

# FULL COMFORT



ISOSPORT is the world's leading manufacturer of plastic materials for skis and snowboards. A supplier to every ski company in the world, Isosport gross Euro\$81M per year.

Heat exchangers were sometimes totally blocked with lime deposits. Water conditions were very bad with a lot of corrosion, high iron, and algae slime. Their microbiological problems were controlled with chemicals.



After installation of Original Grander Technology (OGT), chemical input was stopped and water quality improved dramatically. It took 9 months to become zero bacteria. Isosport is now using *zero biocides and zero chemical stabilizers in their entire system.*

Ondeo, an independent laboratory, tested the cooling water and reported 0.0028 mg/L iron and less than 100 microbes. Ondeo stated in the test report that: *“Not sure if this is conditioning or make up water. It is too good for cooling water. It is important to note that these values are very low for cooling water. This is atypical of cooling water.”* Mr. Koppenstein, a UVO distributor, was so confident about the quality of the cooling tower water that he drank a glass of the Granderized cooling water. The total cost of the OGT was A\$100,000 while the chemical treatment of the cooling system cost A\$52,180, excluding handling, storage and application costs associated with chemical. ***Pay back period was less than 23 months!***

Furthermore, OGT allowed the equipment to be cooled at a more even temperature. This allows Isosport to eliminate the use of hardener in some operation, so there is no acid build up, scaling, lacquering, etc; but it results in better products. The frequency of tear down and cleaning procedures of the production moulds decreased dramatically. There are no service of the cooling water quality, no handling of chemicals, no waste removal, no storage consideration, no corrosion and much less bio slime bacteria. So, the cost decreases; but the productivity and production have both increased.



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ISOSPORT 是 Constantia ISO AG 的附屬公司，亦是全球性生產滑雪用品塑膠材料的領導者。她是顧客導向的生產商，專門於滑雪、雪板、熱可塑性的塑膠板及軟片、合成塑膠板、汽車、建築、運動、網球弦和休閒工業。她供應滑雪及雪板物料給全球每間滑雪公司。每年毛利八千一百萬歐元。

廠內的熱交換器時常被石灰沉積物完全地阻塞。水的狀況很差，有很多腐蝕性物質，很多鐵銹和海藻黏質物。而且水中充滿了控制微生物的化學劑。

剛安裝加能德活水科技(OGT)後，減少了 20%化學添加劑。當停止了使用所有化學品於冷卻系統內一個月，水質有戲劇性的改變。OGT 若需九個月的時間令冷卻水中的細菌消失掉。Isosport 現在無須使用殺菌劑和化學添加劑。



Ondeo 是一間獨立的實驗室。她測驗過 Isosport 的冷卻水後，得出的結果是鐵只有 0.0028mg/L 和微生物少於 100。Ondeo 在測試報告中附註的評語是那些冷卻水的水質太好，如補充水。再者，以冷卻水來說，那些測試數值太低，是一種很不尋常的冷卻水。（“Not sure if this is conditioning or make up water. It is too good for cooling water.” & “It is important to note that these values are very low for cooling water. This is atypical of cooling water.”)Koppenstein 先生，奧地利 UVO 分銷者，對那些冷卻水相當有信心，並喝了一杯以 OGT 活化的冷卻水。

應用於冷卻系統的 OGT 的成本是 A\$100,000.00，而化學處理的成本是 A\$52,180.00，當中不包括處理，儲存和應用化學劑等與化學處理有關的成本。還本期少於 23 個月。

另外，OGT 令儀器冷卻於更穩定的溫度。這效果令 Isosport 在某些運作無須加上硬化劑，但同時可提高產品的質素。除此之外，一些隨著硬化劑而出現的問題消失了，例如：變酸和水垢等等。拆卸與清潔生產模具的次數大幅下降。應用 OGT 可減省冷卻水質的管理，無須使用及儲存化學劑，沒有產生廢物，不會引起腐蝕及大幅減少黏性的細菌。因此，成本減少了，但生產力和產品質素均獲提升。

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