HSSCo 5%	D3110	19	M	Ø 1-10 x 0,50 mm	112,26
		D3111	25	M	Ø 1-13 x 0,50 mm	235,88

Ref. BC33



BC33		Ref.	U.	CONTENT	€	
DIN 1897	HSSCo 5%	D3310	19	M	Ø 1-10 x 0,50 mm	204,61
		D3311	25	M	Ø 1-13 x 0,50 mm	370,30

Ref. BC77



BC77		Ref.	U.	CONTENT	€	
DIN 1897	CARBIDE TIPPED	D7710	17	M	Ø 2-10 x 0,50 mm	520,36
		D7711	23	M	Ø 2-13 x 0,50 mm	871,16

Ref. BC43



BC43		Ref.	U.	CONTENT	€	
DIN 1897	SOLID CARBIDE	D4310	17	M	Ø 2-10 x 0,50 mm	774,09
		D4311	23	M	Ø 2-13 x 0,50 mm	1.645,87



Ref. D7710



Ref. D3110

**TWIST DRILLS IN PLASTIC BOXES**



Ref. DP9314



Ref. DP9312



Ref. DP9313



Ref. DP9311

Ref. BC2



Ref. BC02



BC2		Ref.	U.	CONTENT	€
DIN 338	HSS	DR9314	6	Ø 2 - 3 - 4 - 5 - 6 - 8 mm	18,76
		DR9312	10	Ø 1-10 x 1 mm	39,93
		DR9313	13	Ø 2-8 x 0,50 mm	39,62
		DR9311	19	Ø 1-10 x 0,50 mm	69,76

BC02		Ref.	U.	CONTENT	€
DIN 338	Plus	DP9314	6	Ø 2 - 3 - 4 - 5 - 6 - 8 mm	19,77
		DP9312	10	Ø 1-10 x 1 mm	43,24
		DP9313	13	Ø 2-8 x 0,50 mm	42,25
		DP9311	19	Ø 1-10 x 0,50 mm	76,26

Ref. BC5



Ref. BC18



BC5		Ref.	U.	CONTENT	€
DIN 338	HSSCo 5%	DC9314	6	Ø 2 - 3 - 4 - 5 - 6 - 8 mm	29,81
		DC9312	10	Ø 1-10 x 1 mm	63,93
		DC9313	13	Ø 2-8 x 0,50 mm	64,41
		DC9311	19	Ø 1-10 x 0,50 mm	114,28

BC18		Ref.	U.	CONTENT	€
HSS	TIN	DT9314	6	Ø 2 - 3 - 4 - 5 - 6 - 8 mm	20,54
		DT9312	10	Ø 1-10 x 1 mm	43,74
		DT9313	13	Ø 2-8 x 0,50 mm	43,40
		DT9311	19	Ø 1-10 x 0,50 mm	76,41

Ref. BC82



Ref. BC58



BC82		Ref.	U.	CONTENT	€
DIN 338	HSS	D829314	6	Ø 2 - 3 - 4 - 5 - 6 - 8 mm	17,76
		D829312	10	Ø 1-10 x 1 mm	37,79
		D829313	13	Ø 2-8 x 0,50 mm	37,49
		D829311	19	Ø 1-10 x 0,50 mm	66,02

BC58		Ref.	U.	CONTENT	€
DIN 338	HSSCo 8%	D89314	6	Ø 2 - 3 - 4 - 5 - 6 - 8 mm	38,04
		D89312	10	Ø 1-10 x 1 mm	81,35
		D89313	13	Ø 2-8 x 0,50 mm	83,38
		D89311	19	Ø 1-10 x 0,50 mm	146,26

					Ref.	U.	CONTENT	€
BC95	HSSCo 5%	OX GOLD	130°		DC959314	6	Ø 2-3-4-5-6-8 mm	29,92
BTX	Ø ≥ 3	HSSCo 5%	135°	GOLD	PTX9314	6	Ø 2-3-4-5-6-8 mm	29,65
TTX	Ø ≥ 3	HSS	135°	TiAlSiN	PTTX9314	6	Ø 2-3-4-5-6-8 mm	27,62
TK02	DIN 338	HSS	Ø ≥ 4		PTK029314	6	Ø 2-3-4-5-6-8 mm	48,83
TK05	DIN 338	HSSCo 5%	Ø ≥ 5		PTK059314	6	Ø 2-3-4-5-6-8 mm	61,04

Ref. BC95



Ref. BTX



Ref. TTX



Ref. TK02



Ref. TK05



Twist drills for Metal

Grey  
Pink

**TWIST DRILLS IN PLASTIC BOXES**

**TWIST DRILLS IN ROUND PLASTIC BOXES, 19 PCS**



					Ref.	U.	CONTENT	€
BC2	DIN 338	HSS	118°		DR9380	19	Ø 1-10 x 0,50 mm	65,43
BC02	DIN 338	Plus	118°		DP9380	19	Ø 1-10 x 0,50 mm	73,34
BC5	DIN 338	HSSCo 5%	135°		DC9380	19	Ø 1-10 x 0,50 mm	109,08
BC18	TiN	HSS	118°		DT9380	19	Ø 1-10 x 0,50 mm	96,94
BC58	DIN 338	HSSCo 8%	135°		D89380	19	Ø 1-10 x 0,50 mm	148,35



**PLASTIC CASES WITH DIN 338 FULLY GROUND TWIST MICRO DRILLS FOR MODEL MAKING AND MARQUETRY**



Ref. DR9102

Ref. DC9120

			Ref.	U.	CONTENT	€
DR9120	DIN 338	HSS	DR9120	10	Ø 1-1,90 x 0,10 mm	25,16
DC9120	DIN 338	HSSCo 5%	DC9120	10	Ø 1-1,90 x 0,10 mm	37,95
DR9102	DIN 338	HSS	DR9102	15	Ø 0,30 - 0,35 - 0,40 - 0,45 - 0,50 - 0,55 - 0,60 - 0,65 - 0,70 - 0,75 - 0,80 - 0,85 - 0,90 - 0,95 - 1	50,47

**MIXED PLASTIC BOXES: METAL, CONCRETE & WOOD WORKING DRILLS**

**STANDARD SERIES**

<b>HSS</b> (Ref. BC2)  <b>CARBIDE TIPPED</b> (Ref. BW1)  <b>CV</b> (Ref. BM)				
				
				
<b>REFERENCE</b>	<b>EC9330</b>	<b>EC9331</b>	<b>EC9332</b>	
<b>QUANTITY</b>	8	9	9	
<b>QUALITY</b>	 	  	  	
<b>CONTENT</b>	Ø 4 - 5 - 6 - 8 mm x 2	Ø 4 - 6 - 8 mm x 3	Ø 5 - 6 - 8 mm x 3	
<b>PRICE €</b>	24,08	25,66	26,16	

\* Till end of stock

**PROFESSIONAL SERIES**

<b>HSSCo 5%</b> (Ref. BC5)  <b>CARBIDE TIPPED</b> (Ref. BW6)  <b>HSS</b> (Ref. BMPR)					
					
					
<b>REFERENCE</b>	<b>M9330</b>	<b>M9331</b>	<b>M9332</b>	<b>M9382</b>	
<b>QUANTITY</b>	8	9	9	18	
<b>QUALITY</b>	 	  	  	  	
<b>CONTENT</b>	Ø 4 - 5 - 6 - 8 mm x 2	Ø 4 - 6 - 8 mm x 3	Ø 5 - 6 - 8 mm x 3	Ø 3 - 4 - 5 - 6 - 8 - 10 mm x 3	
<b>PRICE €</b>	41,60	40,85	41,68	81,50*	

\* Till end of stock

**EXTRA PROFESSIONAL SERIES**

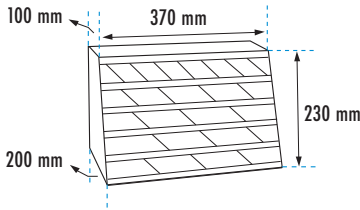
<b>HSSCo 5%</b> (Ref. BC5)  <b>CARBIDE TIPPED</b> (Ref. BW15)  <b>HSS</b> (Ref. BMPR)					
					
					
<b>REFERENCE</b>	<b>P9330</b>	<b>P9331</b>	<b>P9332</b>	<b>P9382</b>	
<b>QUANTITY</b>	8	9	9	18	
<b>QUALITY</b>	 	  	  	  	
<b>CONTENT</b>	Ø 4 - 5 - 6 - 8 mm x 2	Ø 4 - 6 - 8 mm x 3	Ø 5 - 6 - 8 mm x 3	Ø 3 - 4 - 5 - 6 - 8 - 10 mm x 3	
<b>PRICE €</b>	61,76*	56,36*	57,41*	114,71*	

\* Till end of stock

**DISPLAY CABINET FOR TWIST DRILLS DIN 338**

Twist drills for Metal

Grey



Ref. BC2

**DIN 338**

**HSS**



118°



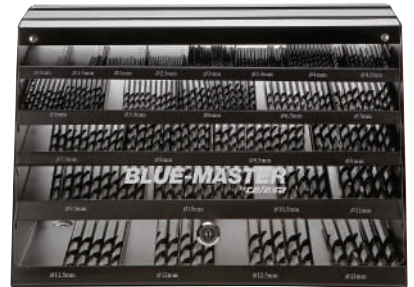
30° "N"



**OX**



70 Kg/mm²



**EXPBROCASBC2**

**1.287,80 €**



**HSS**

CONTENT 400 DRILLS

BC2 Drills

1,00	1,50	2,00	2,50	3,00	3,50	4,00	4,50	5,00	5,50	6,00	6,50	7,00
10	10	20	20	50	30	40	20	40	10	30	10	10
7,50	8,00	8,50	9,00	9,50	10,00	10,50	11,00	11,50	12,00	12,50	13,00	
10	20	10	10	10	10	5	5	5	5	5	5	



Ref. BC02

**DIN 338**

**HSS-G Plus**



118°



30° "N"



**OX GOLD**



70 Kg/mm²



**HSS-G Plus**



CONTENT 316 DRILLS

BC02 Drills

1,00	1,50	2,00	2,50	3,00	3,50	4,00	4,50	5,00	5,50	6,00	6,50	7,00
10	10	20	10	20	10	30	10	30	10	30	10	10
7,50	8,00	8,50	9,00	9,50	10,00	10,50	11,00	11,50	12,00	12,50	13,00	
10	20	10	10	10	10	6	6	6	6	6	6	

**EXPBROCASBC02**

**1.370,60 €**

**DISPLAY CABINET FOR TWIST DRILLS DIN 338**



**EXPBROCASBC5**

**1.782,40 €**



Ref. BC5

**DIN 338**

**HSSCo 5%**



**GOLD**



**HSSCo 5%**



CONTENT 220 DRILLS

BC5 Drills

<u>1,00</u> 10	<u>1,50</u> 10	<u>2,00</u> 10	<u>2,50</u> 10	<u>3,00</u> 10	<u>3,50</u> 10	<u>4,00</u> 10	<u>4,50</u> 10	<u>5,00</u> 10	<u>5,50</u> 10	<u>6,00</u> 10	<u>6,50</u> 10	<u>7,00</u> 10
<u>7,50</u> 10	<u>8,00</u> 10	<u>8,50</u> 10	<u>9,00</u> 10	<u>9,50</u> 10	<u>10,00</u> 10	<u>10,50</u> 5	<u>11,00</u> 5	<u>11,50</u> 5	<u>12,00</u> 5	<u>12,50</u> 5	<u>13,00</u> 5	



Ref. BC18

**DIN 338**

**HSS**



**HSS**

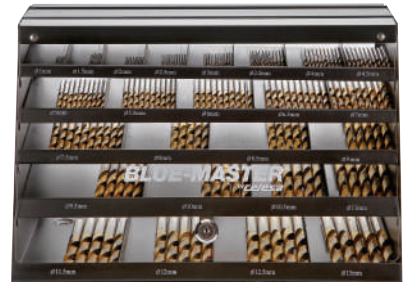
**TiN**



CONTENT 200 DRILLS

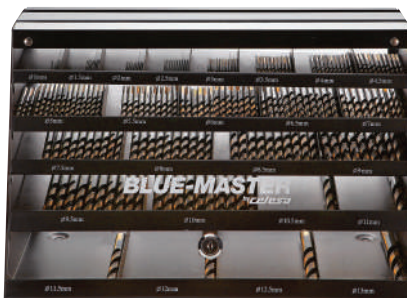
BC18 Drills

<u>1,00</u> 10	<u>1,50</u> 10	<u>2,00</u> 10	<u>2,50</u> 10	<u>3,00</u> 10	<u>3,50</u> 10	<u>4,00</u> 10	<u>4,50</u> 10	<u>5,00</u> 10	<u>5,50</u> 10	<u>6,00</u> 10	<u>6,50</u> 10	<u>7,00</u> 10
<u>7,50</u> 10	<u>8,00</u> 10	<u>8,50</u> 5	<u>9,00</u> 5	<u>9,50</u> 5	<u>10,00</u> 5	<u>10,50</u> 5	<u>11,00</u> 5	<u>11,50</u> 5	<u>12,00</u> 5	<u>12,50</u> 5	<u>13,00</u> 5	



**EXPBROCASBC18**

**1.323,45 €**



**EXPBROCASBC95**

**1.145,60 €**



Ref. BC95

**DIN 338**

**HSSCo 5%**



**OX GOLD**

**INOX**



**HSSCo 5%**

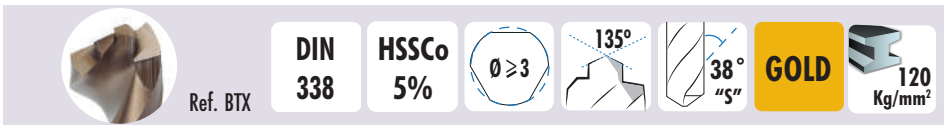


CONTENT 176 DRILLS

BC95 Drills

<u>1,00</u> 10	<u>1,50</u> 10	<u>2,00</u> 10	<u>2,50</u> 10	<u>3,00</u> 10	<u>3,50</u> 10	<u>4,00</u> 10	<u>4,50</u> 10	<u>5,00</u> 10	<u>5,50</u> 10	<u>6,00</u> 10	<u>6,50</u> 10	<u>7,00</u> 10
<u>7,50</u> 10	<u>8,00</u> 10	<u>8,50</u> 5	<u>9,00</u> 5	<u>9,50</u> 5	<u>10,00</u> 5	<u>10,50</u> 1	<u>11,00</u> 1	<u>11,50</u> 1	<u>12,00</u> 1	<u>12,50</u> 1	<u>13,00</u> 1	

## DISPLAY CABINET FOR TWIST DRILLS DIN 338



CONTENT 176 DRILLS

(Ø1-2,5mm) BC5 Drills (Ø3-13mm) BTX Drills

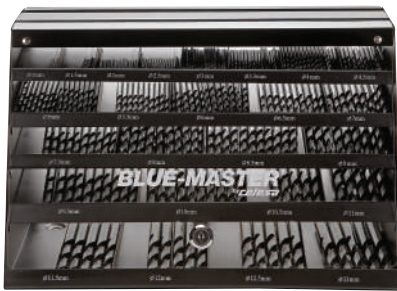
1,00	1,50	2,00	2,50	3,00	3,50	4,00	4,50	5,00	5,50	6,00	6,50	7,00
10	10	10	10	10	10	10	10	10	10	10	10	10
7,50	8,00	8,50	9,00	9,50	10,00	10,50	11,00	11,50	12,00	12,50	13,00	
10	10	5	5	5	5	1	1	1	1	1	1	

EXPBROCASBTX

103,90 €

EXPBROCASBTX

970,91 €



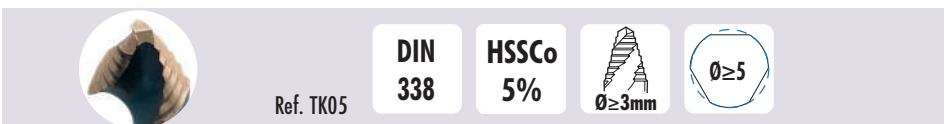
CONTENT 176 DRILLS

TK02 Drills

1,00	1,50	2,00	2,50	3,00	3,50	4,00	4,50	5,00	5,50	6,00	6,50	7,00
10	10	10	10	10	10	10	10	10	10	10	10	10
7,50	8,00	8,50	9,00	9,50	10,00	10,50	11,00	11,50	12,00	12,50	13,00	
10	10	5	5	5	5	1	1	1	1	1	1	

EXPBROCASTK02

1.724,78 €



CONTENT 176 DRILLS

TK05 Drills

1,00	1,50	2,00	2,50	3,00	3,50	4,00	4,50	5,00	5,50	6,00	6,50	7,00
10	10	10	10	10	10	10	10	10	10	10	10	10
7,50	8,00	8,50	9,00	9,50	10,00	10,50	11,00	11,50	12,00	12,50	13,00	
10	10	5	5	5	5	1	1	1	1	1	1	

EXPBROCASTK05

2.181,38 €



**TWIST DRILLS IN METAL CASE**



**DIN  
338**

\*125 DRILLS Ø 1-10 mm x 0,50

Ø	1	1,50	2	2,50	3	3,50	4	4,50
Units	10	5	10	5	10	5	10	5
	5	5,50	6	6,50	7	7,50	8	8,50
	10	5	10	5	5	5	5	5
	9	9,50	10	= 125 DRILLS				
	5	5	5					



REFERENCE	<b>BC2880</b>	<b>BC02880</b>	<b>BC5880</b>	<b>BC18880</b>	<b>M0880V</b>
QUANTITY	125	125	125	125	250
QUALITY	HSS	Plus	HSSCo 5%	HSS <b>TiN</b>	
CONTENT	Ø 1-10 x 0,50 DETAILED IN*	Ø 1-10 x 0,50 DETAILED IN*	Ø 1-10 x 0,50 DETAILED IN*	Ø 1-10 x 0,50 DETAILED IN*	EMPTY BOX
PRICE €	<b>410,78</b>	<b>460,47</b>	<b>679,99</b>	<b>563,93</b>	<b>159,26</b>



**DIN  
338**

\*155 DRILLS Ø 1-13 mm x 0,50

Ø	1	1,50	2	2,50	3	3,50	4	4,50	5
Units	10	5	10	5	10	5	10	5	10
	5,50	6	6,50	7	7,50	8	8,50	9	9,50
	5	10	5	5	5	5	5	5	5
	10	10,50	11	11,50	12	12,50	13	=155 DRILLS	
	5	5	5	5	5	5	5		



REFERENCE	<b>BC2881</b>	<b>BC02881</b>	<b>BC5881</b>	<b>BC18881</b>	<b>M0881V</b>
QUANTITY	155	155	155	155	290
QUALITY	HSS	Plus	HSSCo 5%	HSS <b>TiN</b>	
CONTENT	Ø 1-13 x 0,50 DETAILED IN*	Ø 1-13 x 0,50 DETAILED IN*	Ø 1-13 x 0,50 DETAILED IN*	Ø 1-13 x 0,50 DETAILED IN*	EMPTY BOX
PRICE €	<b>825,10</b>	<b>917,07</b>	<b>1.464,21</b>	<b>1.148,89</b>	<b>368,78</b>

**TAPER SHANK DRILLS IN METAL CASE**

**DIN  
345**

**HSS**



(Ref. BC11 drills)

REFERENCE	<b>MBC11-1</b>	<b>MBC11-2</b>
QUANTITY	10	10
QUALITY	HSS	HSS
CONTENT	Ø 14 - 15 - 16 - 17 - 18 - 19 - 20 - 21 - 22 - 23	Ø 14 - 16 - 18 - 20 - 22 - 24 - 25 - 26 - 28 - 30
PRICE €	<b>722,49</b>	<b>1.007,94</b>

## CUTTING SPEED AND FEED CHART FOR METAL DRILLING

			DIAMETER Ø (mm)											
			2	3	5	7	10	12	15	18	20	22	25	30
STEEL 70 kg/mm <sup>2</sup> BC2	C/S 25 m/min	RPM	3979	2653	1592	1137	796	663	531	442	398	362	318	265
		mm / rev	0,04	0,06	0,08	0,15	0,20	0,26	0,30	0,33	0,34	0,35	0,35	0,39
		S (mm / min)	159	159	127	171	159	172	159	146	135	127	111	103
HARDENED STEEL 120 kg/mm <sup>2</sup> BC5	C/S 13 m/min	RPM	2069	1379	828	591	414	345	276	230	207	188	166	138
		mm / rev	0,03	0,045	0,06	0,10	0,15	0,18	0,20	0,22	0,23	0,25	0,25	0,28
		S (mm / min)	62	62	50	59	62	60	55	51	48	47	41	39
STAINLESS STEEL BC50	C/S 11 m/min	RPM	1751	1167	700	500	350	292	233	195	175	159	140	117
		mm / rev	0,02	0,05	0,08	0,14	0,19	0,23	0,25	0,27	0,28	0,30	0,31	0,33
		S (mm / min)	35	58	56	70	67	67	58	53	49	48	43	39
ALUMINIUM BC16	C/S 50 m/min	RPM	7958	5305	3183	2274	1592	1326	1061	884	796	723	637	531
		mm / rev	0,03	0,06	0,08	0,16	0,20	0,23	0,25	0,28	0,29	0,30	0,30	0,36
		S (mm / min)	239	318	255	364	318	305	265	248	231	217	191	191
TITANIUM BC42	C/S 18 m/min	RPM	5570	3714	2228	1592	1114	928	743	619	557	506	446	371
		mm / rev	0,02	0,03	0,03	0,05	0,08	0,08	0,12	0,15				
		S (mm / min)	111	111	67	80	84	74	89	93				
CAST IRON BC7	C/S 25 m/min	RPM	3979	2653	1592	1137	796	663	531	442	398	362	318	265
		mm / rev	0,05	0,08	0,10	0,20	0,27	0,31	0,37	0,41	0,42	0,42	0,42	0,45
		S (mm / min)	199	199	159	227	215	206	196	181	167	152	134	119
BRASS BC66	C/S 50 m/min	RPM	7958	5305	3183	2274	1592	1326	1061	884	796	723	637	531
		mm / rev	0,04	0,07	0,08	0,17	0,21	0,25	0,28	0,28	0,30	0,30	0,33	0,40
		S (mm / min)	318	345	239	387	334	332	297	248	239	217	210	212
PLASTIC, CARBON FIBER BC7	C/S 12 m/min	RPM	1911	1274	764	546	382	318	255	212	191	174	153	127
		mm / rev	0,02	0,03	0,03	0,05	0,08	0,08	0,12	0,15				
		S (mm / min)	38	38	23	27	29	25	31	32				
NI ALLOYS BC42	C/S 30 m/min	RPM	4775	3183	1910	1364	955	796	637	531	477	434	382	318
		mm / rev	0,015	0,02	0,02	0,03	0,04	0,06	0,07	0,08	0,11	0,12	0,15	
		S (mm / min)	72	64	42	34	38	48	45	42	53	52	57	
CIRCUIT BOARDS BC79	25	RPM	3979	-	-	-	-	-	-	-	-	-	-	

## REMARKS:

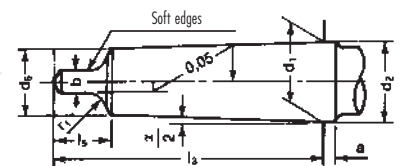
- If we know the drill diameter and workpiece material, the speed and feed are quickly found.

Example;

Material: Aluminium → RPM=2274 RPM  
 Ø drill: 7 mm. → S=364 mm/min

- After several holes you must adjust the speed and feed again.

## TECHNICAL INFORMATION ABOUT DIN 228D MORSE TAPER SHANK DIMENSIONS



MORSE TAPER	Thinning	$\varnothing_2$	$\alpha$	b h13	$d_1$	$d_2$ Ø max.	$d_3$ Ø min.	$d_7$ Ø max.	$l_3$ -1	$l_4$ Ø max. máx.	$l_5$ Ø max. máx.	$r_1$	$r_2$
0	1:19,212=0,05205	1°29 27"	3,0	3,9	9,045	9,2	6,1	6,0	56,5	59,5	10,5	4	1,0
1	1:20,047=0,04988	1°25 43"	3,5	5,2	12,065	12,2	9,0	8,7	62,0	65,5	13,5	5	1,2
2	1:20,020=0,04995	1°25 50"	5,0	6,3	17,780	18,0	14,0	13,5	75,0	80,0	16,0	6	1,6
3	1:19,922=0,05020	1°26 16"	5,0	7,0	23,825	24,1	19,1	18,5	94,0	99,0	20,0	7	2,0
4	1:19,254=0,05194	1°29 15"	6,5	11,9	31,267	31,6	25,2	24,5	117,5	124,0	24,0	8	2,5
5	1:19,002=0,05263	1°30 26"	6,5	15,9	44,399	44,7	36,5	35,7	149,5	156,0	29,0	10	3,0
6	1:19,180=0,05214	1°29 36"	8,0	19,0	63,348	63,8	52,4	51,0	210,0	218,0	40,0	10	4,0