

# BORING

## Portable Magnetic Base Drilling Machine

### ATRA ACE quick auto

#### Model QA-4000 Non-CE

- Max. 40 mm dia. x 35 mm deep



## Fully automatic drilling for increased productivity and reduced cost

- Proven Automatic Technology

(self feeding, automatic return, load detection for speed and feed regulation)

#### Model QA-6500 Non-CE

- Max. 65 mm dia. x 50 mm deep

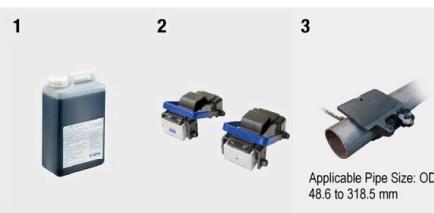


#### Specifications

Model	QA-4000			QA-6500	
Power Source (Single Phase)	110 - 120 VAC, 50/60 Hz			220 - 240 VAC, 50/60 Hz	
Electric Drill	Rated Power Consumption W	680			1010
	Rated Current A	6.1	3.0		4.5
	No-load Speed min <sup>-1</sup> (rpm)	750			400 / 750
Magnet Power Consumption W		50			75
Hole Capacity mm	Cutter	Hole Diameter	Plate Thickness	Hole Diameter	Plate Thickness
mm	One-touch Type JETBROACH 35L	17.5 to 40	9 to 35	17.5 to 40	9 to 35
	One-touch Type JETBROACH 50L	-	-	17.5 to 65	9 to 50
	One-touch Type HI-BROACH 25L	14 to 15 16 to 18	9 to 12 9 to 25	18 to 35	9 to 25
Min. Plate Thickness for Magnet Adhesion mm		9			9
Max. Stroke mm		75			88
Magnet Holding Power N(kgf)		6664 (680)			9800 (1000)
Magnet Dimensions mm		82 (W) x 172 (L)		100 (W) x 200 (L)	
Power Cord Length m		4	5		5
Mass (Weight) kg		18.5			26
Accessories Included		• Oil Tank • Cutting Oil 0.5L • Pilot Pin 08035 • Side Handle • 3 mm Hex Socket Screw Key	• 4 mm Hex Socket Screw Key • 8 x 10 mm Spanner • Chain • Tool Box	• Oil Tank • Cutting Oil 0.5L • Pilot Pin 08050 • Side Handle • 3 mm Hex Socket Screw Key	• 4 mm Hex Socket Screw Key • 8 x 10 mm Spanner • Chip Stopper • Chain • Tool Box

#### Optional Accessories

Ref. No.	PN	Description	Sales Unit	Applicable Model	
				QA-4000	QA-6500
1	TB01507	Cutting Oil 2L	1 piece	●	●
2	TB04374	Supporting Magnet Ass'y	1 set	●	●
3	TB07696	Pipe Attachment Ass'y	1 set	●	
		One-touch Type JETBROACH 35L	1 piece	●	●
		One-touch Type JETBROACH 50L	1 piece		●
		One-touch Type HI-BROACH 12L	1 piece	●	
		One-touch Type HI-BROACH 25L	1 piece	●	●



Applicable Pipe Size: OD 48.6 to 318.5 mm



# BORING

## Automatic Return

Once drilling is completed and the slug is ejected from the hole, the cutting bit is quickly retracted. This quick drill motor retraction allows the user to move onto the next hole more quickly.

## Built-in Motion Sensor

If any lateral movement or excess vibration is detected, both the drill and the feed motor stop. Nitto Kohki is the first company to incorporate this feature into magnetic base drills.

## Self Feeding & Load Detection

The feeding is controlled by an onboard microcomputer. The feed rate begins slowly and then increases to the appropriate speed for the cutter size and load condition. The load detector clearly shows the amount of resistance on the cutter at anytime.



## Step Feed

When cutting through difficult materials, the load sensor will automatically activate the Step Feed Program to help penetrate material.

## Limit Switch

The automatic drills of ATRA ACE utilize a limit switch that resets the machine when it retracts to the starting position after hole completion, and shuts down the motors in the event of an over-travel at the bottom of the stroke.

## Chip Breaker

This chip breaker prevents the cutter from becoming jammed with metal shavings.



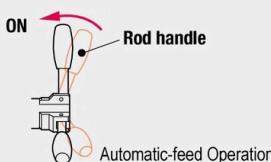
## Automatic-feed Hole-cutting Procedure



Align the pilot pin with the center punch mark of the hole to be drilled. Attach the machine to the beam with the proper safety chain and engage the magnet. Lower the drill down from the top limit switch location to the point of the pilot pin making contact with the material and engage the motor.

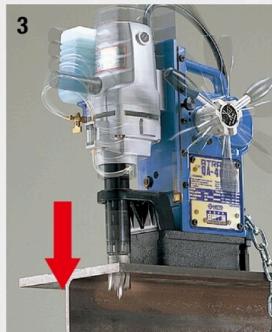


Engage the clutch by pushing the handles in towards the drill and the motor will begin feeding automatically.



ON Rod handle

Automatic-feed Operation



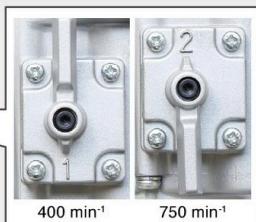
Slow start mechanism cuts smoothly through the mill scale. Then, speed and feed rate is controlled by the sensors to achieve efficient drilling.



After the hole is completed, the QA Series machines will quickly return and stop at the top of the stroke, ready for the next hole.

## Two Speed Selection (QA-6500)

Speed can be changed to suit the type and size of the cutter.



## One-touch Cutter Replacement

Replacement is quick and easy with our unique push fit self-centering cutter system.



Mounting the cutter



Removing the cutter

# BORING

## Annular Cutters

# JETBROACH CUTTERS & HI-BROACH CUTTERS

### BROACH CUTTERS are far better than twist drills

- No dead point
- Peripheral cutting
- Dramatically reduce cutting resistance
- Available diameter size: 12 - 100 mm

Test Drilling is very often the only way to determine the machinability of difficult materials.  
Use a small size cutter wherever possible in order to minimize trial costs.



### Specifications

		HI-BROACH One-touch Type/25L	HI-BROACH One-touch Type/50L	JETBROACH One-touch Type/25,35,50L	JETBROACH One-touch Type/50L(W)	JETBROACH One-touch Type/75L	JETBROACH Side lock Type/75L	
Hole Capacity mm	Hole Diameter	25L: 12 - 52 dia.	-	25L: 12 - 17 dia.	-	-	-	
		-	-	35L: 17.5 - 40 dia.	-	-	-	
	Plate Thickness	-	50L: 12 - 52 dia.	50L: 12 - 65 dia.	50L(W): 18, 22, 24 - 26.5, 28, 32, and 35 dia.	-	-	
		25L: 25	-	25L: 25	-	75L: 17.5 - 55 dia.	75L: 50 - 100 dia.	
Feed Speed mm/rev		0.02 - 0.1						
Circumferential Speed m/min		15 - 35 (mild steel)						
		35 - 50 (mild steel)						

HI-BROACH One-touch Type							
Depth	mm dia.	PN	ARA-100A	WA-3500	WA-5000	AO-5575A	QA-4000
12	TK00698						
13	TK00699						
14	TK00700	●	●	●			
15	TK00701	●	●	●	●		
16	TK00702	●	●	●	●		
17	TK00703	●	●	●	●		
17.5	TK01391	●	●	●	●		
18	TK01392	●	●	●	●	●	
19	TK01393	●	●	●	●	●	
19.5	TK01394	●	●	●	●	●	
20	TK01395	●	●	●	●	●	
21	TK01396	●	●	●	●	●	
21.5	TK01397	●	●	●	●	●	
22	TK01398	●	●	●	●	●	
22.5	TK01399	●	●	●	●	●	
23	TK01400	●	●	●	●	●	
23.5	TK01401	●	●	●	●	●	
24	TK01402	●	●	●	●	●	
24.5	TK01403	●	●	●	●	●	
25	TK01404	●	●	●	●	●	
26	TK01405	●	●	●	●	●	
27	TK01407	●	●	●	●	●	
28	TK01408	●	●	●	●	●	
29	TK01409	●	●	●	●	●	
30	TK01410	●	●	●	●	●	
31	TK01411	●	●	●	●	●	
32	TK01412	●	●	●	●	●	
33	TK01413	●	●	●	●	●	
34	TK01414	●	●	●	●	●	
35	TK01415	●	●	●	●	●	
36	TK01416	●	●	●			
37	TK01417	●	●				
38	TK01418	●	●				
39	TK01419	●	●				
40	TK01420	●	●				
41	TK01421	●	●				
42	TK01422	●	●				
43	TK01423	●	●				
44	TK01424	●	●				
45	TK01425	●	●				
46	TK01426	●	●				
47	TK01427	●	●				
48	TK01428	●	●				
49	TK01429	●	●				
50	TK01430	●	●				
51	TK01431						
52	TK01432						

HI-BROACH One-touch Type							
Depth	mm dia.	PN	ARA-100A	WA-3500	WA-5000	AO-5575A	Pilot Pin
12	TK00721					●	
13	TK00722					●	
14	TK00723	●	●			●	
15	TK00724	●	●	●		●	
16	TK00725	●	●	●		●	
17	TK00726	●	●	●		●	
18	TK00727	●	●	●		●	
19	TK00728	●	●	●		●	
20	TK00729	●	●	●		●	
21	TK00730	●	●	●		●	
22	TK00731	●	●	●		●	
23	TK00732	●	●	●		●	
24	TK00733	●	●	●		●	
25	TK00734	●	●	●		●	
26	TK00735	●	●	●		●	
27	TK00736	●	●	●		●	
28	TK00737	●	●	●		●	
29	TK00738	●	●	●		●	
30	TK00739	●	●	●		●	
31	TK00740	●	●	●		●	
32	TK00741	●	●	●		●	
33	TK00742	●	●	●		●	
34	TK00743	●	●	●		●	
35	TK00744	●	●	●		●	
36	TK00745	●	●	●		●	
37	TK00746	●	●	●		●	
38	TK00747	●	●	●		●	
39	TK00748	●	●	●		●	
40	TK00749	●	●	●		●	
41	TK00750	●	●	●		●	
42	TK00751	●	●	●		●	
43	TK00752	●	●	●		●	
44	TK00753	●	●	●		●	
45	TK00754	●	●	●		●	
46	TK00755	●	●	●		●	
47	TK00756	●	●	●		●	
48	TK00757	●	●	●		●	
49	TK00758	●	●	●		●	
50	TK00759	●	●	●		●	
51	TK00760						
52	TK00761						

JETBROACH One-touch Type							
Depth	mm dia.	PN	ARA-100A	LO-3550	WA-3500	WAJ-3200	AO-5575A
12	TK01148	●					
13	TK01149	●					
14	TK01150	●					
15	TK01151	●					
16	TK01152	●					
17	TK01153	●					
17.5	TK01249	●	●	●	●	●	●
18	TK01250	●	●	●	●	●	●
18.5	TK01251	●	●	●	●	●	●
19	TK01252	●	●	●	●	●	●
19.5	TK01253	●	●	●	●	●	●
20	TK01254	●	●	●	●	●	●
20.5	TK01255	●	●	●	●	●	●
21	TK01256	●	●	●	●	●	●
21.5	TK01257	●	●	●	●	●	●
22	TK01258	●	●	●	●	●	●
22.5	TK01259	●	●	●	●	●	●
23	TK01260	●	●	●	●	●	●
23.5	TK01261	●	●	●	●	●	●
24	TK01262	●	●	●	●	●	●
24.5	TK01263	●	●	●	●	●	●
25	TK01264	●	●	●	●	●	●
25.5	TK01265	●	●	●	●	●	●
26	TK01266	●	●	●	●	●	●
26.5	TK01267	●	●	●	●	●	●
27	TK01268	●	●	●	●	●	●
28	TK01269	●	●	●	●	●	●
29	TK01270	●	●	●	●	●	●
30	TK01271	●	●	●	●	●	●
31	TK01272	●	●	●	●	●	●
32	TK01273	●	●	●	●	●	●
33	TK01274	●	●	●	●	●	●
34	TK01275	●	●	●	●	●	●
35	TK01276	●	●	●	●	●	●
36	TK01277	●	●	●	●	●	●
37	TK01278	●	●	●	●	●	●
38	TK01279	●	●	●	●	●	●
39	TK01280	●	●	●	●	●	●
40	TK01281	●	●	●	●	●	●

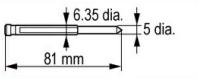
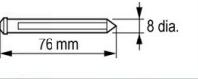
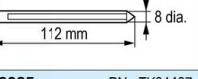
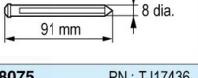
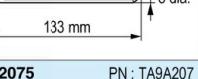
Sales Unit: 1 Piece

# BORING

JETBROACH One-touch Type		
Depth	mm dia.	PN
12	TK01154	ARA-100A
13	TK01155	LO-3550
14	TK01156	WA-3500
15	TK01157	WA-5000
16	TK01158	WOJ-3200
17	TK01159	AO-5575A
17.5	TK01282	QA-6500
18	TK01283	Pilot Pin
19	TK01284	06050
19.5	TK01285	
20	TK01286	
20.5	TK01287	
21	TK01288	
21.5	TK01289	
22	TK01290	
22.5	TK01291	
23	TK01292	
23.5	TK01293	
24	TK01294	
24.5	TK01295	
25	TK01296	
25.5	TK01297	
26	TK01298	
26.5	TK01299	
27	TK01300	
28	TK01301	
29	TK01302	
30	TK01303	
31	TK01304	
32	TK01305	
33	TK01306	
34	TK01307	
35	TK01308	
36	TK01309	
37	TK01310	
38	TK01311	
39	TK01312	
40	TK01313	
41	TK01314	
42	TK01315	
43	TK01316	
44	TK01317	
45	TK01318	
46	TK01319	
47	TK01320	
48	TK01321	
49	TK01322	
50	TK01323	
51	TK01324	
52	TK01325	
53	TK01326	
54	TK01327	
55	TK01328	
56	TK01329	
57	TK01330	
58	TK01331	
59	TK01332	
60	TK01333	
61	TK01334	
62	TK01335	
63	TK01336	
64	TK01337	
65	TK01338	

JETBROACH One-touch Type		
Depth	mm dia.	PN
50 mm	18	TK01068
	22	TK00622
	24	TK00623
	24.5	TK00631
	25	TK00624
	26	TK00625
	26.5	TK00632
	28	TK00626
	32	TK00627
	35	TK00628
75 mm	17.5	TK01350
	18	TK01351
	19	TK01352
	20	TK01353
	21	TK01354
	22	TK01355
	23	TK01356
	24	TK01357
	24.5	TK01358
	25	TK01359
	26	TK01360
	26.5	TK01361
	27	TK01362
	28	TK01363
	29	TK01364
	30	TK01365
	31	TK01366
	32	TK01367
	33	TK01368
	34	TK01369
	35	TK01370
	36	TK01371
	37	TK01372
	38	TK01373
	39	TK01374
	40	TK01375
	41	TK01376
	42	TK01377
	43	TK01378
	44	TK01379
	45	TK01380
	46	TK01381
	47	TK01382
	48	TK01383
	49	TK01384
	50	TK01385
	51	TK01386
	52	TK01387
	53	TK01388
	54	TK01389
	55	TK01390

JETBROACH Side-lock Type		
Depth	mm dia.	PN
50 mm	50	TK01433
	51	TK01434
	52	TK01435
	53	TK01436
	54	TK01437
	55	TK01438
	56	TK01439
	57	TK01440
	58	TK01441
	59	TK01442
	60	TK01443
	61	TK01444
	62	TK01445
	63	TK01446
	64	TK01447
	65	TK01448
	66	TK01449
	67	TK01450
	68	TK01451
	69	TK01452
	70	TK01453
	71	TK01454
	72	TK01455
	73	TK01456
	74	TK01457
	75	TK01458
	76	TK01459
	77	TK01460
	78	TK01461
	79	TK01462
	80	TK01463
	81	TK01464
	82	TK01465
	83	TK01466
	84	TK01467
	85	TK01468
	86	TK01469
	87	TK01470
	88	TK01471
	89	TK01472
	90	TK01473
	91	TK01474
	92	TK01475
	93	TK01476
	94	TK01477
	95	TK01478
	96	TK01479
	97	TK01480
	98	TK01481
	99	TK01482
	100	TK01483

Pilot Pin		
06025	PN : TK01167	
08025	PN : TK01486	
06050	PN : TK01166	
08050	PN : TK01488	
12075	PN : TJ17436	
12075	PN : TA9A207	

Sales Unit: 1 Piece



## BROACH HOLDERS



163 mm  
BHM-02035



182 mm  
BHM-03050



248 mm  
BHM-13075



232 mm  
BHM-14075

### Specifications

Morse Taper No.	M.T.No.2		M.T.No.3						M.T.No.4	
Model	BHM-02035		BHM-03050						BHM-13075 BHM-14075	
PN	TB00390		TB00392						TB00352 TB00354	
Cutter	HBO-25L	JBO-35L	HBO-25L	HBO-50L	JBO-35L	JBO-50L	JBO-50L(W)	JBS-75L		
Cutter Diameter	12 - 17 dia.	17.5 - 35 dia.	17.5 - 40 dia.	12 - 17 dia.	17.5 - 52 dia.	12 - 18 dia.	19 - 52 dia.	17.5 - 40 dia.	17.5 - 65 dia.	18 - 35 dia.
Pilot Pin	06025	08025	08035	06025	08025	08050	08035	08050	08050	12075
	Optional		Optional						Included	
	Included		Included						Optional	

HBO: HI-BROACH One-touch Type

JBO: JETBROACH One-touch Type

JBS: JETBROACH Side-lock Type