

C600 Tri-Tech™ Diver Elite

O W N E R ' S H A N D B O O K

Time on your side...

Your Christopher Ward watch has been designed and engineered by highly talented craftspeople to ensure not only accurate and precise timekeeping but also to bring a real pride of ownership that only luxury items of the highest quality can ever hope to deliver.

You have made an investment, a good one, and the aim of this handbook is to help you make the most of that investment during what I hope will be a lifetime of ownership.

A handwritten signature in black ink that reads "Chris". The letters are fluid and cursive, with a prominent initial "C" and a small dot above the "i".

Christopher Ward

Caring for your Christopher Ward automatic watch

Your C600 Tri-Tech™ is constructed from the finest components and materials available including one of Switzerland's finest automatic movements. As with all mechanical watches of this quality, with just a little care, it has the potential to become an heirloom piece giving further joy to future generations.

Here are a few hints to help keep your watch working perfectly over the years:

- Never fully wind your watch if it stops, 10-15 revolutions should suffice to have it restart.
- Try and wear your watch everyday, if possible, as this will both enable it to keep better time as well as preventing the lubricants in the movement from solidifying.
- Your watch is fitted with the finest Incabloc™ anti-shock system which should protect it if dropped onto a carpeted surface. However, it is best to avoid hard surfaces or sharp knocks. You may not want to wear your watch whilst playing racquet sports, for instance.
- There are many differing views about the right frequency for servicing your watch, ranging from 2 to 7 years! A modern mechanical watch like yours shouldn't need servicing more than every 3 years but we wouldn't recommend leaving it longer than this as, just like a car, the oil needs topping up from time to time.
- Always use a reputable watch repairer to clean and lubricate your watch, and keep any documentation you receive. You can always use the Christopher Ward after-sales service programme too.

Should you need a replacement part - don't worry, we keep stocks of spare parts for years, even for discontinued models. It's all part of the Christopher Ward service.

Finally, don't forget our famous **60:60 Guarantee** allows you to return your watch absolutely free, for any reason, and with no quibbles, for up to 60 days after purchase and we also guarantee your movement for up to 60 months, so long as it is regularly serviced.

After all, why shouldn't you enjoy peace of mind as much as you enjoy your watch?

Your watch should also be thoroughly rinsed in fresh water after immersion in salt water. You must always ensure the crown is fully tightened before any use in water.

A note of caution

A dive watch of this type is NO substitute for a dive computer when diving and should only be used as a backup device.

Always make sure that you use the proper instrumentation when diving including a depth gauge, submersible pressure gauge, timer, and have access to decompression tables whenever diving.



The C600 Tri-Tech™ Diver Elite Automatic

Features

25 jewel Swiss automatic movement

Helium Release Valve

Mb Microtec™ Tritium Gas Tube Technology

PVD (Physical Vapour Deposition) black finished solid 316L stainless steel case

4.5mm thick scratch-resistant convex sapphire crystal glass with anti-reflective coating

Water resistant to 500m (50 atm)

Rubber strap with adjustable buckle

Screw-in crown and 2 piece uni-directional bezel

GTLS gas-filled indices and hands

Screw-in case back with unique serial number

Technical Data

Diameter: 43mm

Height: 13.0mm

Weight: 90g - 170g

Case: 316L Stainless steel

Calibre: Sellita SW200-1

Vibrations: 28,800 per hour (4 Hz)

Accuracy: +20 / 0 seconds per day

Description of the display and control buttons

Display elements

Minute Hand

Hour Hand

Second Hand

Date

Bezel



Control buttons

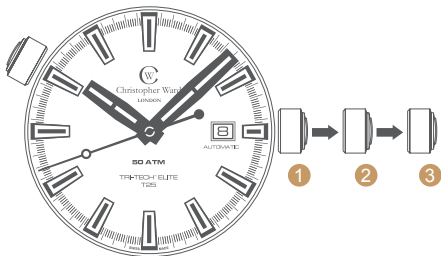
Helium Release Valve

Crown

Setting the time / date

For a higher water resistance your crown is of the screw-in type. To get to position ①, turn the crown anti-clockwise until it releases itself.

- Pull gently into position ②. For rapid date correction, turn in a clockwise direction.
- Pull gently into position ③. This position is used for handsetting, and stopping of the second hand. For precise time setting it is recommended to pass beyond the desired minute and to set the hand backwards.



After adjusting to the correct time ensure that the crown is screwed back in until flush with the case in order that water resistance is maintained.

Please note: Date correction should not be carried out between 20.00 hr and 02.00 hr as the watch gearing will already be aligning itself to change the date. The crown should always be pushed in after adjustment, and it is best to do so from position 3 to avoid advancing beyond the desired date.



The C600 Tri-Tech™ Diver Elite Helium release valve

A Helium release valve, or Helium escape valve, as it is also called, provides functionality for professional divers operating at great depths for prolonged periods of time or under saturation.

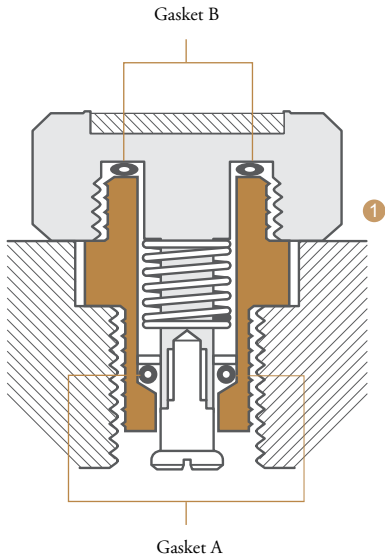
When commercial divers operate at great depths, they often spend prolonged hours in diving bells under pressure breathing a gas mix like trimix or similar, that contains the gas Helium. Since Helium molecules are the second smallest found in nature, the gas is able to work its way inside the watch, around any O-rings or other seals the watch may feature. This is not a problem as long as the divers stay under pressure, but when the decompression stops during resurfacing aren't long enough, a pressure difference builds up between the trapped Helium inside the watch and the environment. A small, one-way valve integrated in the watch case is activated when the differential between the inner and the outside pressure reaches a critical level. Result: The valve releases the Helium trapped inside the case.

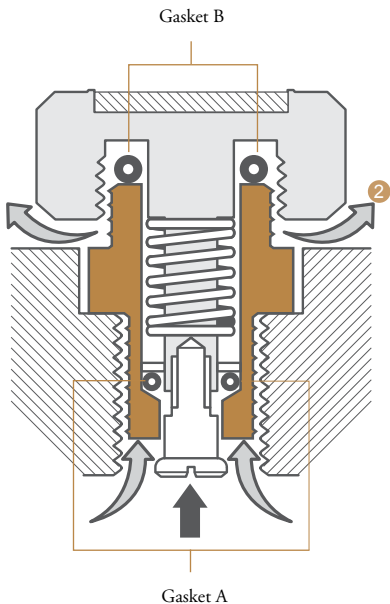
The C600 Tri-Tech™ Diver Elite Helium release valve operates with a screw-down crown at the side of the watch. When the diver starts to ascend, he or she simply unscrews the valve's crown to the full open position, allowing any Helium that may have been trapped inside the watch to escape during decompression (see 'Using the Helium release valve' on pages 10-11).

Using the Helium release valve

In its normal position ①, the Helium release valve is perfectly watertight thanks to **gasket B**, but it is not functional, since it is screwed down.

During the decompression phase, unscrew the crown of the valve in order to release the mechanism to position ② (shown opposite). The valve is still watertight from the outside.



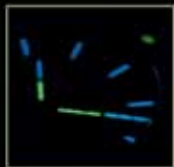


As the interior pressure becomes greater than the exterior pressure, it pushes **gasket A** out of its seating, thus releasing the gas.

Once the pressure is equalised, **gasket A** returns to its original position, pushed by the spring. This operation is automatically repeated several times during the decompression phase. Once atmospheric pressure is reached, screw back down the crown of the valve.

Please note:

Even if the valve is unscrewed (we recommend that the valve remains screwed down whenever the watch is immersed in water), the watch is still water resistant to 500m (50 atm). However, complete water resistance is guaranteed by **gasket B** when the valve is screwed down.



Mb Microtec™ GTLS Technology

Mention radioactivity and the image of men in orange radiation protection suits holding geiger counters may come to mind. However, many industries are making good use of radioactive isotopes and in the process are saving lives in the medical arena and/or manufacturing with illumination technology powered by the decay of Tritium. The C600 contains Gaseous Tritium Light Source tubes that emit a blue light. This is preferred over green emission as it is more visible at depth when diving.

What is Tritium?

Tritium (symbol 'T' or ' ^3H ', also known as 'Hydrogen-3') is a radioactive isotope of Hydrogen. The nucleus of Tritium (sometimes called a triton) contains one proton and two neutrons, whereas the nucleus of protium (most abundant Hydrogen isotope) contains one proton and no neutrons. Pure Tritium therefore, forms a gas, however, Tritium is not stable but decays to the inert gas Helium with a half-life of 12.3 years. This means that after this time half of any amount of Tritium will have become Helium.

The amount of radioactivity in your C600 watch is so small, even a banana is more radioactive, so therefore there is absolutely no risk involved.



Comparing GTLS illumination and SuperLumiNova

If the luminous markings on a watch are reasonably sized and arranged, the readability in the dark is primarily determined by their total light emitted. In order to assess the relative merits, the light intensity of two dials with identical markings by GTLS on one and SuperLumiNova on the other, were measured and compared. The results, with the light intensity expressed in the unit “nanocandela” (ncd) are shown below.

After this amount of time in the darkness	0	5 minutes	1 hour	8 hours
GTLS	6000	6000	6000	6000
Superluminova	up to 10000	6000	400	30

The radio luminescent GTLS remains constant, while the purely phosphorescent light of the SuperLumiNova may initially be brighter but diminishes and becomes progressively less luminous.

The conclusions are plain: SuperLumiNova provides limited night reading capability whereas GTLS is permanent with a constant illumination providing safe, unfailing and unlimited night time readability.

What is PVD (Physical Vapour Deposition) Coating?

In the mid 1800's a scientist named Faraday evaporated thin films in a vacuum when he exploded wires in his laboratory. It was not until the late 1800's that the first films would be deposited in a vacuum by Nahrwold. This was the beginning of the vacuum deposition method that we now call PVD (Physical Vapor Deposition) coating. The application of this technology remained primarily academic until the post World War II era. The branch of PVD coating technology called ion plating was not developed until 1963 by Donald Mattox.

PVD processing is carried out in a vacuum at high temperatures between 150 and 500 °C. The PVD technology consists of three primary deposition methods, evaporation, sputtering and cathodic arc. The PVD coating process is an environmentally friendly vacuum coating process that has the ability to apply various films at various process temperatures. This flexibility allows coatings to be applied to a variety of substrates. Components manufactured from diverse materials such as plastic to steel have been successfully coated using the PVD coating process.

Ion plating is a branch of PVD coating. The ion plating process ionises the material being evaporated. This ionisation greatly enhances the properties and adhesion of the film being applied. The PVD coating process is often confused with the CVD (Chemical Vapor Deposition) process. The CVD process is a thermal deposition process rather than a physical deposition process.

- Coating
- Substrate
- ① Black Finish
 - ② Titanium Nitride
 - ③ Marine Grade Stainless Steel



- ①
- ②
- ③

The use of PVD in Christopher Ward watches

PVD coating on a Christopher Ward watch results in the same warm, smooth lustre as traditional gold-plating ... with added resistance. Extensive testing has proven it is as hard as sapphire crystal and will easily resist corrosion through sea-water or sweat, climatic extremes and pollution of all kinds. It will, for many years resist the inevitable and repeated friction, knocks and scratches of every day life.

Physical Vapour Deposition is not in any way harmful to the environment as it is a procedure that produces no pollutants either directly or in the form of toxic residues.



1 ATM (10 Metres)

Safe to wear your watch while washing your hands with tap water.



3 ATM (30 Metres)

Washing your car and or general hosepipe usage.



5 ATM (50 Metres)

Water resistant to most household shower units.



10 ATM (100 Metres)

Safe to use while snorkelling in open water, it is not advisable to dive with your watch.



30 ATM (300 Metres)

Ideal for experienced divers and, in general, anybody practising scuba-diving.



50 ATM (500 Metres)

Professional divers, experienced prolonged exposure underwater.

Water resistance

Please note. these are only guidelines but we strongly urge you to adhere to them to retain the integrity of your watch. If you have any queries regarding this please contact us direct.

NB. To safeguard watch movement please ensure the crown is, at all times, screwed in correctly.

Keeping in touch with Christopher Ward...

From small beginnings just a few short years ago (our first workshop was actually a refurbished chicken shed!), Christopher Ward has won a worldwide following for his eponymous watch brand and can justifiably claim to manufacture the most affordable luxury watches in the world.

For many, the philosophy behind the brand, trying to put luxury watches within the reach of everyone, is as attractive as the watches themselves as is the very open approach of the business which means that Chris and the team spend a lot of time communicating personally with our customers - many of whom have become friends.

As the owner of a Christopher Ward watch, if ever you need to get hold of us we are at your service. We have listed some useful contact details on the back cover.

There is also always something new going on at our website at **www.christopherward.co.uk** and, if you haven't already discovered the independent forum dedicated to our brand at **www.christopherwardforum.com** we would recommend a visit. Informative and fun, it's a great place to hear the unexpurgated view of Christopher Ward of London!