

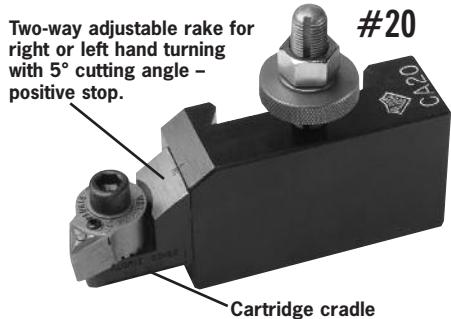
# UNIVERSAL TOOL HOLDERS #20, #30, #22

FOR RIGHT OR LEFT HAND TURNING, FACING, CHAMFERING AND BORING (#22)

A unique design for models #20 & #30 holders provides for many angular turning, contouring and chamfering operations. The cartridge has 12 indexing positions at 15° intervals. See illustration below.

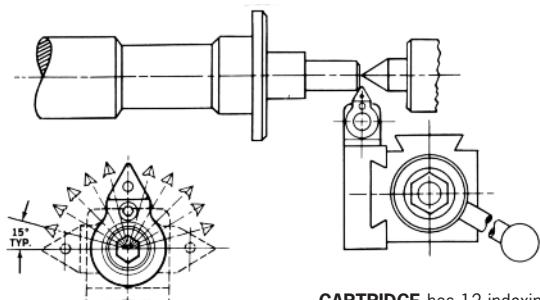
The model #22 with its two dovetail design leads to a wide range of applications by permitting front and rear turning, contouring, boring and facing operations.

All holders assure proper cutting edge and clearance angles at all indexing points.



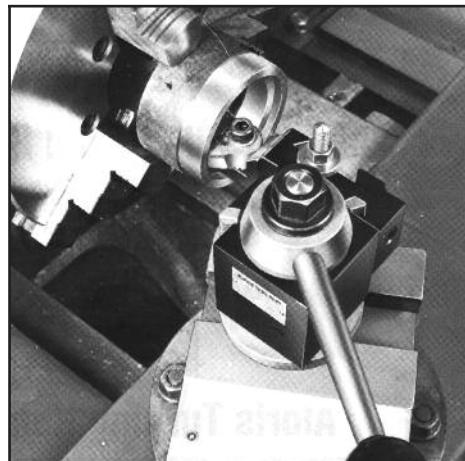
Tool Steel Cartridge adjusts every 15° for right or left hand turning, facing or chamfering. 12 positive lock positions. Exclusive positive lock with 2-way force holding insert down and tight against shoulder. Standard triangular carbide insert has 6 cutting edges.

## ILLUSTRATIONS SHOW WHAT ONE SINGLE TOOL CAN ACCOMPLISH

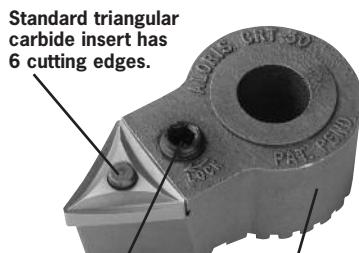


PICTORIAL DIAGRAM OF CARTRIDGE

CARTRIDGE has 12 indexing positions at 15° intervals. This means many angular turning and chamfering jobs can be done faster and easier.



## CARTRIDGE CRT-20, CRT-30, CRT-40 UNITS



Exclusive positive lock with 2-way force holding insert down and tight against shoulder.

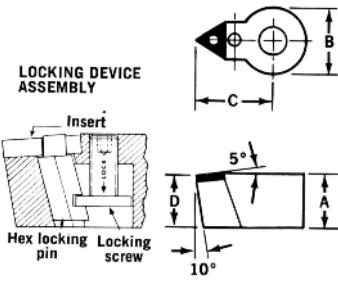
Tool Steel Cartridge adjuster every 15° for right or left hand turning facing or chamfering. 12 positive lock positions.

Can be easily adapted on bars, other special tools, to meet any customer's specifications. Cartridges can be supplied separately or combined with cartridge cradle.

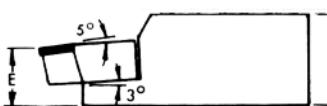
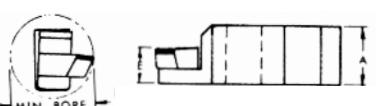
CARTRIDGE ORDER #	DIMENSIONS				INSERT SIZE	
	A	B	C	D	I.C.	THICK
CRT-20*	5/8	1"	1 1/8	9/16	3/8	1/8 - 3/16
CRT-30*	7/8	1 1/4	1 13/16	25/32	1/2	3/16 - 1/4
CRT-40*	1"	1 1/4	1 13/16	15/16	5/8	1/4 - 5/16

Choose from carbide style TNMS, TNMP, or TNMG. See page 38.

Cartridge CRT-30 and CRT-40 are interchangeable.



# ORDERING INFORMATION FOR #20, #30, #22

	AXA SERIES	BXA SERIES	CXA SERIES	CA SERIES	DA SERIES	EA SERIES
<b>UNIVERSAL TOOL HOLDER #20</b> Holder supplied as shown less insert.						
	ORDER # AXA-20	ORDER # BXA-20	ORDER # CXA-20	ORDER # CA-20		
	"A" DIM. = 1 1/2	"A" DIM. = 1 3/4	"A" DIM. = 2"	"A" DIM. = 2 1/2		
	"E" DIM. = 1 1/8	"E" DIM. = 1 3/16	"E" DIM. = 1 1/8	"E" DIM. = 1 3/4		
<b>REPLACEMENT PARTS</b>						
<b>CARTRIDGES</b> 	ORDER # CRT-20*	ORDER # CRT-20*	ORDER # CRT-20*	ORDER # CRT-20*		
<b>CRADLE</b> 	ORDER # CC-20*	ORDER # CC-20*	ORDER # CC-20*	ORDER # CC-20*		
<b>LOCK SCREW</b> 	ORDER # LS-20*	ORDER # LS-20*	ORDER # LS-20*	ORDER # LS-20*		
<b>HEX LOCKING PIN</b> 	ORDER # LP-20*	ORDER # LP-20*	ORDER # LP-20*	ORDER # LP-20*		
<b>HEIGHT ADJUSTMENT ASSEMBLY</b> 	ORDER # AXA-HA*	ORDER # BXA-HA*	ORDER # CXA-HA*	ORDER # CA-HA*		
<b>UNIVERSAL TOOL HOLDER #30</b>				ORDER # CA-30	ORDER # DA-30	ORDER # EA-30
				"A" DIM. = 2 1/2	"A" DIM. = 2 3/4	"A" DIM. = 3
				"E" DIM. = 1 7/8	"E" DIM. = 1 15/16	"E" DIM. = 2 3/16
<b>REPLACEMENT PARTS</b>						
<b>CARTRIDGES</b> 				ORDER # CRT-30*	ORDER # CRT-30*	ORDER # CRT-40*
<b>LOCK SCREW</b> 				ORDER # LS-30*	ORDER # LS-30*	ORDER # LS-40*
<b>HEX LOCKING PIN</b> 				ORDER # LP-30*	ORDER # LP-30*	ORDER # LP-40*
<b>HEIGHT ADJUSTMENT ASSEMBLY</b> 				ORDER # CA-HA*	ORDER # DA-HA*	ORDER # EA-HA*
<b>UNIVERSAL TURNING &amp; BORING HOLDER #22</b>	ORDER # AXA-22	ORDER # BXA-22	ORDER # CXA-22	ORDER # CA-22	ORDER # DA-22	ORDER # EA-22
	"A" DIM. = 1 1/2	"A" DIM. = 1 3/4	"A" DIM. = 2	"A" DIM. = 2 1/2	"A" DIM. = 2 3/4	"A" DIM. = 3
	"E" DIM. = 1 1/8	"E" DIM. = 1 3/16	"E" DIM. = 1 1/8	"E" DIM. = 1 3/4	"E" DIM. = 2	"E" DIM. = 2 1/8
	MIN BORE DIM. = 2 1/4	MIN BORE DIM. = 2 1/2	MIN BORE DIM. = 3	MIN BORE DIM. = 3 1/2	MIN BORE DIM. = 4 1/4	MIN BORE DIM. = 5
	MAX BORE LENGTH = 2 1/4	MAX BORE LENGTH = 2 1/4	MAX BORE LENGTH = 2 1/2	MAX BORE LENGTH = 2 1/8	MAX BORE LENGTH = 3 1/2	MAX BORE LENGTH = 4
<b>REPLACEMENT PARTS</b>						
<b>CARTRIDGES</b> 	ORDER # CRT-20*	ORDER # CRT-20*	ORDER # CRT-20*	ORDER # CRT-30*	ORDER # CRT-30*	ORDER # CRT-40*
<b>CRADLE</b> 	ORDER # CC-20*	ORDER # CC-20*	ORDER # CC-20*	ORDER # CC-30*	ORDER # CC-30*	
<b>LOCK SCREW</b> 	ORDER # LS-20*	ORDER # LS-20*	ORDER # LS-20*	ORDER # LS-30*	ORDER # LS-30*	ORDER # LS-40*
<b>HEX LOCKING PIN</b> 	ORDER # LP-20*	ORDER # LP-20*	ORDER # LP-20*	ORDER # LP-30*	ORDER # LP-30*	ORDER # LP-40*
<b>HEIGHT ADJUSTMENT ASSEMBLY</b> 	ORDER # AXA-HA*	ORDER # BXA-HA*	ORDER # CXA-HA*	ORDER # CA-HA*	ORDER # DA-HA*	ORDER # EA-HA*