

HARDINGE® ADAPTIVE GUIDE BUSHING COLLETS FOR CITIZEN SWISS TURNING CENTERS.

The high cost of ground stock leads some shops to turn to a newer type of guide bushing, the adaptive guide bushing, which permits the use of less costly unground stock.

The Citizen adaptive guide bushing system uses air pressure to open and close the guide bushing collet as the size of material being machined changes. Hardinge manufactures double-angle adaptive guide bushing collets in cooperation with Citizen Machinery America for use in Citizen machines that have the adaptive guide bushing kit installed. The design permits bar stock variation of ± 0.003 " (.0762mm) to accommodate unground stock.

Customers have reported that they can hold 0.0005" (.0127mm) TIR all day with no further adjustment once the bushing is set.



All Hardinge Swiss-type collets are ground to precise size and TIR to meet precision machining requirements with a standard accuracy that rivals the industry!

Brochure H-2384 Hardinge Inc.

- Premium material and heat treat process
- Superior surface finish
- Accuracy to 0.0005" (.0127mm) TIR
- Accommodates ± 0.003 " (.0762mm) unground stock variation



Adaptive Guide Bushing Collets by Hardinge

COLLET PART NO.

97Z-1102 (20mm) for Citizen L720, M20 and A20 type 7
.157-.787" (4-20mm) capacity

97Z-1653 (32mm) for Citizen M32 and A32
.236-1.259" (6-32mm) capacity

To order Adaptive Guide Bushing Collets from Hardinge call 800-843-8801 with the information listed below.

(A Citizen Adaptive Guide Bushing Kit must be installed in your machine to permit use of the adaptive guide bushing collets.)

Bar Size _____ Bar Tolerance _____ (± 0.003 max)
Bar Material _____ Machine Model _____



CITIZEN MACHINERY AMERICA INC

in partnership with Hardinge Inc.

Citizen Adaptive Guide Bushing Kits are available for new machine orders and can also be retrofitted in some existing machines. Call Citizen at 201-818-0100 for more information.

KIT PART NO.

GB-L720-0000
GB-M220-0000
GB-M332-0000
GB-A332-0000
GB-A220-0000

CITIZEN MACHINE

L720
M20
M32
A32
A20 type 7



Hardinge Tooling Guide for Citizen Swiss Turning Centers

Machine Builders' Model No.	HEADSTOCK COLLET		CARBIDE BUSHING		ADAPTIVE	PICK-OFF COLLET		DRILL SLEEVE COLLET		ROTARY TOOL COLLET		
	Collet Model No.	Hardinge Part No.	Bushing Model No.	Hardinge Part No.	Guide Bushing*	Collet Model No.	Hardinge Part No.	Collet Model No.	Hardinge Part No.	Collet Model No.	Hardinge Part No.	
A16	TF20	4611	O201	4639	—	TF20	4611	ER11	1911	ER11	1911	
A20	TF25	4613	TD25NS	4659	97Z-1102	TF25	4613	ER11 ER16	1911 1913	ER16	1913	
A32	TF37SP	OA	TD32	4653	97Z-1653	TF37SP	OA	ER16	1913	ER16	1913	
B12	TF16	4609	SD125R	4633	—	—	—	TF8 ER11	4701 1911	ER11	1911	
B12 I	TF16	4609	SD125R	4633	—	—	—	ER11	1911	—	—	
B12 II	TF16	4609	SD125R	4633	—	—	—	ER11	1911	ER8	2093	
B12 V	TF16	4609	SD125R	4633	—	TF16	4609	ER11	1911	—	—	
B12 VI	TF16	4609	SD125R	4633	—	TF16	4609	ER11	1911	ER8	2093	
BL12	BL12	—	—	—	—	—	—	ER11 ER16	1911 1913	—	—	
B20	TF25	4613	TD25NS	4659	—	TF25	4613	TF8 ER11	4701 1911	ER11	1911	
B20 I	TF25	4613	TD25NS	4659	—	—	—	ER16	1913	—	—	
B20 V	TF25	4613	TD25NS	4659	—	TF25	4613	ER16	1913	—	—	
C16	TF20	4611	O201	4639	—	TF20	4611	ER11	1911	ER11	1911	
C32	TF37SP	OA	TD32	4653	—	TF37SP	OA	ER16	1913	ER16	1913	
D10	TF15	4607	TD10	4631	—	—	—	TF8	4701	—	—	
D16	TF25	4613	TP20	OA	—	—	—	TF12	OA	—	—	
E16	TF25	4613	O201	4639	—	TF25	4613	ER16	1913	ER11	1911	
E16J	TF25	4613	O201	4639	—	TF25	4613	TF8 ER16	4701 1913	0136 ER11	OA	9311
E216	TF25	4613	O201	4639	—	TF25	4613	ER16	1913	ER12 ER16	OA	1913
E220	TF25	4613	TSD20	4645	—	TF25	4613	ER16	1913	ER12 ER16	OA	1913
E225 & E25J	TF30	4615	CD25	4651	—	TF30	4615	ER16	1913	ER12 ER16	OA	1913
E32	TF37SP	6900M	TD32	4653	—	TF37SP	OA	ER16	1913	ER12 ER16	OA	1913
E32 IV	TF37SP	OA	TD32	4653	—	TF37SP	OA	ER16	1913	ER11 ER16	OA	1913
E32K	TF37	4619	TD32	4653	—	TF37	4619	TF10 ER16	4703 1913	ER12 ER16	OA	1913
E232	TF37	4619	TD32	4653	—	TF37	4619	ER16	1913	ER12 ER16	OA	1913
F10	TF15	4607	TD10	4631	—	—	—	TF8	4701	—	—	
F12	TF16	4609	SD125R	4633	—	TF16	4609	TF8 ER16	4701 1913	0136	OA	
F16	TF25	4613	O201	4639	—	TF25	4613	TF8 ER16	4701 1913	0136	OA	
F20	TF25	4613	TSD20	4645	—	TF25	4613	TF10 ER16	4703 1913	TF8 ER16	4701 1913	1913
F25	TF30	4615	CD25	4651	—	TF30	4615	TF10 ER16	4703 1913	TF8 ER16	4701 1913	1913
FL32	TF37SP	OA	—	—	—	TF37SP	OA	ER20 ER25	1915 2095	ER11/16/20	1911/13/15	
G16	TF25	4613	O201	4639	—	—	—	TF8	4701	—	—	
K16	TF20	4611	O201	4639	—	TF20	4611	ER11 ER16	1911 1913	ER11	1911	
L10	TF15	4607	TD10	4631	—	TF8	4701	TF8	4701	TF8	4701	
L16	TF25	4613	O201	4639	—	—	—	TF8 ER16	4701 1913	—	—	
L16 V	TF25	4613	O201	4639	—	TF25	4613	TF8 ER16	4701 1913	—	—	
L16 VI	TF25	4613	O201	4639	—	TF25	4613	TF8 ER16	4701 1913	ER16	1913	
L20	TF25	4613	TD25NS	4659	—	TF25	4613	ER16	1913	ER16	1913	
L20 I & III	TF25	4613	TD25NS	4659	—	—	—	ER16	1913	ER11 ER16	OA	1913
L20VII	TF25	4613	TD25NS	4659	—	TF25	4613	ER16	1913	ER11 ER16	OA	1913
L25	TF30	4615	CD25	4651	—	TF30	4615	ER16	1913	ER16	1913	
L32	TF37SP	OA	TD32	4653	—	TF37SP	OA	ER16	1913	ER12 ER16	OA	1913
L520	TF25	4613	TD25NS	4659	97Z-1102	TF25	4613	ER16	1913	ER16	1913	
L720	TF25	4613	TD25NS	4659	97Z-1102	TF25	4613	ER16	1913	ER16	1913	
M12	TF16	4609	SD125R	4633	—	TF16	4609	ER11 ER16	1911 1913	TF8 ER16	4701 1913	1913
M16	TF20	4611	O201	4639	—	TF20	4611	ER11 ER16	1911 1913	TF8 ER11	4701 OA	OA
M20	TF25	4613	TD25NS	4659	97Z-1102	TF25	4613	TF8 ER16	4701 1913	0136 TF8	OA	4701
									ER11 ER16	1911 1913		
M32	TF37SP	OA	TD32	4653	97Z-1653	TF37SP	OA	ER16	1913	ER11 ER16	OA	1913
R04	TF8	4701	PD4	4675	—	TF8	4701	ER8	2093	ER8	2093	
R07	TF15	4607	TD7	OA	—	TF15	4607	ER8	2093	ER8	2093	

OA = On Application - may be available as a special.

* Adaptive Guide Bushings permit the use of unground stock - Machine kit required from Citizen.



Hardinge Inc. One Hardinge Drive | P.O. Box 1507 | Elmira, New York 14902-1507 USA

USA: 800-843-8801 | Canada: 800-468-5946 | Fax: 607-734-3886

To Order Online: www.shophardinge.com | Corporate Homepage: www.hardinge.com | E-mail: info@hardinge.com | Live Online Support: www.shophardinge.com

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