MARVIN & CASLER COMPANY

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Other Codes Used
Western Union
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Manufacturers of Boring Heads and Chucks

Products

BORING HEADS
BORING BARS
CENTER INDICATORS
DRILL CHUCKS

Boring Head

Style "A" boring head is designed for use on turret lathes, milling machines, drill presses and other machine tools where holes made with an ordinary drill are not quite true. It can also be used to advantage where accurate recessing and counterboring is to be done.

The use of our boring head on a milling machine makes the boring of accurate parallel holes in duplicate parts an easy operation, with only one setting of the work.

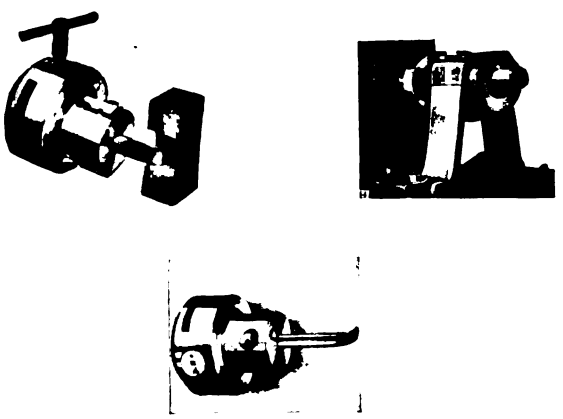

FIG. 1. BORING HEADS WITH BORING BARS

to the end of the machine tool spindle. This results in a limited overhang and a maximum tool space between the work and the chuck. (3) Tool shanks can extend through the drill chuck and into the hollow spindle of the machine; this is sometimes desirable when movement of the table is limited by reason of large work. (4) When the offset plate is brought against a stop the chuck is concentric with the machine spindle and is ready to receive regular twist drills for starting holes. (5) The drill chuck will hold round, hexagon or octagon tools with shanks of varying diameters within the limits of its capacity. (6) Tools with special shanks are unnecessary. Ordinary round shank tools, such as are used for boring on the lathe, can be used without change in shape. (7) Boring bars, with inserted high speed

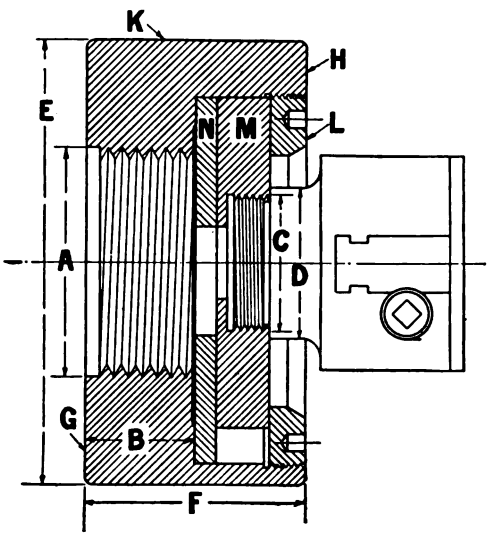

FIG. 2. SECTION THROUGH BORING HEAD

Description

The style "A" boring head combines in one tool all the essentials for boring and counterboring holes to size. It is rigid and compact and can be quickly adjusted to cover a wide range of work.

It is designed to be threaded to the nose of the machine tool spindle, and we prefer to see it so mounted, if possible, although it can be mounted on a taper shank to fit the spindle, if desired. When threaded to the nose of the spindle it is possible to get its full value for heavy work, especially when used with our special boring bars for long hole work.

The style "A" boring head consists of a cylindrical cast iron body "K" (Fig. 2) threaded at "A" to fit the machine spindle or a taper shank. A circular offset plate "M" is held against the face of body "K" by means of the gib ring "L". Offset plate "M" is threaded to receive the drill chuck or boring bar and rotates with the head, but is adjustable across its face by means of a screw which is graduated to .001 in. (0,03 mm.). This construction gives the following advantages: (1) The micrometer screw makes possible a close, accurate adjustment for any tool which may be carried by the offset plate. (2) The drill chuck is brought close

cutters, can be used in place of drill chuck. (8) When the adjustable tool boring bar (Fig. 3) is used in place of the drill chuck, it affords a substantial boring device for deep hole work, free from chatter, and strong enough to remove the stock as fast as could be done in a heavy lathe or boring machine. To thread the head at "A" remove the graduated dial by lifting it from the screw, using two screwdrivers, one on either side. After taking out adjusting screw, remove gib ring "L", sliding plate "M", and key plate "N". Then clamp the surface "H" against a true running face plate and center it, using an indicator against the outside surface "K". The diameter "A" can then be bored and threaded true with the head.

If distance "B" is greater than the length of the projecting end of the milling machine spindle to which the boring head is to be fitted, stock can be removed from surface "H", bringing the drill chuck closer to the end of the machine spindle.

If the boring head is to be mounted on a taper shank, the distance "B" can be reduced to ¾ or ⅜ in. (19 or 10 mm.), depending upon the size of the head.

TABLE I. BORING HEADS

No.	A (Range of width x depth)			B		C		D		E		F		Offset		Capacity drill chuck		Code words	
	in.		mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	Including chuck and bar	Including chuck only
30	1¼-2 x1 5/16	2- 3 x1	32- 51x33	51- 76x25	1 5/16	33	1¼	32	1½	38	3 7/8	98	2 13/16	71	5/16	8	½	13	DRALL	DABIR
40	1½-2½x1 3/8	2½-3½x1 1/4	38- 64x35	64- 89x29	1 3/8	35	1 5/8	41	2	51	4½	114	3	76	3/8	10	¾	19	DRENK	DIDNT
60	1¾-3½x1 5/8	3½- 5 x1 ¼	44- 89x41	89-127x32	1 5/8	41	2 3/8	60	2 7/8	73	6 1/8	156	3 3/8	86	1/2	13	1	25	DRILP	DUGEW
80	2¼-4½x1 7/8	4½- 6 x1 ½	57-114x48	114-152x38	1 7/8	48	2 3/8	60	3 3/4	95	7 3/4	197	3 13/16	97	5/8	16	1	25	DROST	DELOY
100	2¼-5½x2	5½- 7 x1 ½	57-140x51	140-178x38	2	51	3	76	4 3/4	121	9½	241	4 1/4	105	3/4	19	1½	38	DRUCK	DONAC

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Adjustable Tool Boring Bar

This boring bar is designed for use in style "A" boring head. The drill chuck is removed from the head and the bar is threaded into the offset plate. When the bar is in position to bring the cutting tool in line with the offset movement, it is clamped tight with a nut.

The cutting tool is placed in the hole at the end of the boring bar and wedge is driven into the hole at the side of bar against the flat part of the cutter. The cutter is flatted on both sides so that by adjusting cutters holes of different diameters may be bored.

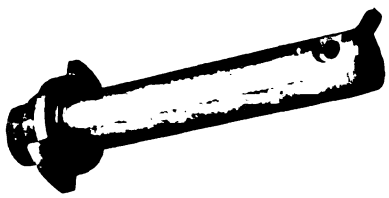


FIG. 3. ADJUSTABLE TOOL BORING BAR

TABLE II. BORING BARS

(1) Fits head No.	30	40		60 and 80			100			
(2) Bar diameter.....in.	1	1	1 1/2	1 1/2	2	2	1 1/2	2	3	3
mm.	25	25	38	38	51	51	38	51	76	76
(3) Will bore hole, depth in.	6	6	9	9	12	15	9	12	15	18
mm.	152	152	229	229	305	381	229	305	381	457
(4) Will bore—from.....in.	1 1/16	1 1/16	1 9/16	1 9/16	2 1/16	2 1/16	1 9/16	2 1/16	3 1/16	3 1/16
mm.	27	27	40	40	52	52	40	52	78	78
(5) to.....in.	2 1/8	2 1/4	3 5/8	3 7/8	5	5	4 3/8	5 1/2	8 1/8	8 1/8
mm.	54	57	92	98	127	127	111	140	206	206
(6) Catalogue No.	306	406	409	609	612	615	109	112	115	118
(7) Code word	BARAB	BAREF	BARIN	BAROS	BARUK	BARYL	BARBA	BARTY	BARLI	BARNE

Extra cost for high speed steel cutters or extra cutters.

TABLE III. BORING BAR CUTTERS

(1) Catalogue No.	1001	1002	1003	1503	2001	2002	2003	3001	3002
(2) Fits bar, diam.....in.	1	1 & 1 1/2	1 & 1 1/2	1 1/2	2	2	2	3	3
mm.	25	25 & 38	25 & 38	38	51	51	51	76	76
(3) Length of tool.....in.	1 13/32	2 3/32	2 27/32	3 1/2	2 27/32	3 1/2	4 3/16	4 3/16	4 7/8
mm.	36	53	72	89	72	89	106	106	124
(4) Code word	MONZA	MONTY	MONSU	MONDI	MONLO	MONVE	MONAB	MONIX	MONEW

Boring Tools

These tools are intended for use in the drill chuck, which is a part of the boring head. They are forged from hexagon bar steel, and shaped so that they can be reground until the cutting point reaches the shank diameter. The hexagon shape insures a firm grip by the chuck.

Nos. 3A, 3B, 3C and 3D will fit No. 30 head or larger.
No. 4E will fit No. 40 head or larger.
No. 6F will fit No. 60 head or larger.

TABLE IV. BORING TOOLS

(1) No.	3A	3B	3C	3D	4E	6F
(2) Diam. shank in. (mm.)	1/4 (6)	3/8 (10)	3/8 (10)	1/2 (13)	3/4 (19)	1 (25)
(3) Bore—from in. (mm.)	5/16 (8)	3/4 (19)	1 1/16 (27)	1 3/4 (44)	2 3/8 (60)	3 1/4 (83)
to....in. (mm.)	1 (25)	1 5/8 (41)	2 5/16 (59)	3 (76)	3 7/8 (98)	5 1/4 (133)
(4) Code word	TOELS	TOESK	TOAMB	TOACH	TOADT	TOAPF

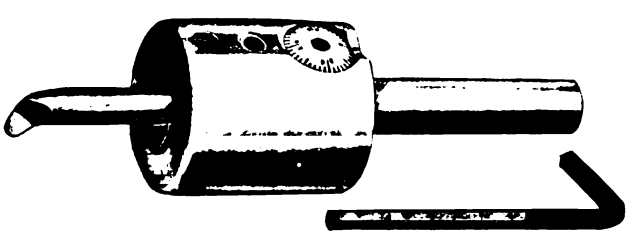


FIG. 4. SMALL SIZE BORING HEAD

Small Size Boring Heads

In order to meet the demand for a small size boring head, we have brought out our style C. Note, we eliminate the chuck, substituting the V block and hollow set screws. Head is fitted with micrometer adjustable screw graduated to read .001 in. (,003 mm.).

TABLE V. SMALL SIZE BORING HEAD

(1) Diameter of body.....in. (mm.)	1 3/8	35
(2) Length of body including chuck.....in. (mm.)	1 5/8	41
(3) Diameter of shank.....in. (mm.)	1/2	13
(4) Capacity for drills or tool shanks.....in. (mm.)	5/16–3/8	5–10
(5) Offset.....in. (mm.)	1/8	3
(6) Code word	BORED	

The Rotary Center Indicator

The rotary center indicator is an instrument designed to indicate quickly and accurately the center or axis of any rotating spindle or shaft. Small, compact and strongly built, it is a positive, accurate tool, particularly valuable to those engaged in laying out and boring holes in jigs, tools and machine parts.

The accuracy of the device may be tested by means of a micrometer. In such a test, which is sensitive to 1/10000 in. (0.003 mm.), it may be necessary to run the spindle at a low speed if the spindle bearings are worn or the machine is gear driven; otherwise the vibration of the spindle destroys the accuracy of the device.

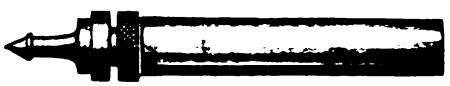


FIG. 5. ROTARY CENTER INDICATOR

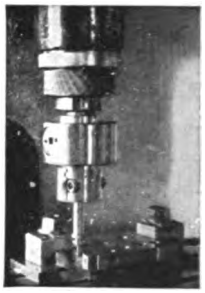


FIG. 6. ROTARY CENTER INDICATOR IN USE

Twin Screw Drill Chuck

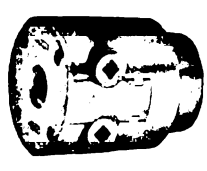
The Casler twin screw drill chuck was designed to meet the demand for a rugged, strong, gripping, accurate drill chuck. It is made of the best materials obtainable. The body is reinforced by a steel cap plate which absolutely prevents it from spreading when under strain. A secondary screw doubles the grip on the drill and permits it to be crowded to the limit of its strength.

When using the chuck, the primary screw is first operated to grip the drill shank between the jaws on one side.

The secondary screw is then operated, and the jaws grip the drill shank on the opposite side, holding it firmly.

In addition, this drill chuck has the following advantages: (1) It has strong gripping power. Large screws on both sides of drill shank enable this chuck to double the gripping power of a single screw chuck. It prevents the shank from turning, and hence, from being cut or marred—an occurrence which often makes it necessary to scrap the drill or turn down the shank. (2) The secondary screw relieves strain on primary screws; this results in giving both screws a longer life. (3) The capacity of the chuck is from 0 to rated size. All sizes hold a No. 80 drill. (4) Body is of close-grain iron. Jaws and screws are high carbon steel tempered. Combination of cast iron and steel gives long life to wearing surface of body, jaws and screws. (5) Body is reinforced by steel cap plate, which prevents it from spreading under strain. (6) Wrench is made from special alloy steel. (7) Extreme accuracy: all parts are machined within close limits, and every operation checked with limit gauges. (8) All parts are interchangeable.

Made in three sizes: No. 8, capacity 0 to ½ in. (0 to 13 mm.); code word: DECOS; No. 12, capacity 0 to ¾ in. (0 to 19 mm.); code word: DOFAV; and No. 16, capacity 0 to 1 in. (0 to 25 mm.); code word: DAKIX.



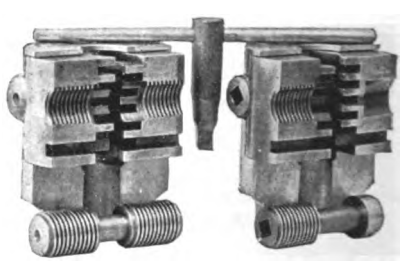


FIG. 7. TWIN SCREW DRILL CHUCK

TABLE VI. ACCESSORIES

(1) Morse taper shanks to fit chucks Nos. 8, 12 and 16		(3) Repair parts	
(2) Morse taper number	Code word	(4) Name	Code word
1	TAPRE	(5) Jaws	SCRAB
2	TASCH	(6) Secondary screw	SCRIL
3	TAKST	(7) Primary screw	SCREX
4	TAKUM	(8) Wrench	SCRUM
5	TARSA		

Note: Always specify chuck for which shank is intended.

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