

# GoldSmith Watch Works



GSW COMMUNITY WATCHES



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« 24 OCTOBER 2013 TOP WATCH RESTORATIONS - WHAT IS Quartz Accutron Electric Electronic »

## WHAT ARE BUMPER-ROTOR-MICROROTOR-AUTOMATICS



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# BUMPER-ROTOR-MICRO-ROTOR-AUTOMATIC-WATCHES



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An **automatic** or **self-winding watch** is a mechanical watch that winds the mainspring with a pendulum/rotor/weight through the natural wrist motion of the wearer's arm. There are three designs that evolved, the 180 BUMPER, the 360 ROTOR, and the MICRO-ROTOR. All self winding watches have a PENDULUM – ROTOR – WEIGHT THAT MOVES WITH WIST ACTION WINDING THE MAINSPRING.

### APPROXIMATE DATES OF AUTOMATIC WRIST WATCHES

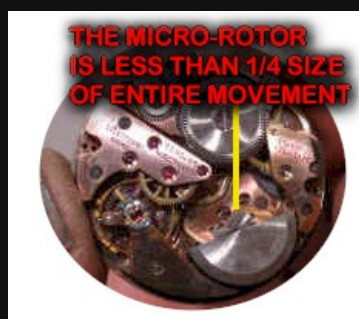
1923 180 BUMPER WAS PATENTED- PRODUCTION WAS FROM 1928 – 1950'  
FULL 360 ROTOR ROLEX WAS FIRST DEVELOPED BY ROLEX IN 1930, ALL OTHER 360 ROTOR AUTOMATICS WERE DESIGNED 1950 ON  
THE MICRO ROTOR WAS DEVELOPED IN 1957



**THE BUMPER 180** WAS DESIGNED AND PATENTED BY JOHN HARWOOD IN THE UK IN 1923. "BUMPERS" WOULD EVENTUALLY HAVE A WEIGHT THAT MOVED 180 DEGREES BACK AND FORTH TO WIND THE MAIN SPRING. BUMPERS WOUND ONLY ONE WAY. YOU CAN FEEL THE WEIGHT "BUMP" OR "HAMMER" WHEN YOU MOVE THE WATCH BACK AND FORTH. THE WEIGHT OR PENDULUM ACTUALLY BUMPS OFF SPRINGS ATTACHED TO THE MOVEMENT. WITH CASE BACK OFF, THE WEIGHT /ROTOR IS PROMINENT, IT SITS ON TOP YET EVEN WITH THE TOP BRIDGE OF THE MOVEMENT —LIKE THE BOTTOM OF A HORSE SHOE.



**THE 360 DEGREE ROTOR AUTOMATIC** WAS DESIGNED BY ROLEX IN 1930. THE REST OF THE WATCH INDUSTRY DID NOT PRODUCE A FULL 360 AUTOMATIC UNTIL 1950. THE " FULL ROTOR AUTO WIND" HAVE A 360 DEGREE ROTOR THAT SWINGS COMPLETELY AROUND THE MOVEMENT. THE ROTOR/PENDULUM IS USUALLY HALF THE SIZE OF THE MOVEMENT AND SITS OVER THE MOVEMENT. ONE CANNOT ACCESS MOST PARTS OF THE MOVEMENT WITHOUT REMOVING THE ROTOR AND ITS ASSOCIATED PARTS AND BRIDGES. YOU WILL FEEL IT GO ROUND THE MOVEMENT- RATHER THAN BACK AND FORTH. IN FACT, THESE SHOULD BE MOVED IN A CIRCULAR MOVEMENT. IF YOU MOVE THE WATCH FAST IN CIRCULAR MOTION YOU CAN PLACE THE WATCH TO YOUR EAR AND HEAR THE ROTOR SPINNING.



**THE "MICRO ROTOR"** SITS IN THE MOVEMENT, THE TOP OF THE ROTOR IS EVEN OR BELOW EVEN WITH THE TOP BRIDGE. IT IS SLIGHTLY LARGER THAN THE BALANCE AND IS POSITIONED IN THE MOVEMENT LIKE THE BALANCE. THE MINIATURE ROTOR IS HALF THE SIZE OF THE MICRO ROTOR ASSEMBLY, AND, JUST LIKE THE FULL ROTOR, IT WINDS WITH 360 DEGREE MOTION.

"Micro-rotor movements are aesthetically much more pleasing and Buren was the first company to introduce them, they succeeded in making a very thin, very accurate automatic movement by employing revolutionary mechanisms that functioned reasonably well in a variety of different levels of

execution and elaboration. In the mid 50s, Uhrenfabrik Büren A.G. designed and patented the first ever micro-rotor automatic watch movement. In 1957, heir "planetary rotor" automatic movement was released in what was called the "Super Slender" line. Compared to bulky 360 automatic movements, with a large rotor sitting atop a bridge on top of the movement, the planetary rotor was the flattest automatics of its time. A few other companies would produce watches with micro rotors including Hamilton's "Thin-O-Matic" line and the Universal Geneva micro-rotor. These companies would compete with the thinnest automatic watches in the world for many years. The most famous implementation of the Buren micro-rotor was to be found in Hamilton's "Thin-O-Matic" line. "

## THERE ARE ONLY A FEW COMPANIES THAT PRODUCED SELF WINDING CHRONOGRAPHS

VINTAGE AUTOMATIC CHRONOGRAPHS

SEIKO /CITIZEN (75%)  
 HEUER  
 ZENITH EL PRIMERO  
 BREITLING  
 OMEGA -SUPER RARE-

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**100 Restorations**  
**FEB 2012 6105-8119 SEIKO DIVE RESTORE**  
**NEW 12/02/2011 6105-8119 SEIKO DIVE RESTORE**  
**MAY 13, 2010 4 SEIKO DIVE RESTORE**  
**JULY 1 2010 NEW DIVE iRESTORES AND SEIKO CHRONO**

**ALL ABOUT WATCH HANDS**

## ROLEX REPAIR 3135 31 JEWEL 5 ADJ AUTOMATIC MOVEMENT

HOW TO REPAIR AN OFFSET CANNON PINION ON A ZODIAC WATCH



THE NEW GSW GSWW MWB PICTURE GALLERY

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