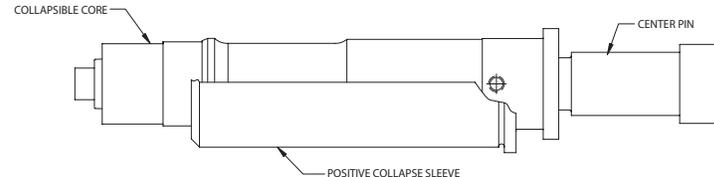


Thank you for purchasing the enclosed Roehr Tool “RT” Series Collapsible Core Assembly. To ensure trouble free operation and minimal maintenance requirements, please adhere to the following mold design guidelines. For additional information, including 2D and 3D CAD geometry, mold base machining information and grinding instructions, please visit our website at www.roehrtool.com or call direct to 1-877-563-1912.

Mold Design Check List:

1. Use guided ejector plates and a support ring around the center pin in addition to the normal stop buttons.
2. Use springs to assure first break at main parting line.
3. Return pins must end under stripper plate, not at main parting line.
4. Provide adequate ejector plate travel to C-Core specifications.
5. Secondary stripper plate actuation to begin only after full ejector plate travel. Stripper plate must return fully before ejector plate begins to return.
6. Good venting is essential, preferably to outside of mold, away from C-Core.
7. Clearance between core shutoff OD and stripper insert to be .0010” / .0015” total. Avoid excessive shutoff length. .150”-.250” is adequate.
8. When face of C-Core segments shut off against cavity (through hole parts), all cores must be ground to the same overall length. Normal tolerance of +/- .003” is inadequate. Do not pre-load the core, ensure .0005” -.0010” clearance and utilize an early ejector plate return system.
9. Break all sharp corners.
10. The stripper shutoff diameter should be the same or preferably a larger diameter than any other diameter on the core in the molding area.
11. Provide a means for proper mold sequencing to prevent C-Core damage. (Mold opens, ejector and stripper plates move forward together the entire ejection stroke, and the stripper plate is pushed forward and then returned, the ejector plate and stripper plate return together.)
12. There must be a means to keep the molded part central on the stripper ring while the core collapses. This is commonly referred to as the 10 by 10. It consists of a raised ring on the edge of the stripper ring bore. This holds the part central while the core collapses. Shock from the stripper plate coming to the end of its stroke dislodges the part allowing it to drop out of the mold.



Core Installation

1. Ensure that all cores are numbered to their corresponding mold plate locations and that the serial number on the center pin matches the serial number on the C-Core. Pins and cores are not interchangeable.
2. Ensure that the Positive Collapse Sleeve is free to travel through the mold plates. Apply grease where indicated in the mold design guidelines. Check for free movement when the mold is up to normal operating temperature.
3. Ensure that the mounted core is free to rotate in the ejector plate assembly. If keyed for positive feature orientation, the core must not be held rigid.
4. Check that the Center Pin is concentric with the stripper insert and that the pin tip protrudes beyond the core face and has the proper edge radius when the mold is assembled.

Mold Set-Up:

1. Care must be taken when the mold is set and dry cycled so that the proper mold sequence is followed. (Mold opens, ejector & stripper plates move forward together the entire ejection stroke, the stripper plate is pushed forward and then returned, the ejector plate and stripper plate return together.)
2. Heat the mold evenly to maintain bore alignment. (Avoid looping water from one end of the mold to the other.)
3. Lightly lubricate the tapered end of the Center Pin during new mold break-in.
4. Be aware of any short shots. Remove any from the cores prior to closing the mold. Closing on parts is the No.1 cause of C-Core damage.

Things to Look For:

1. Center Pin protrusion when the ejector and stripper plates are in the back position. Lack of pin protrusion could be a sign of a bent plate or something restricting the complete return of the ejector system.
2. Any amount of flash on the inside of the part in the core segment areas that could prevent the segments from collapsing.
3. Gassing or burns on the inside of the part. The mold cavities should be well vented at the parting line away from the cores.
4. Any cocking or bouncing of the mold plates and audible sounds of friction or misalignment.

Maintenance:

1. The collapsing segments have a “Self Cleaning” action and will tend to carry any dirt deposits to the outer surface. Although designed to be capable of operating without lubrication, a spray-on, PTFE-based lubricant is recommended.
2. Prior to the assembly of the mold, the cores should be thoroughly cleaned and degreased. Inserting a small section of polypropylene rod into the base of the core, up into the molding area will help separate the segments for complete cleaning.
3. Periodically lubricate the outside surface of the Positive Collapse Sleeve with a general purpose mold grease so that it continues to move freely in the mold plate bores.

