Source: Tissot

Caliber Corner

Manufacturer	Tissot
Caliber Number	Powermatic 80, Powermatic 80.111, PM80
Base Caliber	ETA C07.111 (based on the ETA 2824-2)
Lignes	11.5‴
Diameter	25.6mm
Height	4.6mm (needs confirmed)

Jewels	23 or 25
Power Reserve	80 hours
Lift Angle	Unknown
Vibrations Per Hour	21,600 bph, 3Hz
Anti-Shock	Novodiac by Incabloc
Rotor Style	Ball bearing
Regulator	None
Hacking?	Yes
Hand-Windable?	Yes
Functions	Hours, minutes, central seconds, date (3:00 or 6:00)
Country of Manufacture	Switzerland
Known Models	Tissot Luxury, Tissot Seastar 1000, Tissot Carson Premium, Tissot Chemin Des Tourelles, Tissot Le Locle, Tissot Gentleman, Tissot Tradition Open Heart, Tissot Ballade COSC, Tissot Couturier, Tissot PR 100, Tissot PRC 200, Tissot Lady Heart Flower

The **Tissot Powermatic 80** is a Swiss Made self-winding automatic movement with 23-25 jewels. It is found in various Tissot models and is based on the ETA caliber C07 series, which itself is based on the legendary ETA caliber 2824-2. This caliber was announced at Baselworld 2012.

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- ARCAP Inside?
- Silicon Balance Spring:
- Tissot Powermatic80 Silicium Video:

ALMOST MYSTERIOUS:

Tissot offers almost no information about the Powermatic 80 or the ETA base calibers. The official Tissot site provides large images of each movement, but they do a good job of hiding the ETA caliber designation near the balance wheel. The image above was one of the few available with a blurry glimpse at the base caliber number. Furthermore, ETA does not provide any official documentation on the C07 series, and these movements appear to be exclusive to Swatch Group brands only (as is currently the case for all ETA mechanical movements).

POWER RESERVE:

This caliber's claim to fame is the high 80 hours power reserve. In contrast, the standard ETA 2824-2 is rated at about 38 hours power reserve when fully wound. Obtaining an 80 power reserve was achieved with the combination of a more efficient spring barrel and reducing the frequency from 4Hz to 3Hz. This means that the PM80 beats at 21,600 bph compared to a 2824-2 beating at 28,800.

NO REGULATOR:

The Powermatic 80 is not equipped with an ETAChron or other type of regulating system. Similar to the Sistem51, the Powermatic 80 laser regulated at the factory. This is what Tissot refers to as their "High-Tech" escapement. This doesn't necessarily mean that the movement is *impossible* to adjust or service, but good luck finding parts or a watchmaker who will want to work on it. This is something for hardcore mechanical watch lovers to take into consideration before spending $1,000+ on a two-tone Tissot Luxury.

ETA C07 BASE MOVEMENT:

As mentioned above, the Tissot Powermatic 80 movements are based on the ETA caliber C07 series. At the time of this post, there are at least four variations of the C07 (C07.111, C07.141, C07.611, C07.651, C07.811) being used in Tissot timepieces labeled Powermatic 80, but Tissot does not give clear indication which models are powered by which version. We're doing our best to gather as much information as possible to keep this list updated. Here's what we have so far:

HOW TO TELL THE DIFFERENCE?

An easy way to distinguish the difference between the base calibers in Tissot Powermatic 80 models is to look at the features and/or text on the rotor:

Powermatic 80.111 (ETA C07.111)

- Features: Date at 3:00 or 6:00
- Rotor: High-Tech Escapement / Twenty-Three 23 Jewels / Swiss Made

Powermatic 80.111 COSC (ETA C07.111 COSC grade)

- Features: Date at 3:00 or 6:00
- Rotor: High-Tech Escapement / Twenty-Three 23 Jewels / Swiss Made

Note: The dial or caseback will have Certified Chronometer text, but not the rotor.

Powermatic 80.121 (ETA C07.141)

- Features: Day at 3:00 or wide date at 12:00, date at 3:00 or wide date at 6:00
- Rotor (black): High-Tech Escapement / Twenty-Three 23 Jewels / Swiss Made

Note: Tissot shows the caliber 80.121 as being in the Couturier (day at 12 and date at 6) as well as the PRC 200 (day and date at 3), but the calendar layout is different enough to call for different caliber numbers and the images show an ETA C07.141 base movement in the Courturier and an ETA C07.111 base in the PRC 200.

Another Note: Although the image of the movement in the Couturier looks like ETA C07.141, it's partially covered by the balance. As of this post, there is *absolutely*

nothing to be found about this caliber number anywhere online. If you have a watch with this movement, please confirm in the comments below if we have the correct ETA caliber number.

Powermatic 80.601 (ETA C07.111)

- Features: Date at 3:00 or 6:00
- Rotor (black): High-Tech Escapement / Twenty-Five 25 Jewels / Swiss Made

Powermatic 80.661 (ETA C07.651)

- Features: Open escapement at 12:00
- Rotor (black): Twenty-Five 25 Jewels / Swiss Made

Powermatic 80.811 (ETA C07.811)

- Features: Silicium hairspring, date at 3:00
- Rotor: Silicon Balance Spring / Twenty-Five 25 Jewels / Swiss Made

Powermatic 80.811 COSC (ETA C07.811 COSC grade)

- Features: Certified Chronometer, Silicium hairspring, "Si" logo near the balance wheel, date at 3:00 or 6:00
- Rotor: Silicon Balance Spring / Chronometer / Swiss Made / Twenty-Five 25 Jewels

PLASTIC PARTS:

There is confusion about whether or not the Powermatic 80 movement uses plastic parts (similar to the Sistem51). First, it's important to acknowledge that there is more than one Powermatic 80 caliber. For example, The Tissot Luxury line has the Powermatic 80.111 with 23 jewels and uses plastic parts. The COSC rated Powermatic 80.811 found in the Tissot Ballade does not.

ARCAP INSIDE?

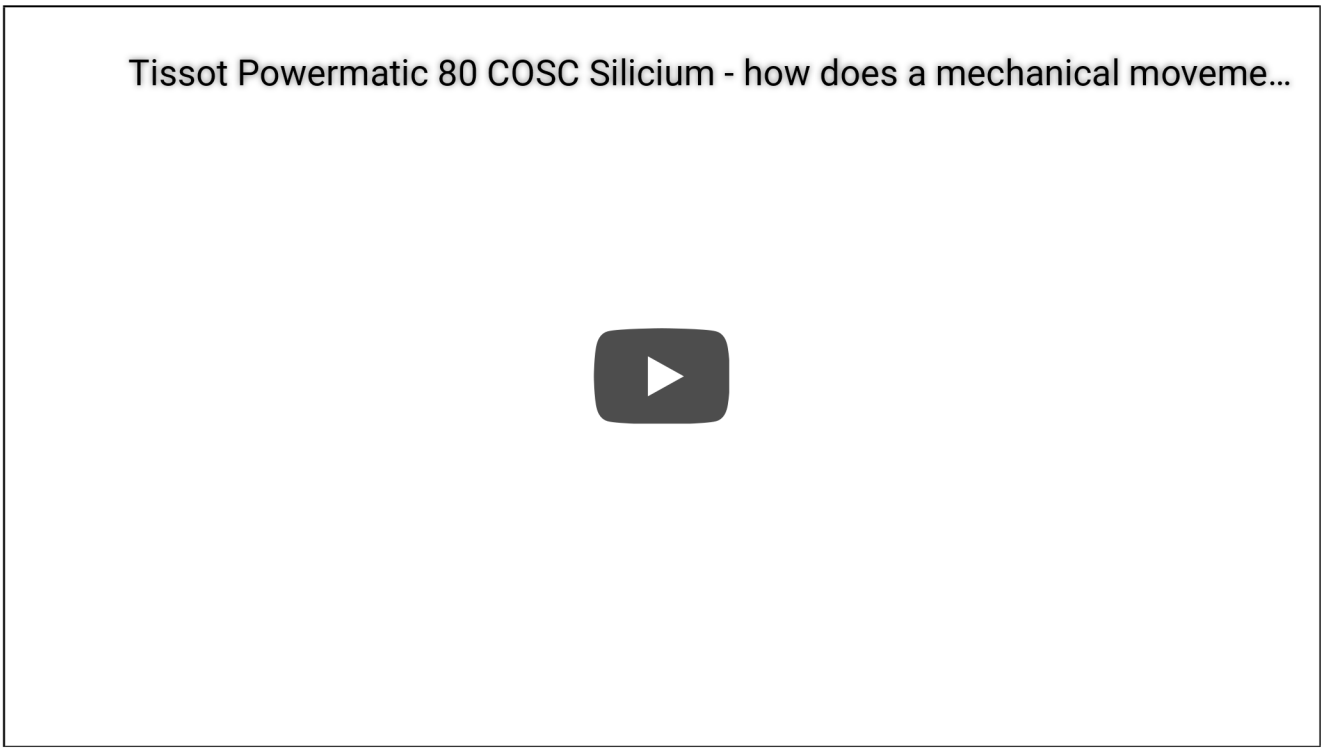
Ever since the release of the Powermatic 80, there has been speculation in the watch industry as to the materials they used to make it. Following the release of the Swatch caliber Sistem51, a movement made entirely of ARCAP, an alloy of copper, nickel and

zinc, the Powermatic 80 is believed to be constructed (at least in part) from similar a material. If this is true, it would give the movement resistance against magnetism.

SILICON BALANCE SPRING:

Furthering the resistance to magnetism is the use of a patented silicon balance spring in some Tissot Powermatic 80 models. As mentioned above, movements containing the silicon balance spring will have it written on the rotor, but you can also find a Silicium logo (Si) near the balance wheel. Silicium is another word for silicon, Si is the symbol for silicon on the periodic table of elements.

TISSOT POWERMATIC80 SILICIUM VIDEO:



Additional Resources:

- Official Tissot Powermatic 80.111 user manual
- Servicing the Tissot Powermatic 80 movement

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