botek

DEEP HOLE DRILLING SYSTEMS
SOLID CARBIDE TOOLS

Solid drilling heads
Type 12 / Type 64

Type 12

Type 64

Deep hole drilling tools, system BTA
with indexable inserts and guide pads
for solid drilling
Drilling range type 12: 28.50 – 74.99 mm
Drilling range type 64: 28.71 – 65.00 mm

Type 12

Drill tube type 25
1-start connection thread

Type 64

Drill tube type 45
4-start connection thread

botek advantages

1. High-performance tool due to high stability of the drill head body
2. Less spare parts needed due to reduced number of inserts and standardised guide pads
3. Trouble free adjusting of intermediate diameters possible by changing the stop plate (available in increments of 0.01mm) and using shims for the guide pads
4. Easy exchange of indexable inserts and guide pads.
   No need to adjust setting within +- 0.01mm diameter
5. Peripheral inserts with 2 cutting edges, centre inserts with 6 cutting edges
6. Easy assembly onto the drill tube with an open-end wrench
7. Various standard chip breakers for drilling a wide range of materials
8. Various combinations of carbide grades and coatings for inserts and guide pads
9. Drilling tolerance up to IT 8 is possible under favourable conditions
10. New chipbreaker design SP5 for general use and high feed rates

Type 12

Drilling range from – up to	Solid drilling head type 12		Drill tube type 25 with 1-start connection thead		
Ø (mm)	Drill head complete [1]	Drill head body [1]	Drill tube size	Drill tube dia. (Da)	Over all length (L)
28.50 - 29.99	12-05**-000	12-05**-110	05	24	63.1
30.00 - 31.99	12-06**-000	12-06**-110	06	26	63.1
32.00 - 33.99	12-07**-000	12-07**-110	07	28	63.1
34.00 - 36.99	12-08**-000	12-08**-110	08	30	79.1
37.00 - 39.99	12-09**-000	12-09**-110	09	33	80.2
40.00 - 43.99	12-10**-000	12-10**-110	10	36	81.2
44.00 - 46.99	12-11**-000	12-11**-110	11	39	81.2
47.00 - 51.99	12-12**-000	12-12**-110	12	43	88.5
52.00 - 56.99	12-13**-000	12-13**-110	13	47	90.5
57.00 - 60.99	12-14**-000	12-14**-110	14	51	95.5
61.00 - 67.99	99-121500-***	99-121501-***	15	56	98.8
68.00 - 74.99	99-121700-***	99-121701-***	17	62	104.9

[1] Exact order number on request

Spare parts type 12/type 64

Drilling range from – up to	Peripheral tip			Centre insert		Guide pads		
	Peripheral insert	Shim	Screw/key	Centre insert	Screw/key	Guide pad	Shim	Sc
Ø (mm)	[2]							
28.50 - 29.49	02-0870-315	42-0610-710	22-0600-831 (M3 x 10) 22-0600-935	22-0600-211	22-0600-820 (M2.5 x 8.2) 22-0600-925	10-0700-410/28	10-0700-419/S S: 0.025/0.05/0.1	22- (M 22-
29.50 - 29.99	02-0950-315	22-0600-710						
30.00 - 31.99						10-0700-410/30		
32.00 - 33.99	02-1050-315	22-0700-710				10-0700-410/32		
34.00 - 35.99				22-0800-211	22-0800-820 (M3 x 10.3) 22-0600-935	10-0800-410/34	10-0800-419/S S: 0.025/0.05/0.1	22- (M 22-
36.00 - 36.99						10-0800-410/36		
37.00 - 37.99	02-1200-315	22-0910-710	22-0900-831 (M4 x 12) 22-0900-935					
38.00 - 39.99						10-0800-410/38		
40.00 - 41.99				22-1000-211		10-0800-410/40		
42.00 - 43.99	02-1350-315	22-1030-710				10-0800-410/42		
44.00 - 45.99				22-1100-211		10-0800-410/44		
46.00 - 46.99						10-0800-410/46		
47.00 - 48.99	02-1550-315	22-1230-710	22-1200-831 (M5 x 14.2) 22-1200-935			10-1000-410/47	10-1000-419/S S: 0.025/0.05/0.1	22- (M3 22-
49.00 - 50.99						10-1000-410/49		
51.00 - 51.99	02-1650-315	22-1240-710				10-1000-410/51		
52.00 - 52.99				22-1300-211	22-1200-840 (M3.5 x 11.4) 22-0900-935			
53.00 - 54.99						10-1000-410/53		
55.00 - 56.99						10-1000-410/55		
57.00 - 58.99	02-1800-315	22-1340-710				10-1200-410/56	10-1200-419/S S: 0.025/0.05/0.1	22- (M3 22-
59.00 - 60.99						10-1200-410/59		
61.00 - 61.99	02-1900-315	22-1500-710	22-1500-831 (M6 x 17.5) 22-1500-935	22-1500-211	22-1500-820 (M3.5 x 14) 22-0900-935			
62.00 - 64.99						10-1200-410/62		
65.00 - 65.99						10-1200-410/65		
66.00 - 67.99	02-2150-315	22-1630-710				10-1500-410/67	10-1500-419/S S: 0.025/0.05/0.1	22- (M 22-
68.00 - 69.99								
70.00 - 70.99						10-1500-410/70		
71.00 - 72.99	02-2370-315	22-1630-710						
73.00 - 74.99						10-1500-410/73		

Type 64

Drilling range from – up to	Solid drilling head type 64		Drill tube type 45 with 4-start connection thead		
Ø (mm)	Drill head complete [1]	Drill head body [1]	Drill tube size	Drill tube dia. (Da)	Over all length (L)
28.71 - 31.00	64-06**-000	64-06**-110	06	26	73.1
31.01 - 33.30	64-07**-000	64-07**-110	07	28	74.1
33.31 - 36.20	64-08**-000	64-08**-110	08	30	74.1
36.21 - 39.60	64-09**-000	64-09**-110	09	33	83.2
39.61 - 43.00	64-10**-000	64-10**-110	10	36	85.2
43.01 - 47.00	64-11**-000	64-11**-110	11	39	93.4
47.01 - 51.70	64-12**-000	64-12**-110	12	43	90.5
51.71 - 56.20	64-13**-000	64-13**-110	13	47	96.5
56.21 - 60.60	64-14**-000	64-14**-110	14	51	102.5
60.61 - 60.99	64-15**-000	64-15**-110	15	56-1	105.7
61.00 - 65.00	99-641500-***	99-641501-***	15	56-1	105.7

[1] Exact order number on request

rew/key	Stop plate: Stop plate	Stop plate: Screw/key
-0610-840 2.5 x 5.9) -0600-925	01-2050-610-S...	01-0200-860 (M 2.5 x 4.4) 22-0600-925
-0800-840 M3 x 8.2) -0600-935		
-1200-840 3.5 x 11.4) -0900-935	01-2400-610-S...	21-0200-860 (M 2.5 x 4.7) 22-0600-925
-1200-840 3.5 x 11.4) -0900-935	01-3750-610-S...	21-0600-860 (M3 x 6.7) 22-0600-935
-1600-840 M5 x 15) -1200-935		

Available carbide grades and chip breakers

	Peripheral insert			Centre insert	Guide pads
	Chip breakers			Chip breakers	
Carbide grade	SP1	SP2	SP5	SP1	
P25	□	□	□	□	-
P25-B	■	■	■	■	-
P40	□	□	□	□	-
P40-B	■	□	■	■	-
K10	■	□	□	■	□
K10-B	■	□	□	■	□
P20	-	-	-	-	■
P20-B	-	-	-	-	□

■ On stock, □ On request, - Not available

Order example:

Solid drill head type 64
Diameter 45.00 mm: 64-1121-000-D45.00.
Please give carbide grades and chip breakers seperately.

[2] When ordering complete heads the peripheral insert will be with a corner radius (version -315). Peripheral inserts without this radius (version 02-…-310) are on request.

Open end wrench SW
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Technical information
for solid drill heads type 12 and 64

Type 12 and 64 are high-precision deep hole drilling tools with indexable inserts and guide pads for use on deep hole drilling machines with BTA (STS) drilling system.

Adjusting of tool diameter in increments of 0.01mm by changing inserts and putting a shim underneath the guide pads.

The tools do have an adjusting range within 0.25mm (..,00 - ..,24mm) (..,25 - ..,49mm) (..,50 - ..,74mm) (..,75 - ..,99mm). For the smallest diameter of each drilling range no guide pad shims are used.

Tools with adjusting range (..,00 - ..,24mm) are available in a few working days.

Adjustment of tools

Drill heads will be adjusted to the ordered drill diameter in-house. Stop plate thickness "S" is engraved into the drill head body (see below)

Procedure:

Tools can be adjusted in diameter by using guide pad shims and exchanging the stop plate. The maximum adjusting range is 0.25mm diameter.

The thickness of all guide pad shims must be exactly the same.

The exact drill head diameter D1 is adjusted by exchanging the stop plate.

The difference between D1 and D2 must be at least 0.02mm and at most 0.06mm. D1 should be always bigger as D2.

Example:

The drill head 64-1121-000 with D1 = 45.00 should be adjusted to D1 = 45.22 mm
Engraved in the head is a stop plate thickness S = 1.51 mm for a drill head diameter 45.00 mm.

For adjusting the drill head to the new diameter guide pad shims # 10-0800-4919/0.1mm thickness and a stop plate # 01-2050-610-S1.63 are used.

Stop plate system

When using identical tools with exactly the same drill head diameter, the thickness of the stop plate (dimension "S") can vary due to manufacturing tolerances of the milled drill head body.

The needed thickness "S" for the ordered drill head diameter is therefore engraved in the drill head body.

Stop plates are available in increments of 0.01mm.

Thickness "S" is engraved in the stop plate as well. When re-ordering, please state order number as well as the dimension "S" of the requested stop plate.

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DEEP HOLE DRILLING SYSTEMS
SOLID CARBIDE TOOLS

1264GB-0106-01

www.lacondesign.de

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Type 12

Drill tube type 25
1-start connection thread

Type 64

Drill tube type 45
4-start connection thread

Drilling range from – up to	Solid drilling head type 12		Drill tube type 25 with 1-start connection thead		
Ø (mm)	Drill head complete [1]	Drill head body [1]	Drill tube size	Drill tube dia. (Da)	Over all length (L)
28.50 - 29.99	12-05**-000	12-05**-110	05	24	63.1
30.00 - 31.99	12-06**-000	12-06**-110	06	26	63.1
32.00 - 33.99	12-07**-000	12-07**-110	07	28	63.1
34.00 - 36.99	12-08**-000	12-08**-110	08	30	79.1
37.00 - 39.99	12-09**-000	12-09**-110	09	33	80.2
40.00 - 43.99	12-10**-000	12-10**-110	10	36	81.2
44.00 - 46.99	12-11**-000	12-11**-110	11	39	81.2
47.00 - 51.99	12-12**-000	12-12**-110	12	43	88.5
52.00 - 56.99	12-13**-000	12-13**-110	13	47	90.5
57.00 - 60.99	12-14**-000	12-14**-110	14	51	95.5
61.00 - 67.99	99-121500-***	99-121501-***	15	56	98.8
68.00 - 74.99	99-121700-***	99-121701-***	17	62	104.9

Type 12

[1] Exact order number on request

Drilling range from – up to	Solid drilling head type 64		Drill tube type 45 with 4-start connection thead		
Ø (mm)	Drill head complete [1]	Drill head body [1]	Drill tube size	Drill tube dia. (Da)	Over all length (L)
28.71 - 31.00	64-06**-000	64-06**-110	06	26	73.1
31.01 - 33.30	64-07**-000	64-07**-110	07	28	74.1
33.31 - 36.20	64-08**-000	64-08**-110	08	30	74.1
36.21 - 39.60	64-09**-000	64-09**-110	09	33	83.2
39.61 - 43.00	64-10**-000	64-10**-110	10	36	85.2
43.01 - 47.00	64-11**-000	64-11**-110	11	39	93.4
47.01 - 51.70	64-12**-000	64-12**-110	12	43	90.5
51.71 - 56.20	64-13**-000	64-13**-110	13	47	96.5
56.21 - 60.60	64-14**-000	64-14**-110	14	51	102.5
60.61 - 60.99	64-15**-000	64-15**-110	15	56-1	105.7
61.00 - 65.00	99-641500-***	99-641501-***	15	56-1	105.7

Type 64

[1] Exact order number on request

botek advantages

1. High-performance tool due to high stability of the drill head body
2. Less spare parts needed due to reduced number of inserts and standardised guide pads
3. Trouble free adjusting of intermediate diameters possible by changing the stop plate (available in increments of 0.01mm) and using shims for the guide pads
4. Easy exchange of indexable inserts and guide pads.
   No need to adjust setting within +- 0.01mm diameter
5. Peripheral inserts with 2 cutting edges, centre inserts with 6 cutting edges
6. Easy assembly onto the drill tube with an open-end wrench
7. Various standard chip breakers for drilling a wide range of materials
8. Various combinations of carbide grades and coatings for inserts and guide pads
9. Drilling tolerance up to IT 8 is possible under favourable conditions
10. New chipbreaker design SP5 for general use and high feed rates

Spare parts type 12/type 64

Drilling range from – up to	Peripheral tip			Centre insert		Guide pads			Stop plate	
	Peripheral insert	Shim	Screw/key	Centre insert	Screw/key	Guide pad	Shim	Screw/key	Stop plate	Screw/key
Ø (mm)	[2] R									
28.50 - 29.49	02-0870-315	42-0610-710	22-0600-831 (M3 x 10) 22-0600-935	22-0600-211	22-0600-820 (M2.5 x 8.2) 22-0600-925	10-0700-410/28	10-0700-419/S S: 0.025/0.05/0.1	22-0610-840 (M2.5 x 5.9) 22-0600-925	01-2050-610-S...	01-0200-860 (M 2.5 x 4.4) 22-0600-925
29.50 - 29.99	02-0950-315	22-0600-710								
30.00 - 31.99						10-0700-410/30				
32.00 - 33.99	02-1050-315	22-0700-710				10-0700-410/32				
34.00 - 35.99				22-0800-211	22-0800-820 (M3 x 10.3) 22-0600-935	10-0800-410/34	10-0800-419/S S: 0.025/0.05/0.1	22-0800-840 (M3 x 8.2) 22-0600-935		
36.00 - 36.99						10-0800-410/36				
37.00 - 37.99	02-1200-315	22-0910-710	22-0900-831 (M4 x 12) 22-0900-935							
38.00 - 39.99						10-0800-410/38				
40.00 - 41.99				22-1000-211		10-0800-410/40				
42.00 - 43.99	02-1350-315	22-1030-710				10-0800-410/42				
44.00 - 45.99				22-1100-211		10-0800-410/44				
46.00 - 46.99						10-0800-410/46				
47.00 - 48.99	02-1550-315	22-1230-710	22-1200-831 (M5 x 14.2) 22-1200-935			10-1000-410/47	10-1000-419/S S: 0.025/0.05/0.1	22-1200-840 (M3.5 x 11.4) 22-0900-935	01-2400-610-S...	21-0200-860 (M 2.5 x 4.7) 22-0600-925
49.00 - 50.99						10-1000-410/49				
51.00 - 51.99	02-1650-315	22-1240-710				10-1000-410/51				
52.00 - 52.99				22-1300-211	22-1200-840 (M3.5 x 11.4) 22-0900-935					
53.00 - 54.99						10-1000-410/53				
55.00 - 56.99						10-1000-410/55				
57.00 - 58.99	02-1800-315	22-1340-710				10-1200-410/56	10-1200-419/S S: 0.025/0.05/0.1	22-1200-840 (M3.5 x 11.4) 22-0900-935		
59.00 - 60.99						10-1200-410/59				
61.00 - 61.99	02-1900-315	22-1500-710	22-1500-831 (M6 x 17.5) 22-1500-935	22-1500-211	22-1500-820 (M3.5 x 14) 22-0900-935				01-3750-610-S...	21-0600-860 (M3 x 6.7) 22-0600-935
62.00 - 64.99						10-1200-410/62				
65.00 - 65.99						10-1200-410/65				
66.00 - 67.99	02-2150-315	22-1630-710				10-1500-410/67	10-1500-419/S S: 0.025/0.05/0.1	22-1600-840 (M5 x 15) 22-1200-935		
68.00 - 69.99										
70.00 - 70.99						10-1500-410/70				
71.00 - 72.99	02-2370-315	22-1630-710								
73.00 - 74.99						10-1500-410/73				

Available carbide grades and chip breakers

	Peripheral insert			Centre insert	Guide pads
	Chip breakers			Chip breakers	
Carbide grade	SP1	SP2	SP5	SP1	
P25	□	□	□	□	-
P25-B	■	■	■	■	-
P40	□	□	□	□	-
P40-B	■	□	■	■	-
K10	■	□	□	■	□
K10-B	■	□	□	■	□
P20	-	-	-	-	■
P20-B	-	-	-	-	□

■ On stock, □ On request, - Not available

Order example:
Solid drill head type 64
Diameter 45.00 mm: 64-1121-000-D45.00.
Please give carbide grades and chip breakers seperately.

[2] When ordering complete heads the peripheral insert will be with a corner radius (version -315). Peripheral inserts without this radius (version 02-….-310) are on request.

Open end wrench SW
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