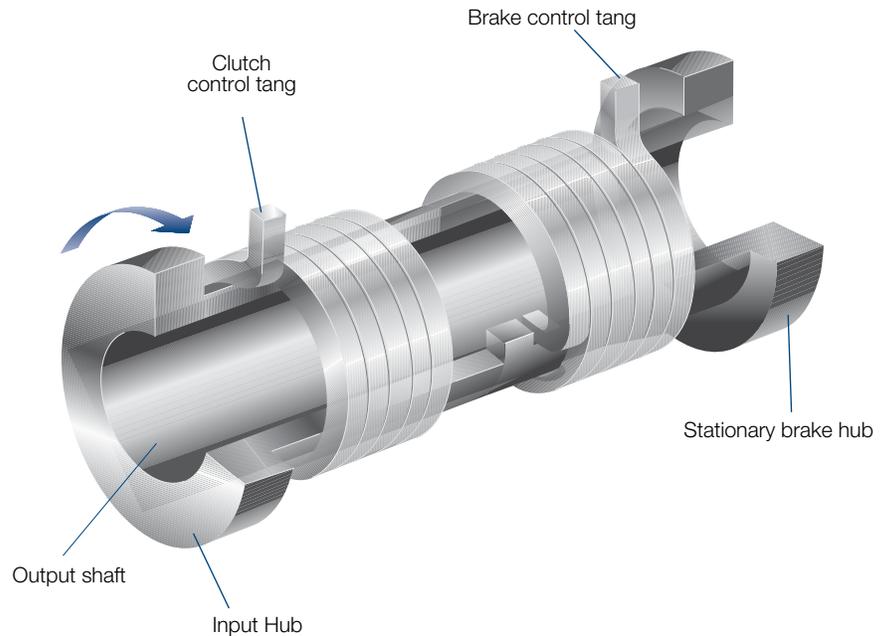


Principle of Operation

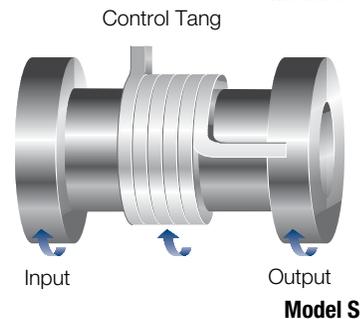
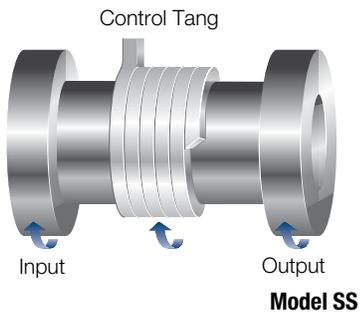
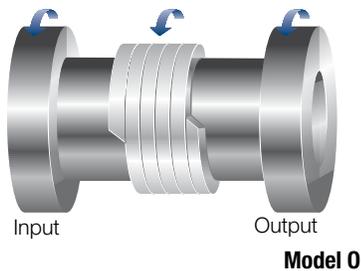
The three basic components of the wrap spring clutch are the input hub, output hub, and spring. The inside diameter of the spring is slightly smaller than the outside diameter of the two hubs. Rotation at the input hub in the direction of the arrow engages the spring and positively locks the two hubs together. Adding a control tang enables the spring to be disengaged, allowing the input hub to overrun.

Combination Clutch/Brake

The control tangs are used to hold open the clutch or brake spring, which are wrapped in opposite directions. When the clutch and brake control tangs rotate with the input hub, the input hub and output shaft are engaged by the clutch spring. When the stop collar locks the control tang of the brake spring, it wraps down engaging the output shaft to the brake hub. The clutch spring unwraps at the same time, allowing the input hub to freely rotate.

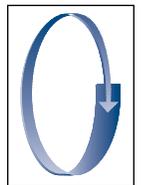


Design Configurations



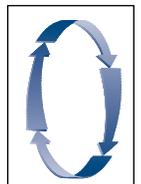
Overrunning (One Way Clutch)

When the input hub is rotated in the direction shown, the spring wraps down and engages the input to the output hub. When the input hub is stopped or reversed, the spring unwraps, allowing the output hub to overrun. These clutches can also be used for backstopping and indexing. In the backstopping mode, either the input or output hub is attached to a fixed member and the other hub on a rotating part. Rotation is permitted in one direction, but locked in reverse rotation. Indexing provides an accurate and smooth intermittent rotary output from reciprocating input in variable angular increments.



Start/Coast-To-Stop Clutch (Random Positioning)

In this mode, the control tang rotates with the input hub, thus the clutch is engaged. When the stop collar locks the control tang, the spring unwraps, allowing the output hub to coast while the input hub continues to run.



Start/Stop – Single Revolution Clutch

In this mode another control tang is added to the spring and fixed to the output hub. When the stop collar engages the control tang, the output hub will not overrun. Remember only a maximum of 10% of the load will be stopped with the single revolution clutch.

