Octagon / Cylinder / Fisher Cube / Windmill Cube

The Octagon, Cylinder, Fisher Cube and Windmill Cube all work on the same mechanism as the normal Rubik's Cube. The difference in the appearance is due to the fact that the vertical edges of the cube have been truncated or reshaped. The corner pieces now have only two colours and the four edge pieces in the middle layer have only one colour.

Solving the Octagon / Cylinder / Fisher Cube / Windmill Cube is the same as solving the ordinary Rubik's Cube. When solving, hold the puzzle so that the octagonal/cylindrical faces are facing upwards and downwards. At the last stage of solving, you may end up with a situation where it seems that a single edge piece needs to be flipped or two pieces need to be swapped. Both situations are impossible on an ordinary Rubik's Cube.

A single edge piece may appear to be flipped when some of the middle layer 'corner' pieces are flipped 180°. To flip the upper-right edge of the Octagon or Cylinder, do the following:

\[
\text{RERERERE} = (\text{RE})^4
\]

Two edges pieces appear to be swapped because two vertical columns are in the wrong places. To swap the upper-front and upper-back edges, do the following:

\[
\text{RLU}^2L'R'
\]

Similarly on the Fisher Cube, a single edge piece may appear to be flipped when some of the middle layer 'corner' pieces are flipped 180°. When solving the top layer of the Fisher Cube, you may need to do the following to flip a top edge piece:

\[
(\text{RU}^2\text{R'})^2 \text{F'UF}
\]

At the last stage of solving the Fisher Cube or Windmill Cube, you may also need to flip a single piece in the middle layer:

\[
(\text{FUDF}^2\text{U'D'})^2
\]

http://www.jaapsch.net/puzzles/barrel.htm