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**OMEGA AND PYEONGCHANG 2018**

In 1988, the Olympic Games arrived in Seoul, where the best athletes performed on the world’s greatest stage. 30 years later, the event is back in South Korea once again. This time, it’s the Olympic Winter Games which are in focus. The sports are different and the athletes have changed. But thanks to an ongoing history of excellence, the Official Timekeeper remains very much the same.

OMEGA first served as Official Timekeeper of the Olympic Winter Games in 1936, when the event was held in Garmisch-Partenkirchen, Germany. For that occasion, a single technician was sent with just 27 OMEGA stopwatches used to time every second. Over the past 82 years since then, OMEGA has continued to develop its technology and hone its expertise and, today, the brand has an unrivalled reputation in timekeeping.

Now, for the 28th time in history, OMEGA is set to fulfil its role as Official Timekeeper of the Olympic Games. The brand’s presence in PyeongChang will include 300 timekeepers supported by 350 trained volunteers, 230 tons of equipment including 30 public and 90 sports scoreboards, and many kilometres of cables and optical fibre.

From February the 9th to the 25th, OMEGA will be trusted to capture the results and measure the performances at PyeongChang 2018, ensuring that every athlete, spectator and judge has the most reliable timekeeping at hand. And, from March the 9th, the brand will continue its role at the PyeongChang 2018 Paralympics.

Dreams are ready to be realised and the starting pistols are ready to fire. It’s time to enjoy the show!

**OMEGA’S HISTORY AT THE OLYMPIC WINTER GAMES**

**Our First Olympic Winter Games**

1936 was the first year that OMEGA officially timed an Olympic Winter Games and one OMEGA watchmaker arrived in Garmisch-Partenkirchen equipped with 27 stopwatches to time every sport. The brand had already been chosen as the first ever Official Timekeeper of the Olympic Games when the summer events were contested in Los Angeles in 1932.

Today, OMEGA is still the name behind the clock. PyeongChang will be the brand’s 28th time as Official Timekeeper, it’s 14th in winter since 1936. With the recent extension of the partnerhsip between the IOC and OMEGA, this legacy is set to continue until at least 2032, a full 100 years since the very first occasion.

**Photoelectric Cells**

1948 was the first time that OMEGA’s photoelectric cells were used at the Olympic Games. This revolutionary technology replaced the capabilities of the human eye and has remained ever since. In St. Moritz that year, the equipment was positioned on the finish line of races and emitted a highly-reactive beam of light. As soon as the first athlete crossed the line, the electronic timer would immediately stop and a truly accurate result could be measured to the nearest 1000th of a second.

Today, photoelectric cells are still in place. In speed skating, the beams of light are now just two or three centimetres above the ice. This ensures that the clock is stopped as soon as the winning competitor’s skate crosses the line. The system guarantees precision at the moment of victory and gives timekeepers the most accurate finishing time possible.

**Starting Gates**

1956 was the first time that OMEGA introduced starting gates in alpine skiing at the Olympic Games. Making their début in Cortina d’Ampezzo, the gates signalled the beginning of each run. As soon as the athletes passed through, the OMEGA Quartz Recorder was triggered.

Today, OMEGA’s “Snowgate” technology provides the latest innovation. It was introduced at Vancouver 2010 and ensures that the starting pulse sounds when the “wand” is at precisely the same angle for every competitor. The timing system is then activated automatically when an athlete bursts through.

**The Viewing Experience**

1964 was the first year that OMEGA was able to superimpose the times of Olympic Games performances onto the bottom of television screens. This was all thanks to a new piece of technology known as the Omegascope. Never before had spectators outside the venues been so quickly and well-informed about the events taking place. From this moment in Innsbruck, the concept of “real-time” sports reporting had arrived.

Today, OMEGA’s on-screen information has progressed much further. The Omegascope is gone. But as you will see in PyeongChang, OMEGA can now display a huge range of measurements in a broad range of sports. Through motion sensor systems, OMEGA will provide continuous measurements of athletic performance from start to finish, giving spectators a much deeper understanding of what they are watching.

**Providing Statistics**

1968 was the first year that OMEGA introduced “Integrated Timing” at the Olympic Games. With events taking place in Grenoble, OMEGA was able to supply the press, media, television channels, judges and the general public with additional information about athletic performances as well as in-depth statistics. Furthermore, the updated Omegascope could also now superimpose complete competition details onto TV screens, including athlete names, live times, final times, intermediate times and speeds.

Today, OMEGA’s statistical information is greater than ever before. And the capabilities are still advancing! In PyeongChang, a huge array of measurements will be instantly available to media and spectators. From ski jump speeds to ice hockey positions, never has so much data been available at the Olympic Winter Games.

**Live Rankings**

1980 was the year that OMEGA introduced its Game-O-Matic technology. The system could immediately calculate and display an athlete’s ranking as soon as he or she crossed the finish line in alpine skiing events. It featured its own data processing equipment and met all of the expectations of the Organizing Committee in Lake Placid that year.

Today, the technology has changed, but OMEGA is still providing immediate information for the benefit of everyone. As athletes become quicker and margins become smaller, the need for fast information and precision has never been greater. Luckily, OMEGA remains up to the challenge.

**The Photofinish Camera**

1992 was the year that OMEGA introduced its new Scan’O’Vision system in Albertville. Photofinish cameras had been used at past Olympic Games by OMEGA, but this updated technology could now digitally measure times to the nearest 1/1000th of a second. The improvement in precision was astounding and heralded a new chapter in the science of timekeeping.

Today, OMEGA’s Scan’O’Vision cameras are still in place at the Olympic Games. They have continued to evolve over the past two decades and the images are now used by judges to determine the official results. The most recent model, the Scan’O’Vision MYRIA, is able to capture 10,000 digital images per second.

**Modern Day Timekeeping**

2006 was the first year that OMEGA introduced special transponders worn by athletes. Primarily used in the new team pursuit event in speed skating in Turin, the transponders were worn on the ankles of competitors and were able to send and receive radio signals, allowing OMEGA to capture specific time measurements.

2010 saw the arrival of the new Electronic Start Pistol in Vancouver. Instead of using a traditional gun, OMEGA introduced a streamlined, futuristic device composed of a flash gun and a sound generation box. When the starter presses its trigger, three things happen simultaneously: a sound is “played”, a light flash is emitted and a start pulse is given to the timing device.

2014 in Sochi included a number of exciting technologies, including the advancement of athlete tracking. In ice hockey, OMEGA introduced the Whistle Detection System. This was worn by officials, and the microphone allowed them to speak to the scorekeeper on the timing bench. The system also stopped the clock as soon as it detected the sound of a referee’s whistle. This would happen at least half a second faster than any timekeeper could manually achieve.

**OMEGA's New Technologies in PyeongChang**

At PyeongChang 2018, OMEGA is paving the way for a dynamic Olympic Games future.

Through incredible sensor systems, the brand will now provide continuous measurements from start to finish of events, meaning that athletes can gain an immediate understanding of where they gained or lost time, or where they won or lost points.

From the live speed of a single alpine skier - to the formations of an entire ice hockey team – the information provided by OMEGA will add a brand new dimension to every performance.

Additionally, this information will mean that people in the venues, as well as those at home watching on television, can have a far greater understanding of each sport as it happens.

Everything in 2018 is about enhancing the viewer experience and providing live information that athletes can use to analyse their performances.

This is the first time at the Olympic Games that such in-depth data will be made instantly available and it is almost certainly the beginning of a brand new era.

This is what it means for each sport…

**Alpine Skiing**

Measurements can now include things such as acceleration and brake. But firstly, the athlete’s speed can be shown live as they start the run, and can constantly update at various intermediate points. Alongside this, the speed can also be compared to the fastest athlete at the same point.

At the end of the run, OMEGA can provide an in-depth run analysis that broadcasters can use to compare athletes with each other. The data can also be made available to athletes and their coaches for analysis. In addition to this, systems such as Stromotion and Simulcam will become invaluable for knowing exactly where a competitor won or lost time.

**Cross Country and Nordic Combined**

At PyeongChang, OMEGA's new Positioning System can track the live position of the athletes in both Cross Country and Nordic events. Information can be displayed for single competitors or groups and will be able to show distances to the finish, speed, and times between groups.

When a single athlete is shown on screen, it will also be possible for OMEGA’s system to compare their performance with the current leader. This can even be shown to include multiple intermediate points.

Finally, an innovative gradient chart will be available to pinpoint an athlete’s position on the course inclines and also compare them with others.

**Ski Cross and Snowboard Cross**

OMEGA has the capacity to measure many elements of these exciting events. In fact, almost any part of the run can be analysed in-depth. In the seeding and qualification rounds (when only one athlete is on the course), OMEGA will provide a cross jump analysis that can be viewed live or through replays.

The information will begin with a “take off” speed at each jump.

This will be followed by a distance measurement that updates live through the jump (showing in white), before a complete distance is given.

Finally, a landing speed will be indicated after each jump.

**Speed Skating**

A fast-paced sport at the heart of the Olympic Winter Games, speed skating is set to become even more enthralling for those watching. In individual events, except for Mass Start, live speeds can now be shown on screen and can update live as the speed changes.

In comparison to the current overall leader’s time, it is also possible to show live delta, giving viewers a unique understanding of how each competitor is progressing.

OMEGA can now also show live positioning of each athlete or team on the oval. By pinpointing these positions, it will be clear to see who is gaining an advantage.

A line to beat can also be shown live on the ice, indicating the distance that an athlete needs to make up to come first.

**Short Track Speed Skating**

After the finish of a race, it will be possible during the replay to show the distance between the skates of first and second placed athletes, or second and third. Taken from the finish line, it will add more precision to this fast-paced sport.

**Bobsleigh**

Sensors inside each bobsleigh will be able to measure various factors including G forces, angles, trajectory and accelera­tion that will enable teams to understand where they won or lost time on the track.

Primarily, as the team tears downhill, repeater antennas placed along the track will transmit the bob's live speed. On television, this data can be shown as a white line on a meter, with a green tip to indicate the highest speed achieved by the current sled.

Once the sled starts to decelerate, the best speed achieved can be displayed.

If the sled beats the current “top speed” of the competition at any point in the course, this can be indicated in red.

In bobsleigh, skeleton and luge, the Sled Path system provided by OMEGA can also help to compare the performances between different teams. The current sled will always be shown in red, while the path of the current leader will be shown in blue. With this method, it will be possible to see the different techniques of each team.

**Freestyle and Snowboard – Half Pipe**

Half pipe is action packed, with many criteria all taken into consideration when scoring. The display that viewers will see on screen can now include each competitor’s highest jump as well as their average jump height. This information will be shown after each run has finished. The system can even capture the number of rotations in a certain jump.

**Ice Hockey**

In-depth information can be valuable to teams, who will be able to use it after a game to analyse their performance.

Connected to the main motion sensor data, OMEGA's ice hockey analytical tool will also provide an exciting visual representation of what just happened on the ice. During replays and game analysis, it can highlight players and the puck, track athlete and puck movement, show the speed of individual athletes, show time on ice, measure distances between players and display team formations.

**Ski Jumping / Nordic Combined**

When jumping from great heights, every­thing has to come together perfectly for the competitor. At PyeongChang 2018, OMEGA will be able to provide valuable competition-relevant data for athletes and will allow spectators to zone right in on the finest details.

"In-run" speed will be one of the primary factors that might interest viewers, and this can now be displayed for each jump.

Then, as they hit the jump, the display can change to show the “take-off” speed measurement.

“At 20m” of their jump, a mid-air speed can be shown, while also highlighting how much faster, similar or slower it is compared to their “take-off” speed.

Finally, a “landing speed” will be instantly calculated and displayed. These measurements will all disappear seconds later, or when the distance measurement becomes available.

A virtual line will also be displayed across the landing zone during live coverage to show the current distance to beat.

**Stromotion**

In South Korea, OMEGA will be using its new "Stromotion" technology to break down the action into sections and take a closer look. Trajectory video footage will now neatly reveal the evolution of an athlete's movement or technique to show you exactly how good it was.

Other events in which stromotion will be used include alpine skiing, figure skating, aerial events and halfpipe.

**Simulcam**

OMEGA’s Simulcam will help to enhance the replay action of numerous events in PyeongChang. By laying an image of one competitor over another, it will be possible for replays to compare the techniques and performances of different teams.

Events in which you might see Simulcam used include alpine skiing, bobsleigh, skeleton, luge, ski jumping and Nordic combined.

**Course Maps and Animations**

To give viewers a clear idea of the courses and venue layouts, OMEGA can now provide course maps and animation, layered with virtual graphics and information.

**HOW OMEGA TIMES THE SPEED SKATING EVENTS**

**The Events**

With speeds of more than 60 kilometres per hour, speed skating is the fastest human-powered, non-mechanical-aided sport in the world. There will be 14 speed skating medal events in PyeongChang.

Women will compete at distances of 500m, 1000m, 1500m, 3000m, and 5,000m as well as in a team pursuit event. Men’s distances are 500m, 1000m, 1500m, 5,000m and 10,000m. They also have a team pursuit event.

There are also two new events in speed skating this year: Men's mass start and Women's mass start. As the name implies, all competitors are on the ice at one time and start simultaneously, racing over 16 laps of the 400m oval. The competition will begin with two semifinal heats. The top eight skaters from each semifinal will advance to the final.

But the results of the race aren’t just based on the finish. During the race there are three intermediate sprints (after four, eight and 12 laps). At these intermediate marks, skaters are awarded points for the sprint (5 for first place, 3 for second place, 1 for third place) that count towards the final standings.

There is also one final sprint. Skaters are awarded 60 points for first, 40 points for second, and 20 points for third, ensuring that the first three finishers of the final sprint will also be ranked as the top three competitors who get the medals.

**The Timekeeping**

* To start the race, an official fires the electronic starting gun. When the starter presses the trigger, three things happen immediately and simultaneously: a light flash is emitted, a sound is generated through speakers and a start pulse is transmitted to the timing device. If the trigger is pressed a second time within two seconds, a false start will be audibly signaled.
* During the race, a lap counter located near the finish line lets skaters know how many laps remain.
* In some events, transponders worn on the ankles of the competitors also transmit information to the timekeepers which provides live data as the race takes place.
* A last-lap OMEGA bell is rung when the racers have one lap to go.
* Finally, the finish time is always determined when the blade of the competitor’s skate crosses the photocell-beam located on the surface of the ice at the finish line. This time is then projected onto scoreboards within the stadium. In case of disputes, the OMEGA Scan'O'Vision Myria photofinish camera records the action at the finish line at 10,000 digital images per second.
* In speed skating, the timekeepers and their technologies face the ultimate challenge: it is timed to the nearest thousandth of a second. To put this in perspective, about a thousand of these tiny increments of time pass in the second or so it takes to say “Olympic speed skating”.

**HOW OMEGA TIMES THE ALPINE SKIING EVENTS**

**The Events**

The 11 alpine ski medal events, including downhill, super-G, slalom, giant slalom and super-combined, will all take place at the Jeongseon and Yongpyong Alpine Centres.

Featured on the Olympic Games programme for the first time at PyeongChang 2018, will be the alpine mixed team event which promises to provide a thrilling spectacle. It will include 16 teams competing in a single elimination tournament. Each team will include 4 competitors (2 men and 2 women) and the race will be conducted as a parallel event using giant slalom gates and flags.

The speed and drama of the alpine events make them among the most popular of all winter sports. Athletes can reach speeds in excess of 130 kilometres per hour as they travel down a vertical drop that ranges from 180 metres (slalom) to 1,100 metres (downhill) for men and 140 metres (slalom) to 800 metres (downhill) for women. The skiers also have to pass through a series of gates. A skier who misses a gate has to climb back up and go through the gate in order not to be disqualified.

**The Timekeeping**

* Alpine skiers start their runs through the “Snowgate” starting gate, which ensures that the running time is started when the “wand” is at precisely the same angle for every competitor. The skiers have a ten-second starting window, indicated by a series of beeps, and can begin up to five seconds before or five seconds after the official start time indicated on the start clock.
* As the race progresses, infrared photocells record the intermediate times of the competitors as they speed down the course.
* Photocells are also at the finish line to capture final times. As well as this, OMEGA has its Myria cameras on hand if the judges need a backup. The cameras produce 10,000 digital images per second.
* Motion sensors attached to the boots of athletes interact with antennas along the track, providing OMEGA with in-race data and information that can be instantly sent live to viewers at home.

**HOW OMEGA TIMES THE ICE HOCKEY EVENTS**

**The Events**

Ice Hockey in PyeongChang will be contested at two separate venues, including the Gangneung and Kwandong Hockey Centres.

Played in front of thousands of spectators, there will be tournaments for both men (12 nations) and women (8 nations).

In the women’s tournament, the four best teams in round robin play will advance to the semifinals. The winners of these two games will compete for the gold medal and the losing team will play in the bronze medal round. The teams which did not advance to the semifinals and medal rounds will compete in additional games to determine 5th through 8th places.

After round robin play in the men’s ice hockey tournament, the four best teams will automatically be qualified for the quarterfinals. The eight remaining teams will play one more game and the four losing sides will be eliminated. The four victors will advance to the quarterfinals.

The games are made up 3 x 20 minute periods, with a 15 minute time-out between each period. In case there is no victory after three periods, the tournament carries to overtime under a “Sudden Death” rule which means the first team to score wins the game. If no score is made, the Game Winning Shots Procedure applies.

**The Timekeeping**

* OMEGA’s timing and scoring system is situated on the timing bench beside the ice. This system relays all the necessary information and live time from each game to the scoreboards and beyond.
* During play, officials on the ice are fitted with OMEGA’s Whistle Detection System. This wireless system includes a microphone which allows them to speak to the scorekeeper on the timing bench. The system also stops the clock as soon as it detects the sound of a referee’s whistle. This happens at least half a second faster than any timekeeper can manually achieve.
* Motion sensors attached to the players’ backs now provide OMEGA with in-game data and information that can be instantly sent live to viewers at home or used in match analysis.

**HOW OMEGA TIMES THE BIG AIR EVENTS**

**The Events**

Snowboarding was officially adopted as a formal discipline at the Nagano 1998 Olympic Winter Games. However, PyeongChang 2018 will be the first year that the Big Air event takes place.

This new Olympic Games sport features competitors riding down a hill and performing tricks after launching off very large jumps. As the name suggests, the riders launch themselves into the air and then perform complex tricks such as frontside 1080, backside 1440 and double corks in the air, aiming to attain sizable heights and distances, all the while looking to secure a clean landing. Many competitions including the Olympic Games also require a rider to do a specific and special trick to win.

The newly built venue in PyeongChang is the largest Big Air ramp in the world, with total height from start to finish reaching 49 metres and a maximum slope angle of 40 degrees, allowing athletes more time in the air to show off their techniques.

**The Timekeeping**

* Each judge in the Big Air competition will be equipped with a Judge’s Keypad, which is linked to OMEGA’s Timing and Scoring Room. They will use this to indicate their score for each competitor.
* The scores will then be automatically transmitted to the scoreboards as well as to external media.
* OMEGA attaches motion sensors to the boots of the athletes, which captures competition-relevant information and statistics that can be instantly beamed live to viewers.

**INFORMATION IN AN INSTANT**

*How OMEGA’s data gets from the Olympic Games to the people who need it*

When you think of OMEGA’s role at the Olympic Games, it’s easy to only think of timekeeping. But there’s much more than what happens on the clock. OMEGA’s data processing is the magic at the heart of the whole operation.

At Sochi 2014, for example, OMEGA measured more than 650,000 finish times, intermediate times, rankings, distances and scores. This was in 98 different events over two weeks.

That is an incredible volume of data. Not only was it captured precisely for the benefit of athletes, but it was also transmitted to the scoreboards in the stadiums, and through the broadcasters to television screens, within 100 milliseconds.

That truly is live sport!

At every Olympic Games, OMEGA is the single source of this instantaneous data. And it’s a massive job to not only collect it, but to also deliver it quickly. That’s why, whether it’s summer or winter, each sport features unique customised applications as well as specific timekeepers who are experts in that field. Everything is now streamlined and all steps of the process work in complete harmony.

It may not be the first thing you think of for a timekeeper, but OMEGA’s data processing plays a vitally important part in the Olympic Games experience. Through years of participation and knowledge, the brand has perfected its skills to give every athlete and spectator a live understanding of each moment.

Today, as the sporting action happens, the data is provided all the way. Don’t take it for granted. It’s OMEGA excellence at its best!

**Limited edition watches in celebration of PYEONGCHANG 2018**

OMEGA has created two special editions of its Seamaster wristwatches to commemorate the PyeongChang 2018 Olympic Winter Games. Both are limited to 2018 pieces.

**THE SEAMASTER PLANET OCEAN "PYEONGCHANG 2018" LIMITED EDITION**

Created to mark the countdown to the Olympic Winter Games in PyeongChang in 2018, the Seamaster Planet Ocean "PyeongChang 2018" is guaranteed to perform with world-class precision long after that great event has come and gone.

Limited to 2,018 pieces, it is not only an aesthetically striking timepiece in bold blue and red, (the colours of the Korean flag) it is also a technological marvel.

Cased in stainless steel, it features a polished blue ceramic [ZrO2] dial with applied rhodium-plated indexes, coated with white Super-LumiNova that emits a blue glow. These same qualities are shared by the hour and seconds hands. The minute hand, in line with the dot on the bezel, emits a green glow.

The unidirectional rotating diving bezel is very special indeed. It features the world’s first polished blue ceramic ring with rubber and OMEGA Liquidmetal® diving scale, with red rubber for the first 15 minutes. OMEGA Liquidmetal® has also been used for the minute scale and the dot at 12H.

Just right of the date window positioned at 3H is the screw-in crown with OMEGA logo. The helium escape valve placed at 10H has been embossed with "He".

Protecting the face of the watch is a domed, scratch-resistant sapphire crystal with anti-reflective treatment on both sides, while the new alveol-patterned screw-in caseback is engraved in blue with the words PLANET OCEAN and LIMITED EDITION, as well as the watch's Limited Edition number. Transferred to the caseback's sapphire crystal are the words "PyeongChang 2018" and the Olympic Winter Games logo.

The beating heart of the timepiece is the OMEGA Co-Axial Master Chronometer Calibre 8900. As a Master Chronometer the watch has passed the highest level of watch testing in the industry, having endured 8 rigorous tests over 10 days, set down by the Swiss Federal Institute of Metrology (METAS).

**THE SEAMASTER AQUA TERRA “PYEONGCHANG 2018” LIMITED EDITION**

The OMEGA Seamaster Aqua Terra “PyeongChang 2018” Limited Edition is a timepiece that captures all the original innovation and beauty of the Aqua Terra 150M collection. However, for this model, the additional focus is firmly on the momentous sporting event.

**THE DIAL**

The first noticeable difference is the addition of the event name. Using the five colours of the iconic Olympic Rings, the words “PYEONGCHANG 2018” have been inscribed on the minute track of the popular blue PVD dial.

Incredibly, the 20 and the 18 are perfectly aligned with the exact minute indexes. This is a very unique coincidence that cannot be repeated in our lifetime.

**THE CASE**

The transparent sapphire crystal caseback includes the official “Olympic Games PyeongChang 2018” logo. On the side of the case, the limited edition number has been engraved. This will be one of only 2018 limited edition numbers made available.

**DESIGN AND INNOVATION**

The 41mm timepiece, including the case and the metal bracelet, has been created in stainless steel. The typical “teak concept” pattern of the Aqua Terra dial is included and, at its heart, the watch is powered by the Master Co-Axial movement 8500.

The OMEGA Seamaster Aqua Terra “PyeongChang 2018” Limited Edition is presented in its own Olympic themed box, and takes its place amongst OMEGA’s renowned history of collectable Olympic themed watches.