

AUTOMATIC BORING CUM FACING HEADS



BORING HEAD

- Set Consists of the following
- 1 Boring Head Dia 68mm
 - 2 ISO 40 shank
 - 3 2pc 12mm carbide Brazed tools

CHARACTERISTIC

Automatic Boring and Facing Head Designed with simplicity of construction and operation in mind, This Boring head is very rigid in construction, with very little backlash in the tool carrier due to extra large slide ways. Has a Boring capacity of 250mm. Takes 12mm boring tool sizes.

TECHNICAL DATA

Ordering No.	Boring Head Dia.	Overall Length	Centre Distance Between Hole	Cross Hole Size \varnothing	Offset	Boring Capacity Minimum	Boring Capacity Maximum	Mounting Thread	SHANKS	Automatic feed	Net. Weight Kg.
	mm	mm	mm	mm	mm	mm	mm				
171200	68	72	12	12	25	12	225	24x2	R8 or ISO 40	I	2.700

AUTOMATIC BORING CUM FACING HEAD

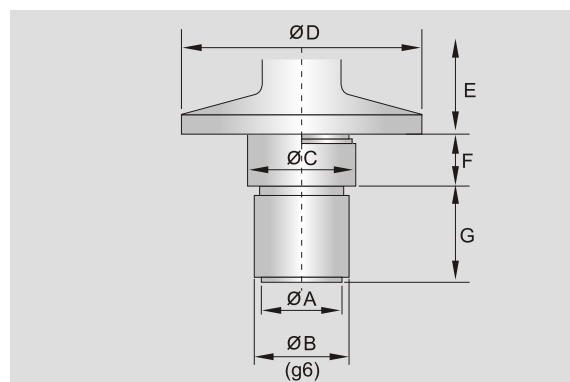
ADAPTABLE SHANKS:- The adaptable shank is interchangeable on both types of boring heads of the same size. It is generally supplied with the equipment taking into account the specifications indicated at time of the order, but it can also be made by the user with the aid of the following table which gives the adaptable points of the shank in the body of the equipment.

TECHNICAL DATA

Size of the heads	A	B		C		D		E		F		G	
		Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm
60 Metric	18/150 ISO	3/4	19	29/32	23	1-23/32	42	3/8	9.5	3/8	9.5	15/16	24
90 Metric	24/200 ISO	1	25	1-7/16	36	2-5/16	58	17/32	13.1	17/32	13	15/16	24

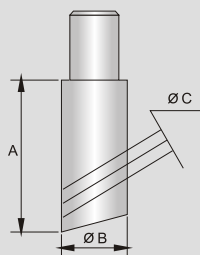
Machining tolerances

18 a 30 g6	{ -0.007 mm	-30 á 50 g6	{ -0.009 mm
	- 0.020 mm		- 0.025 mm



TOOL EXTENSION:- According to the supply or the option chosen, refer to the table on page A 14 concerning the characteristics. The same size boring heads of both types use the tool extensions whose dimensions figure below. It is also possible for us to supply special tool extensions as well as boring bars which hold the tool extensions.

TECHNICAL DATA

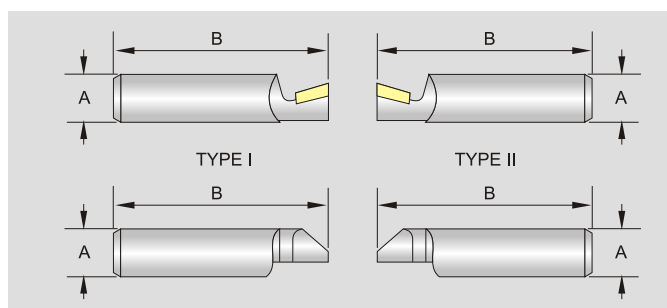


Size of the heads	Tool No.	Length	A		B		C +0.0	
			Inch	mm	Inch	mm	Inch	mm
60 Metric	018	short	3-3/8	85	3/4	20	5/16	8.10
90 Metric	604	short	1-3/4	45	1-5/32	29	3/8	10.10
90 Metric	605	medium	3	75	1-5/32	29	3/8	10.10
90 Metric	606	long	4-3/16	105	1-5/32	29	3/8	10.10

TOOL BITS:- These tools are supplied on option and are mounted in the tool extensions described above.

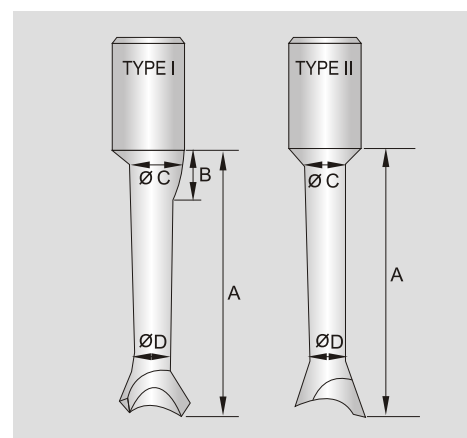
TECHNICAL DATA

Size of the heads	Tool No.	Type	Ø A 0 - 0.05		B		Capacity in boring Surfacing	
			Inch	mm	Inch	mm	Inch	mm
60 Metric	201	I	5/16	8	1-7/16	36	1-1/2 to 5	Ø 40 á 125
60 Metric	202	II	5/16	8	1-7/16	36	9 to 10	Ø 220 á 250
90 Metric	500	I	3/8	10	1-3/4	45	2 to 7	Ø 50 á 170



BORING TOOLS:- These tools supplied on option can be used on all types of heads of the same size.

TECHNICAL DATA



Size of the heads	Tool No.	Type	A		B		C		D		Bore Ø		Surfacing	
			Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm
	251	I	1-9/16	40	3/4	20	5/32	3.6		2.6	3/16 to 5/16	5 á 8	3	78
	252	I	1-29/32	48	9/16	15	1/4	6	3/16	4.5	5/16 to 9/16	8 á 15	3-5/16	82
60 Metric	253	I	2-3/16	55	3/8	9	3/8	9	1/4	6.5	9/16 to 1	15 á 25	3-3/8	85
	254	I	2-1/2	62	9/32	7	7/16	11	5/16	8	1 to 1-9/16	25 á 40	3-9/16	90
	255	I	2-9/16	65			9/16	14	7/16	11.5	3/16 to 1/2	30 á 50	3-3/4	95
	450	I	1-1/2	38			3/16	5	5/32	4	1/2 to 3/4	5 á 12	4-9/16	115
	451	I	2-3/8	59			3/8	10	1/4	6	1/2 to 3/4	12 á 20	4-3/4	120
90 Metric	452	I	3	77			5/8	16	9/16	14	3/4 to 2	20 á 50	4	125
	453	II			3	73	5/8	16	9/16	14	1 to 5-3/16	25 á 130		
	351	I	2-3/4	70	9/16	13	3/8	10	1/4	6	3/8 to 4-3/8	10 á 110		

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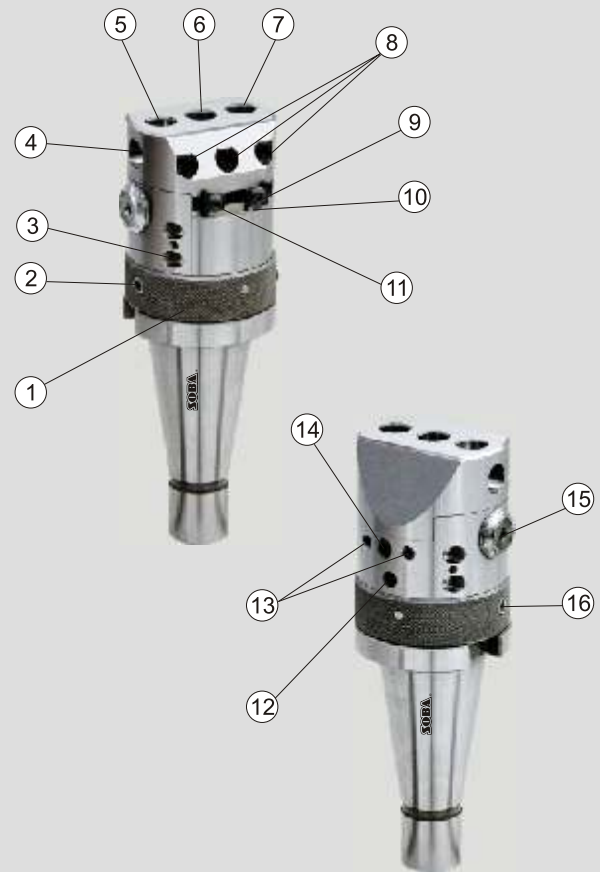
CHARACTERISTIC

These heads are designed in two sizes 60-90. By using the automatic movement of the carriage they enable precise boring work to be undertaken in all simplicity as well as facing surfaces and recessing (e.g. grooves). For the latter jobs, the stopping of the tool carriage can be controlled by an adjustable position stop which enables repetitive operations to be undertaken without having to reset the dimensions. When in the manual control mode in both translation movements, the stop can also be used without resorting to reading the vernier. The position of the tool carriage is thus obtained precisely with automatic advance and with manual advance which enables the tool to be withdrawn when the adjustable stop is reached.

Automatic Boring and Facing Heads have been designed for simplicity of construction and operation, particular attention being paid to maximum rigidity and freedom from backlash in the tool carriage which is mounted on extra large slide ways. The Automatic Boring and facing Head incorporates basically of a solid cylindrical body fitted with an appropriately shaped shank for mounting to the machine tool spindle.

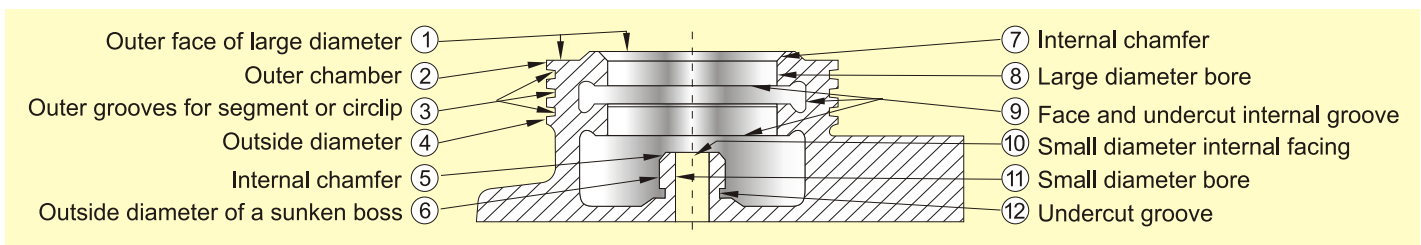
The body incorporates generously proportioned dovetail sideways which contain the tool carriage. The tool carriage which traverses radially may be controlled manually whilst the machine spindle is stationary. Alternatively, automatic traverse movement may be imparted to the tool carriage whilst the machine spindle rotates. This flexibility of operation permits a wide range of machining operations to be carried out without resorting to special tooling arrangements. Such operations as-boring, turning of bosses, facing surfacing bosses or bores, inner or outer grooving operations as for circlips chamfering etc., fall readily within the scope of this attachment.

The adjustable stops limit the carriage displacements in both directions, when manually controlled and in the feed direction in automatic motion. The Automatic Boring and Facing Heads are high precision attachments which are equally at home on delicate and accurate tooling work, as on quantity production operations. All parts are made of chromium-nickel steel, heat treated and ground including the thread and the control screw.



1. Automatic feed knurled ring
2. Automatic feed retractable cam (hexagon hole)
3. Lubrication point
4. Fixed hole for boring bar for extra large bore
5. Hole for fixing boring bar for small bore
6. Hole for fixing boring bar for normal bore
7. Hole for fixing boring bar for larger bore
8. Screw for clamping boring bar
9. Adjustable stop for manual retract
10. Pin for automatic feed stop
11. Adjustable stop for automatic feed
12. Lock screw for shank
13. Adjusting screws for tool carriage
14. Locking screw for tool carriage
15. Adjustable vernier
16. Fixed cam for automatic feed (round hole)

Examples of work which can be performed with automatic boring & facing heads heads with an adjustable stop.



This example resumes the majority of work that can be undertaken with the head without having to move the part being machined.

AUTOMATIC BORING CUM FACING HEAD

Examples of fitting tool on the automatic boring and facing Head Type 90° with an adjustable stop



**Diameters
5 - 50 mm**



**Diameters
50 - 110 mm**



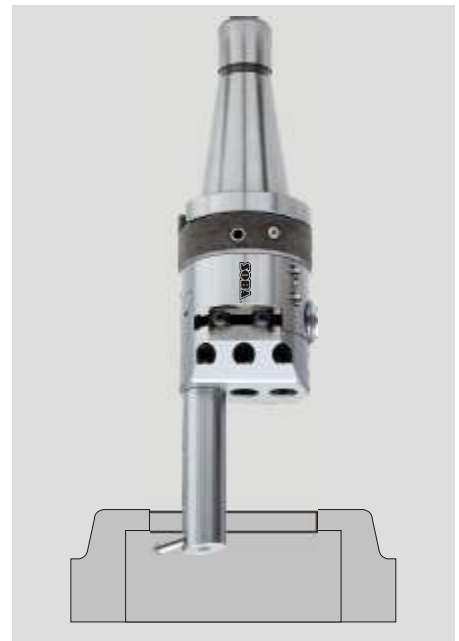
**Diameters
110 - 170 mm**



**Making of a very small diameter bore (carriage locked)
Tool shaped to requirements**



**Making of internal groover
(Automatic feed)
Adjustable stop**



**Truing of an internal face
(Automatic feed)
Adjustable stop**

AUTOMATIC BORING CUM FACING HEAD

BORING HEAD



**Diameters
170 - 230 mm**



**Diameters
290 - 350 mm**



**Turning of bore
(carriage locked)
Truing of top & bottom faces
(Automatic feed)
Possibility of an adjustable stop**

TECHNICAL DATA

Ordering No.	Dia of Body		Total Head Height		Minimum Cap		Max Cap		Tool Shank Dia (H7)		Distance Between Tool Housaxes		Minimum Carriage Movement (Radial)		Radial Movement for one Graduation of the Vernier		Automatic Feed (Radial) for Rev	No of Tool Position for Vertical tool	Net. Weight Kg.
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm					
171220	2-3/8	60	3-1/8	78.5	1/8	3	10	250	1/2	12	23/32	18	3/4	20	.0004	0.01	0.05-0.10	3	2.50
171240	3-9/16	90	4	100	3/16	5	14	350	3/4	20	1	25	1-3/16	30	.0004	0.01	0.05-0.10-0.15	3	6.50

The equipment is delivered in a wooden box with the extension and the keys. The accessories available on option such as tool bits, boring tools and adaptating shanks.



Size of Wooden Boxes with Tools

Ø	L		W		H		Total weight Kg.
	Inch	mm	Inch	mm	Inch	mm	
60	10	260	5	143	6	145	3
90	14	360	7	180	7	175	7