

Please read and save these instructions Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

phase II+ 5C Spin Index

Description

The 5C Spin Index is a multipurpose indexing fixture designed to extend the work capabilities of milling machines, surface grinders and drill presses. Accepts 5C collets to 1^{1/8}" capacity. Indexing plate has a 36 hole pattern for direct indexing in 10 steps graduated in 5° increments. Vernier is calibrated to 1° settings. Hardened and ground spindle with lock for accuracy under load travels 2^{1/8}" for flute grinding.

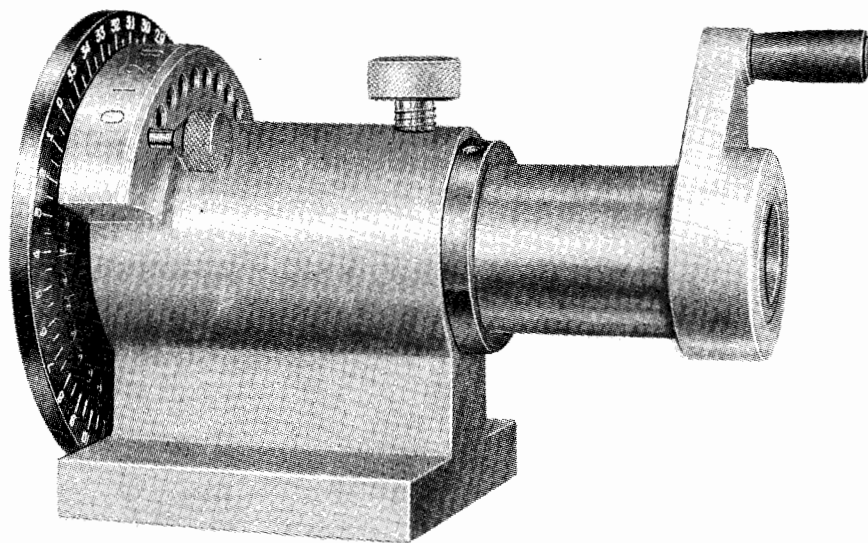


Figure 1

Unpacking

Check for shipping damage. If damage has occurred, a claim must be filed with carrier immediately. Check for completeness. Immediately report missing parts to dealer.

IMPORTANT : The tool has been coated with a protective coating. In order to ensure proper fit and operation the coating must be removed. Remove coating with mild solvents such as mineral spirits and a soft cloth. Nonflammable solvents are recommended. After cleaning, cover all exposed surfaces with a light coating of oil.

CAUTION

Never use highly volatile solvents.

Avoid getting cleaning solution on paint as it may tend to deteriorate these finishes. Use soap and water on painted components.

Specifications

	Max. Variation
Dividing spindle concentricity.....	0.0004"
Cylindrical center bore concentricity(per 1").....	0.0012"
Spindle center line parallelism to base.....	0.0008"

General Safety Information

1. Read and follow all operating instructions before operating tool.
2. Understand and obey all safety instructions supplied with mill or other machines on which the tool is used.
3. Always secure tool to machine table or other surfaces with the use of standard clamping kit.
4. Maintain and lubricate tool properly.



5C Spin Index

Operation

Refer to Figure 2.

The spindle (Ref. No. 4) accepts 5C collets. Clean the spindle before inserting collet. Be sure collet is free of any dirt or metal chips. Tighten knob (Ref. No. 10) before inserting the collet into spindle. Insert collet into spindle and rotate until keyway in collet engages key in spindle. Slide collet into spindle and rotate crankhandle clockwise (Ref. No. 8) to secure collet with drawtube (Ref. No. 7). Rotating the crankhandle after loosening the knob (Ref. No. 10) will turn the indicator disc.

The indicator disc (Ref. No. 3) has 36 holes marked 0 to 35. The center angle between one hole and the adjacent hole is 10° . The Vernier scale in the housing (Ref. No. 1) has ten holes marked 0 to 9. The center angle in the Vernier scale between one hole and the adjacent hole is 1° .

Align hole '0' of the Vernier scale with hole '0' of the indicator disc by rotating the crankhandle. Insert the indicator pin (Ref. No. 11) so that it passes through both the holes in the Vernier scale and indicator disc.

This will prevent the indicator disc from any movement. The next operation should be referenced from this point.

The 36 holes in the indicator disc permits division into 2, 3, 4, 6, 9, 12, 18, and 36 divisions. Using the formula $36 \div D = 1$,

where D is the number of divisions, the interval of holes (1) in the indicator disc can be determined. For example to divide the indexing into nine divisions, using the above-mentioned formula ($36 \div 9 = 4$), the indicator disc has to be turned at the interval of every four holes.

Slide the indicator pin out of the indicator disc and turn the crankhandle until the pin can be inserted in hole '4'. Inserting the indicator pin at intervals of four holes will divide into nine equal divisions.

Indexing can also be accomplished in terms of angles. Turning the indicator disc by one hole causes the disc to rotate by 10° . Indexing from $0^\circ - 360^\circ$ in increments of 10° can be accomplished by turning the indicator disc at intervals of one hole. For example, 40° indexing means turning the indicator disc at intervals of four holes.

The Vernier scale can be used for more accurate indexing for all nine intermediary angles between steps of 10° . For example, to achieve 48° index, first align hole '0' in the Vernier scale with hole '0' in the indicator disc. Next turn the crankhandle so that hole '4' in the indicator disc is aligned with hole '0' in the Vernier scale. Without moving the indicator disc, insert the indicator pin in hole '8' of the Vernier scale. The indicator pin will press against the wall of the indicator disc. Now,

turn the disc clockwise gradually until the pin can be inserted in the next hole.

The Vernier hole system is designed so that the desired indexing accuracy in steps of 1° can be achieved.

After completion of indexing, make sure knob is tightened and indicator pin stops movement of indicator disc. To unscrew collet from drawtube, turn crankhandle counterclockwise with the knob tightened and indicator pin passed through indicator disc.

The spindle has a 2 $\frac{1}{16}$ " travel in the direction of thrust for flute grinding. The travel can be regulated by adjusting the collar (Ref. No. 5) using the set screws (Ref. No. 6).

Maintenance

Keep tool free of dirt and metal chips to prevent premature wear.

Lubrication

Refer to Figure 2.

Lubrication spindle frequently to ensure proper operation. The hole in the center of the knob (Ref. No. 10) is for lubrication purposes. Use light machine oil for lubrication. In addition, prevent rusting of any part of spin index, as it will affect the normal functions.

Please provide following information:

- Model number
- Serial number (if any)
- Part descriptions and number as shown in parts list

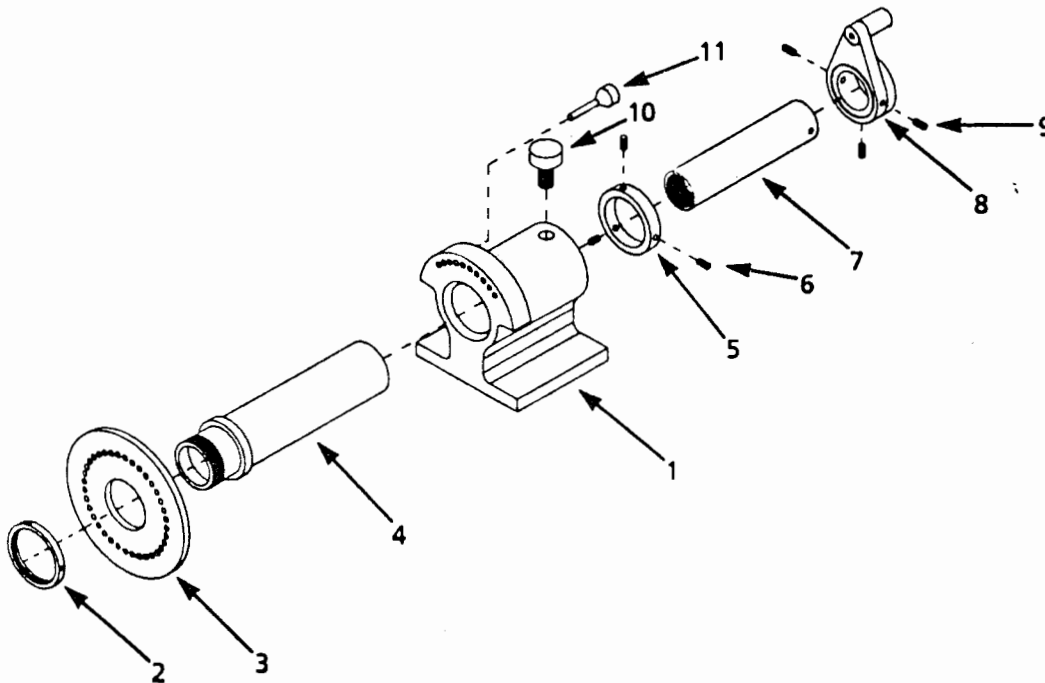


Figure 2 - Replacement Parts Illustration

Replacement Parts List

Reference Number	Description	Part Number	Quantity
1	Housing	■	1
2	Spindle locknut	8121.00	1
3	Indicator disc	8122.00	1
4	Spindle	■	1
5	Collar	8123.00	1
6	6 - 1.0X6mm Set screw	*	3
7	Drawtube	8124.00	1
8	Crank handle	8125.00	1
9	6 - 1.0X10mm Set screw	*	3
10	Knob	8126.00	1
11	Indicator pin	8127.00	1

(■) Available as assembly only, and can be ordered by Part No.

(*) Standard hardware item available locally