

MICRO BORING AND FACING HEADS



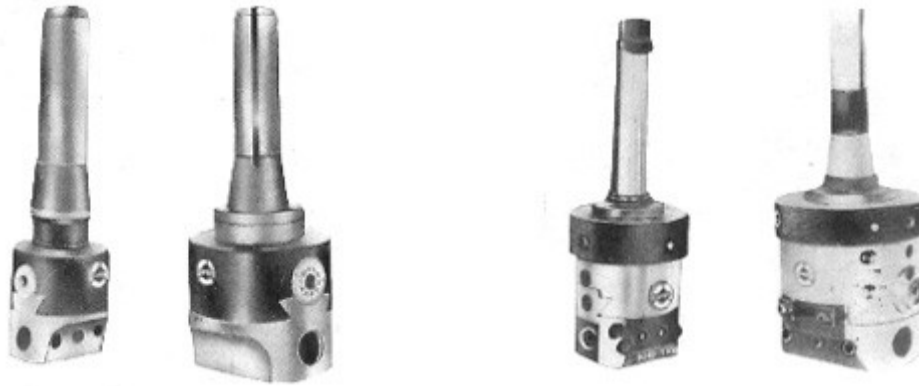
500 Facing operation is started by pressing the retaining pin. By doing so, the feed control collar is coupled with the retaining ring, the rotation of which is arrested by the stop rod. Each of the 12 pressed in push buttons provide a feed of 0.02mm (0.008") per revolution. The pre-set stop, upon reaching the stop pin, automatically disengages the cross feed. Rapid return is effected manually by the quick - setting screw with the aid of T-Wrench. For cylindrical turning or boring, the work diameter is set by means of quick setting screw in conjunction with the graduated fine-setting screw. After setting, the slide should be locked in position. Taper turning and taper threading can be carried by engaging the cross feed of the head in conjunction with the axial feed of the machine spindle.



When threading on machines with lead screws, the threading Tool is moved out by means of the fine setting screws and retracted by reversing the machine.

260 Facing operation is started by pressing the feed button. The self-actir cross feed is actuated by rotating the head and stopping the retaining ring with the stc rod. By means of an adjustable stop the cross slide is set for any desired travel. Upon reaching this stop, the cross slide is automatically disengaged. Whilst the spindle continues rotating the button for return movement is pressed causing the slide to return at ten times the facing feed, to its starting position as fixed by a second stop. Coarse or fine settings for cylindrical turning and boring are performed by means of the graduated collar. The slide maybe locked. Taper turning is effected by combining the cross feed of the head with axial feed of the machine.

162 This head is for boring, facing and recessing. The tool slide has an automatic movement which is actuated by holding the knurled ring either by hand or by a rod which can be screwed into the ring. The head is designed for right-hand operatic Facing slide movement is from centre outwards. After completing the facing work, return the slide is to be done manually with an Alien key. The tool holder has two tool positions for use on different work diameters. While boring, the slide or the tool holder is to be locked by means of lock screw to make it vibration-free. But this lock screw should positively be released while facing.



AN INTRODUCTION TO 202 & 203 SERIES BORING HEADS

These widely known ELMECA 202 & 203 Series Boring Heads are readily adapted on many machines. An important feature of these heads is the threaded back which can be fitted with interchangeable Shanks. All Elmeea boring heads have a clearly graduated lead screw of heat treated tool steel with threads ground from solid. AFTER HARDENING.

Since, space is usually an important factor, the overall length of These Boring Heads is held to minimum. This feature has the further advantage of contributing to greater tool rigidity which in turn assures a smoother, more accurately bored hole. The generous bearing surface of these heads makes possible heavy roughing cuts, and more accurate finish cuts.

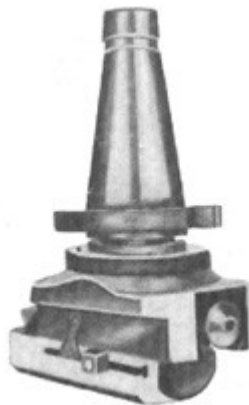
Another important feature is the large adjustment range. This often eliminates off set bars and special set ups. Since the graduation are widely spaced and easy to read, adjustments of 0.0005 and less are easily made. All parts subject to wear are hardened to guarantee long life and continued accuracy.

200 Provided with one fixed cam for feed rate and one adjustable cam the same. Automatic end release and rapid return by hand.

300 Provided with one fixed cam and two adjustable cam for Feed rate with automatic end release and rapid return by hand.

MICRO BORING AND FACING HEADS

An ideal tool with which it is possible to carry out operations like facing, Boring, Turning, Recessing, Undercutting forming and provided the machines are equipped with lead screws for a suitable axial feed, combined with the cross feed of the head, taper turning and threading is possible. Thus the range of application of Boring mills, Radial drills, Lathes, Milling machines, Jig Borers, Transfer Units and other machine tools can be gradually increased by the application of our universal Boring and Facing Heads.



An ideal tool for milling, drilling and boring machines - and especially for big but precise work. This boring head has been provided with automatic trip-off mechanism which makes it convenient for facing the bottoms of blind holes or surfaces which have stepped collars. Facing mechanism starts actuation when the mechanism is put

to the 'on' position and the knurled ring is kept-steady either by hand or by a lever. The facing is always done from centre outward. The return is manually accomplished with the help of an Allen key. Three vertical holes and one horizontal hole have been provided to accommodate the boring bars to suit various diameters.

The feed mechanism is totally enclosed and there is no risk of clogging up of parts which have important functions. Tool slide is adjustable to ensure consistent high accuracy.

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TECHNICAL DATA FOR SERIES MICRO BORING AND FACING HEAD!

Models No.	4037	4038	4039	4040	4041	4042	4043	4044
Sizes	260	400	400S	500	500S	800	800S	1200
Accessories								
Boring Bars	3	3	3	3	3	3	3	3
Boring Bars Holders	2	4	4	4	4	4	4	3
Clamping Sleeves	4	5	5	5	5	5	5	6
HSS Tool Bits	2	2	2	2	2	2	2	2
Draw-in-Screw	-	1	1	1	1	1	1	1
Reinforcement Rings	-	5	5	5	5	5	5	5
Instruction Manual	1	1	1	1	1	1	1	1
Shanks to suit Boring Heads	MT-3	MT-5	MT-5	MT-5	MT-5	MT-6	MT-6	MT-6
	MT-4	MT-6	MT-6	MT-6	MT-6	ISO-50	ISO-50	ISO-60
	MT-5	ISO-40	ISO-40	ISO-40	ISO-40	Metric	Metric	M100
	ISO-30	ISO-60	ISO-60	ISO-60	ISO-60	80	80	
	ISO-40	Metric	Metric	Metric	Metric	100	100	
	ISO-50	50.80	50.80	50.80	50.80			
	M1TR	100	100	100	100			

Models No.	4045	4046	4047	4048	4049	4050	4051	4052
Sizes	260	400	400S	500	500S	800	800S	1200
Operation								
Operating Accuracy	±0.005	±0.005	±0.005	±0.005	±0.005	±0.005	±0.005	±0.005
Boring & Facing Range	260	400	400	500	620	800	920	1200

Boring & facing Range	48	50	80	80	110	140	210	210
Max. adjustability of slide	48	50	80	80	110	140	210	210
Self acting slide	0.551	0.02	0.02	0.02	0.02	0.02	0.02	0.05
Feed per revolution		0.24	0.24	0.24	0.24	0.24	0.24	0.6
1Graduation of sensitive adjustments on Ø / Revolution	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
1Revolution of sensitive adjustments on Ø	1.0	0.4	0.4	0.4	0.4	0.2	0.2	0.2
Quick return per revolution on Ø	1	6	6	6	6	6	6	6
Quick Dia of per revolution on Ø Max dia of slide	85	115	142	142	170	223	299	323
Diameter of tool post holes	18	22	22	22	22	30	30	38
Height of head without shank	81	128	128	128	128	190	190	200
Weight of head in Kgs	2.2	6.5	7.5	9	9.5	19	22	50
Max allowable speed RPM	800	600	600	600	600	600	600	500

TECHNICAL DATA											
Models	Boring Cap. mm	Outside Dia body mm	Dia of tool bore mm	Slide displacement mm	Adjustment Per Division on Dia	Adjustment Per Division on Dia	Height without shank mm	Weight without shank kg.	Built in surface feed Revolution	Maximum speed.	
202	100	50	12	16	0.04	0.00080	65			1000	
203	200	75	18	30	0.02	0.002	80			1000	
200	100	59.91	12.7	18	0.127	0.0127	69.95			1000	
300	200	81.91	19.05	28	0.127	0.0127	94.99			700	
350	350	150	18	60	0.04	0.004	100	7.0	0.1	700	
162	162	70	12	22	0.01	0.01	70.5	1.8	0.083	1000	
			Collets								
90	90	119	4 to 25	25	0.01	0.001	98	4.2		700	
Shanks			ISO-60, ISO-50, ISO-40 MT-6, MT-5, MT-4, MT-3, MT-2 M1TR								