Movement

In horology, a movement is the internal mechanism of a watch. The term originated with mechanical timepieces, whose movements are comprised of numerous moving parts. In modern mass produced watches, the same movement is often put into many different styles of case. When buying a quality pocket watch from the mid-19th to the mid-20th Century, the customer would separately pick out the movement and the case of his choice, and the movement would be installed in the case for him.

Mechanical movements get dirty and the lubricant dry up, so they must periodically be disassembled, cleaned and lubricated (this is known as servicing). It is generally recommended that mechanical watches should be serviced every 3-5 years. In quartz watches, a servicing is required each time the battery runs out (a common indicator of a quartz battery running low is when the seconds hand ticks twice every two seconds instead of every second). There are three main types of movements, which we deal with within Aurum and are covered in the following sub-sections.

Quartz

Introduced in the 1970’s, Quartz movements are relatively inexpensive and incredibly accurate. The main downside with quartz movements is that watch batteries need to be replaced once every 2-4 years and, due to the electronic nature of the watch, require more sealing from water. Another disadvantage is that quartz watches, in general will not last as long as mechanical watches and if a fault develops other than the battery running out, it is generally more cost effective to replace the watch rather than repair it.

Despite dramatic advancements, the Swiss hesitated in embracing quartz watches in the 1970’s. At the time Swiss mechanical watches dominated world markets. In addition, excellence in watchmaking was a large component of Swill national identity. From their position of market strength, and with a national watch industry organized broadly and deeply to foster mechanical watches, many in Switzerland thought that moving into electronic watches was unnecessary. Others, outside of Switzerland, however, saw the advantage and further developed the technology and by 1978 quartz watches overtook mechanical watches in popularity, plunging the Swiss watch industry into crisis while at the same time strengthening both the Japanese and American watch industries. This period of time was marked by a lack of innovation in Switzerland and between 1970 and 1988 Swiss watch employment fell from 90,000 to 28,000. At the same time that...
the watch making industries of other nations were taking full advantage of emerging technologies, specifically, quartz watch technology, hence the term “Quartz Crisis” (outside of Switzerland, the crisis is often referred to as the “Quartz Revolution”, particularly in the United States).

By 1983, the crisis reached a critical point, the Swiss watch industry, which had 1,600 watchmakers in 1970, had now declined to 600. A research consortium, the Swiss ASUAG Group (Societe Generale de L’Horlogerie Suisse SA), was formed to save the industry and the result was materialised in March 1983 – the Swatch. The Swatch would be instrumental in reviving the Swiss watch industry giving a new bill of health to all brands concerned and gave rise to what would become the Swatch Group – one of the largest watch manufacturers in the world.

The Swatch was sealed in plastic cases with no possibility of repair. They also had a low number of moving parts, 51, compared to about 125 for mechanical watches. Furthermore, production was automated, which resulted in a higher profitability.

**Manual**

A manual watch is a watch that uses a mechanical mechanism to measure the passage of time, as opposed to modern quartz watches which function electronically. It is driven by a spring (called mainspring) that must be wound periodically via the crown of the watch. Its force is transmitted through a series of gears to power the balance wheel (a weighted wheel which oscillates back and forth at a constant rate). A device called an escapement releases the watch’s wheels to move forward a small amount with each swing of the balance wheel, moving the watch’s hands forward at a constant rate. This makes the ticking sound characteristic of all mechanical watches. Mechanical watches evolved in Europe in the 17th century from spring-powered clocks, which appeared in the 15th century.

The advantage of mechanical watches over quartz watches is that they generally require servicing at lesser intervals although, due to the higher number of moving parts, their servicing will most likely be higher than that of a quartz watch. If damaged, mechanical watches can be repaired thus extending their longevity and, if cared for properly, can generally last several generations. Furthermore they are also generally considered more collectable and hold their value better. Mechanical watches also have their disadvantages; they are not as accurate as modern quartz watches and are generally more expensive due to the more complex movements and craftsmanship required.

**Automatic**

An automatic, or self-winding watch is a mechanical watch, whose mainspring is wound automatically by the natural motion of the wearer’s arm, which provides energy to run the watch. This is achieved thanks to a rotor on the back of the watch, which winds the mainspring. An automatic watch can also be would like a mechanical watch although, it is not essential as long as the wearer is wearing the watch on the wrist. The
advantages and disadvantages of an automatic watch over a quartz watch are very similar to the ones for mechanical watch with the exception to an automatic watch, like a quartz watch, does not essentially require to be wound regularly, although it is worth remembering they can be wound. When winding manual or automatic watches it is best to pinch the crown between two fingers and move the crown back and forth. This prevents any damage to the movement and decreases wear on the moving parts.