

Metric Conversions

MM	x	0.03937	=	Inches
Inches	x	25.4	=	MM
Grams	x	0.03527	=	Ounces
Ounces	x	28.349527	=	Grams

EAGLE ROCK[®]
TECHNOLOGIES

Wettstein Tool[™]

Milling Accessories

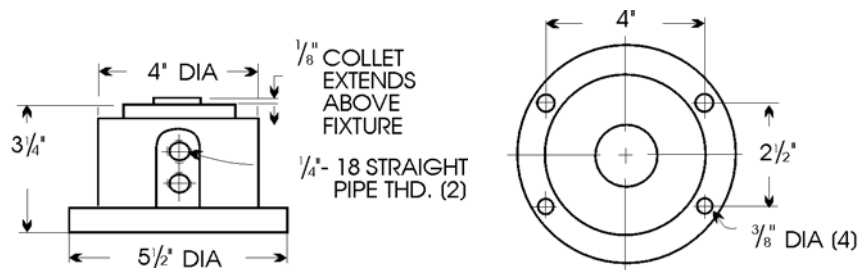
No. A1-212

5C Air Collet Fixture

For use with standard Hardinge[®] 5C Collets.

Designed especially for high production applications. Their light weight and compact size permits the use of several units on indexing tables for custom applications or used individually for fast chucking of parts on milling machines and drill presses.

Air operation is double acting for "Power" opening and closing of the collet. The collet is locked into position for positive depth location of work. These units operate efficiently and effectively on air pressure up to 150 PSI with upward clamping pressure exceeding 7.5 times line pressure. All bearings and moving parts are hardened and precision ground for accuracy and long life.



	Collet	Capacity	Cat. No.
Air Collet Fixture	5C	1 1/16"	A1-212-5C

EAGLE ROCK[®] TECHNOLOGIES INC. *Manufacturers of Specialty Tooling and Accessories since 1963*
One Eagle Rock Drive
Bath, Pennsylvania
18014-9648
 1-610-759-5200 • Fax: 1-610-759-4340
 1-800-EAGLEROCK • 1-800-324-5376
www.EagleRockONLINE.com

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Milling Accessories

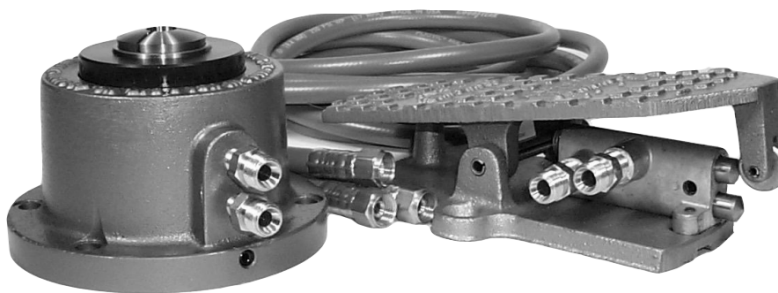
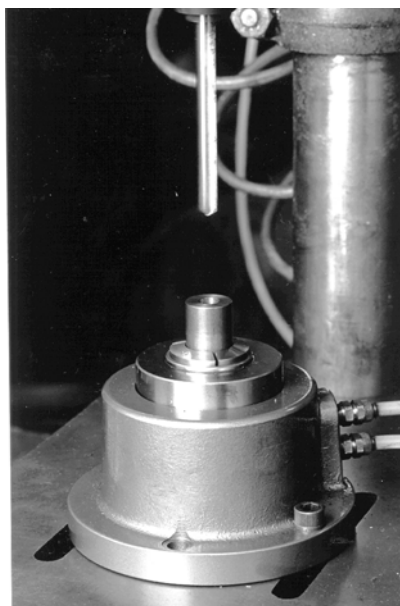
No. A1-212

5C Air Collet Fixture Kits

All you need is a collet and an air compressor. The foot operated 4-way air valve provides "hands free" operation of the Air Collet Fixture. The valve locks in place in either the clamped or unclamped position without the need for constant foot pressure.

Available for Standard 5C collets and also for the **HARDINGE** 5C 2" Step Collet with 1-1/4" depth (see page 5-4).

Kit includes our standard Air Collet Fixture, a 4-Way Foot Valve and (3) Air Hoses.



	Collet	Capacity	Cat. No.
Air Collet Fixture Kit	5C	1 1/16"	A1-212-5C-K
Air Collet Fixture Kit	5C Step Collet	2	A1-212-5CS-K

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No. A1-212

5C Air Collet Fixture

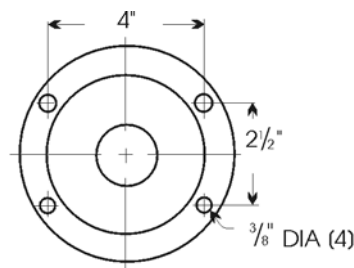
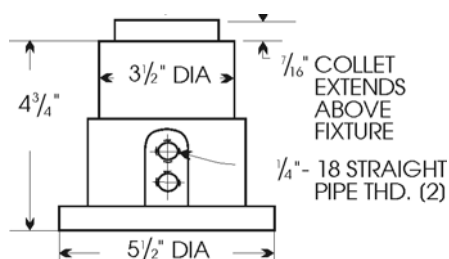
For use with HARDINGE® 2" 5C Step Collets with 1 1/4" Depth.

Designed especially for high production applications. Their light weight and compact size permits the use of several units on indexing tables for custom applications or used individually for fast chucking of parts of milling machines and drill presses.

By using the **HARDINGE 2" 5C Step Collets with 1 1/4" depth**, superior performance is insured due to the collet taper being on the "head" of the collet. This exclusive feature of the HARDINGE Step Collet allows for maximum rigidity and repeatability of the workpiece.

Air operation is double acting for "Power" opening and closing of the collet. The collet is locked into position for positive depth location of work. These units operate efficiently and effectively on air pressure up to 150 PSI with upward clamping pressure exceeding 7.5 times line pressure. All bearings and moving parts are hardened and precision ground for accuracy and long life.

For the "kit" version of this fixture, please see page 5-3.



	Collet	Capacity	Depth	Cat. No.
Air Collet Fixture	HARDINGE 5C Step Collet	2"	1 1/4"	A1-212-5CS

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Milling Accessories

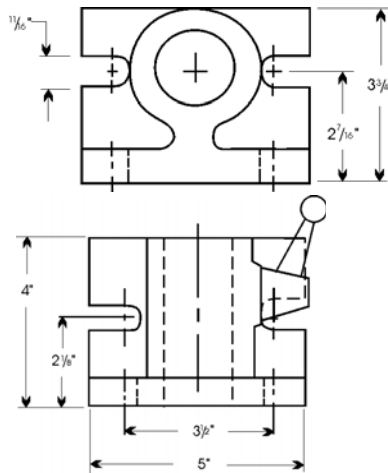
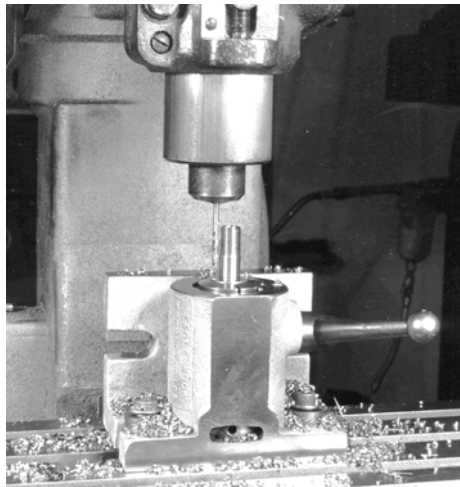
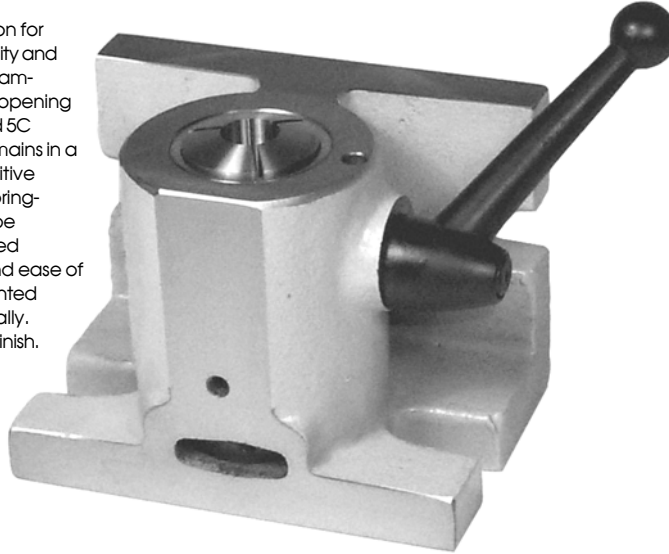
No. A1-210

5C Manual Collet Fixture

An indispensable fixture for your milling machines and drill presses.

Solid cast construction for maximum repeatability and durability. Features cam-operated sleeve for opening and closing standard 5C collets. The collet remains in a fixed position for positive depth control. The spring-loaded handle can be indexed to any desired position for safety and ease of operation while mounted vertically or horizontally. Beige enamel paint finish.

*Toolcrib
Classics[™]*



	Collet	Capacity	Cat. No.
Manual Collet Fixture	5C	1 1/16"	A1-210-5C

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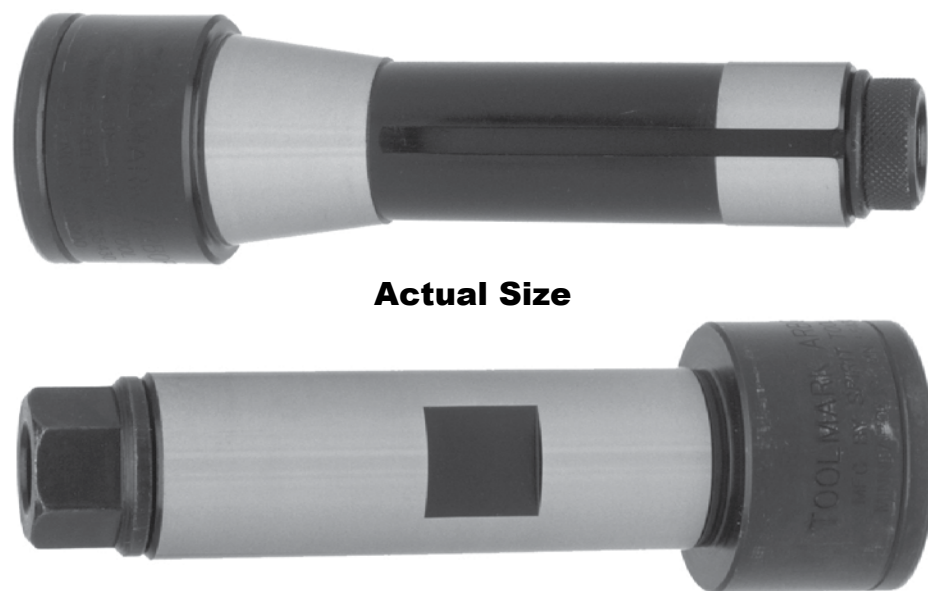
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Mfg by: Eagle Rock Technologies, Inc.
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MADE IN THE USA SINCE 1972



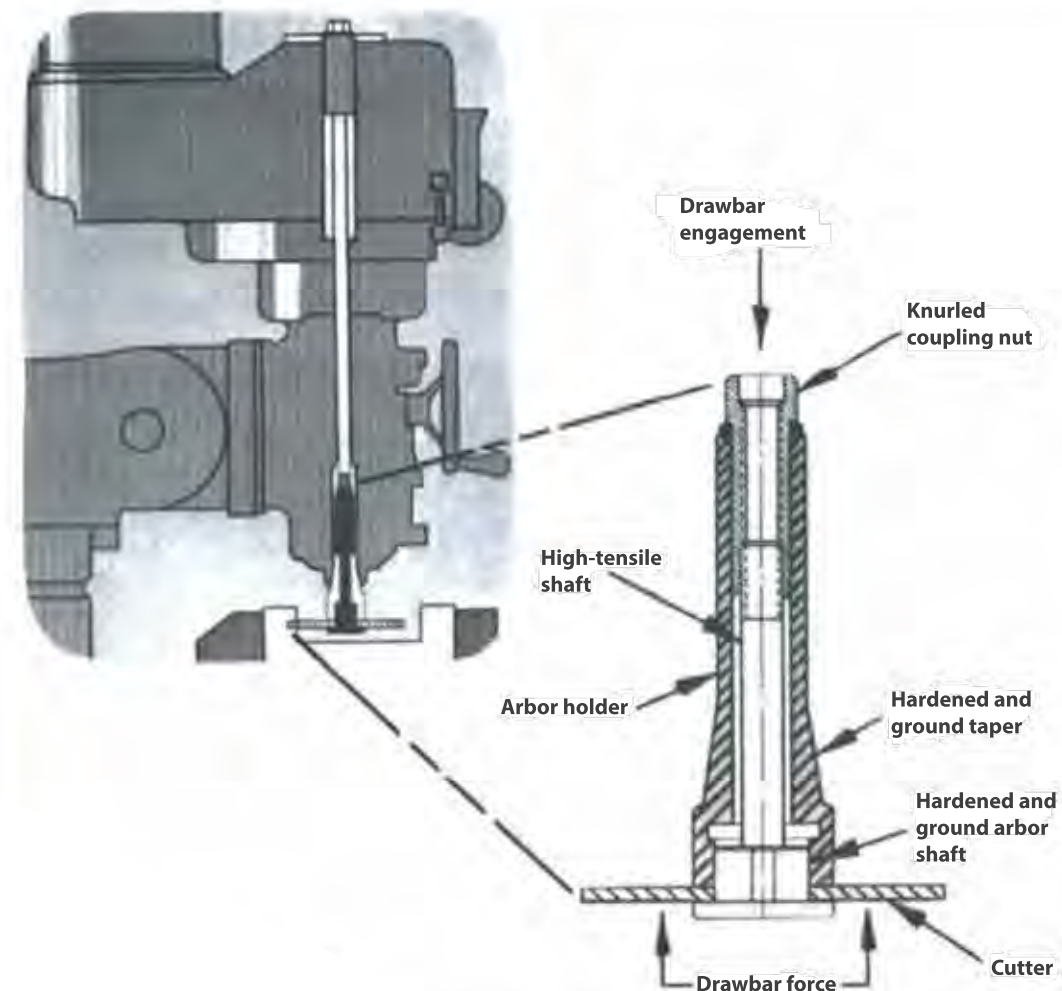
Actual Size

For ALL Milling applications

These arbors are made up of 4 pieces consisting of the arbor & key, the arbor holder and a coupling nut. It works on a pull through principle. Your cutter slips onto the arbor & key, the arbor's threaded stem is then pushed through the holder and drawn up by the coupling nut at the opposite end of the holder.

FOR SLITTING SAWS & CUTTERS TO 1/2" WIDE

MADE IN THE USA SINCE 1972



*****Recommended for Slitting Saws & Milling Cutters up to 1/2" thick*****

The Spirit Tool Arbor System offers the machinist two major advantages: **LOW PROFILE MOUNTING** of cutters for truly versatile tool positioning, and **EXTREMELY RIGID CUTTER MOUNTING** for improved performance and accuracy.

In use, the cutter is positioned in the Arbor Assembly and is drawn together with the coupling nut which is only tightened "finger-tight", no wrenches are required.

The Arbor Assembly is then inserted into the spindle of the milling machine where it is retained in the usual manner by the drawbar. At this point, Spirit Tool's exclusive cutter holding feature permits all of the drawbar tightening force to be transmitted directly to the cutter faces. The tool, now an integral part of the quill, is ready for the most demanding performance in low-clearance work areas completely inaccessible to other arbors.



**1" STRAIGHT SHANK
SEMI-FLUSH ARBORS
FOR SLITTING SAWS &
CUTTERS TO 1/2" WIDE**

Straight Shank, Can be used in 1" collets, end mill holders or with straight shank adaptors. The low profile design of this arbor simplifies setups in CNC equipment where studs might interfere with tool changing operations. The hex nut is wrench tightened as no drawbar is employed.



ARBOR SYSTEM
THE TOOLMARK ARBOR

ALSO USE WITH
HORIZONTAL BORING MILLS
OR TURNING CENTERS
WITH MILLING



Vise Clearance How often have you found interface between the outboard stud and the vise jaw or swivel bolts on your work set-up? The Spirit Tool Arbor has the nut on the other end where it can't interfere. This keeps the cutter less than one inch from the spindle nose, providing the same rigidity of the quill. The Spirit Tool Arbor is a precision tool. The allowable tolerance on the work piece will not be used up by the arbor runout. Saves minutes on every job; saves hours on tough jobs.

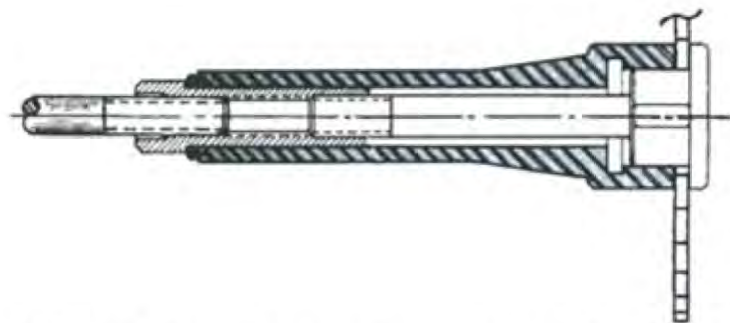


Work Clearance Many work pieces such as castings have surfaces to be machined which are inaccessible with conventional arbors. Until now, the only solution was to employ expensive, large diameter cutters or to build a custom cutter holder. Spirit Tools' low-profile arbor now makes nearly all of these difficult cuts possible. Wide cutters can be recessed to accommodate the .180" arbor shoulder to provide full flush cutting capability.



Adaptors A series of adaptors permits the use of cutters having holes smaller than 1 inch. They extend the cutter 1.25 inches below the arbor holder providing better access with the smaller diameter cutters. The adaptors are made with the same precision as the 1 inch arbor but sell for approximately half the price. Adaptors fit both the R-8 and the straight shank arbor holder.

CONFIGURATIONS



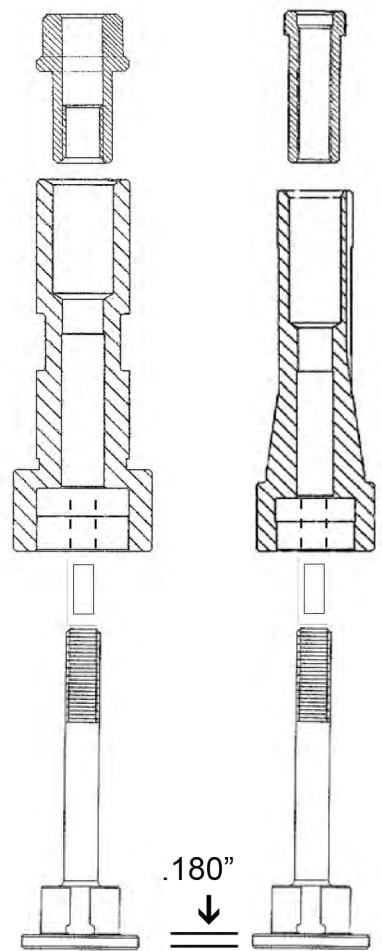
Basic Design Elements The coupling nut engages both the drawbar and the arbor shaft. The high tensile shaft transmits the three ton drawbar clamping force directly to the cutter mounting faces. The arbor holder is manufactured of alloy steel and carefully hardened and ground to eliminate cutter runout. Steel keys assure positive drive of all elements thus allowing the machines to run in either direction. The cutter clamping faces are ground flat and perpendicular to the arbor axis, thus preventing distortion of even very thin slitting saws.

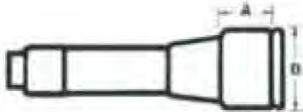
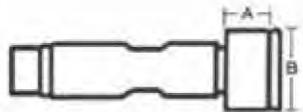
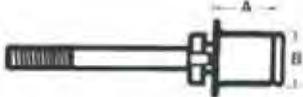
R-8 TAPER STUB SEMI-FLUSH ARBORS FOR SLITTING SAWS & CUTTERS TO 1/2" WIDE



1" STRAIGHT SHANK SEMI-FLUSH ARBORS FOR SLITTING SAWS & CUTTERS TO 1/2" WIDE

Straight Shank, Can be used in 1" collets, end mill holders or with straight shank adaptors. The low profile design of this arbor simplifies setups in CNC equipment where studs might interfere with tool changing operations. The hex nut is wrench tightened as no drawbar is employed.



PACKAGE DEALS AVAILABLE	LOW-PROFILE: 2010 (1), 2003, 4, 5 & 6 (1 ea.)				2009	
	LOW-PROFILE: 2011 (1), 2003, 4, 5 & 6 (1 ea.)				2015	
	LOW-PROFILE: 2010, 111 (1), 2003, 4, 5 & 6 (1 ea.)				2016	
OUTLINE DRAWING	STYLE and DESCRIPTION	CUTTER SIZE - MAX		DIMENSIONS		MODEL NUMBER
		I.D.	WIDTH	A	B	
	LOW-PROFILE: R-8 TAPER ARBOR	1.00"	.50"	.88"	1.50"	2010
		1.25"	.50"	.88"	1.88"	2014
	LOW-PROFILE: STRAIGHT SHANK ARBOR	1.00"	.50"	.88"	1.50"	2011
		1.25"	.50"	.88"	1.88"	2013
 See instructional videos at: www.spirittool.com	ADAPTERS for either of the 1.00" ARBORS listed above for clamping SMALL CUTTERS	.875"	.50"	1.25"	1.25"	2003
		.75"	.50"	1.25"	1.12"	2004
		.625"	.50"	1.25"	1.00"	2005
		.50"	.50"	1.25"	.88"	2006

See instructional videos at: www.spirittool.com

OVERALL LENGTH OF STANDARD TOOL 4.8"

- Machine's drawbar threads into the coupling nut of the R8 arbor to hold the arbor and the cutter in place.
- Straight Shank Arbors are to be held by a 1" end mill holder or collet, for use with Machining or Turning Centers with milling capability & Boring Mills.
- This tool is made of alloy steel, hardened and precision ground to eliminate cutter runout.
- Steel key assures positive drive of both clamping faces, as well as the cutter.
- Wide cutters can be recessed to accommodate the .180" arbor shoulder to provide full flush milling capability.



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Wettstein Tool

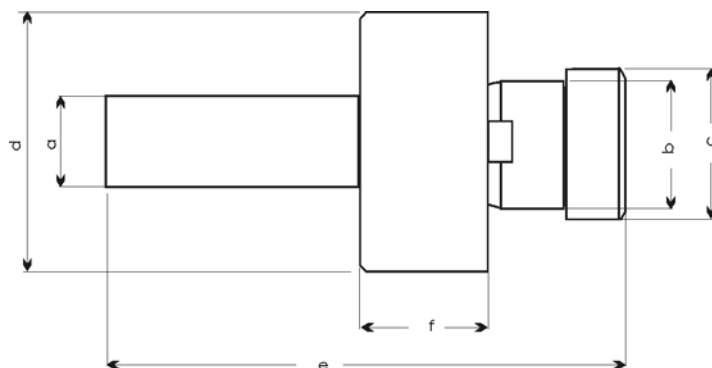
Milling Accessories

No. A1-36

Straight Shank Shellmill Arbors

Fully hardened and ground. Solid, one-piece shank, head and plug. Replaceable cutter slot keys.

For use on standard milling applications or for mounting Shellmills in our A1-205 Endmill Grinding fixture found on page 6-1



a	b					
Shank	Shellmill Bore	c	d	e	f	Cat. No.
1/2"	1/2"	.650	1.340	3.450	.625	A1-36-0500-0500
1/2"	3/4"	.885	1.750	3.750	.720	A1-36-0500-0750
3/4"	3/4"	.885	1.750	3.750	.720	A1-36-0750-0750
3/4"	1"	1.187	2.125	4.110	.720	A1-36-0750-1000
3/4"	1 1/4"	1.500	2.500	4.270	.850	A1-36-0750-1250
1"	1"	1.187	2.125	4.110	.720	A1-36-1000-1000

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