BÜHLMANN
DIVE WATCHES

Dr. Albert A. Bühlmann (1923–1994)

Swiss Pioneer in Decompression Science and Diving Safety

Origins & Motivation

Born in Berlin and trained in Zürich, Dr. Bühlmann led cardio-pulmonary research at the University Hospital Zürich from 1952 to 1990. He was driven by a fascination with human physiology under extreme conditions, particularly the pressures of underwater environments.

Empirical Breakthroughs

Dr. Bühlmann collaborated with Swiss diver Hannes Keller to pioneer mixed-gas decompression dives in Swiss lakes and deep-sea environments. These included record-setting dives in Lake Maggiore and chamber tests reaching depths of up to 575 meters. His models also ensured safety in high-altitude diving, protecting military and recreational divers in alpine regions.

Decompression Framework

Over two decades, Bühlmann developed and refined a series of decompression algorithms known as the ZH-L models (Zurich Limits), including ZH-L12 and ZH-L16. These models calculate nitrogen and helium gas exchange in body tissues, guiding safe ascent protocols for divers. His algorithms became the gold standard in dive planning and are widely implemented in modern dive computers.

Publications & Influence

In 1983, he published his landmark work 'Decompression – Decompression Sickness,' laying the scientific foundation for modern diving practices. His algorithms were adopted by international dive organizations and became integral to altitude and mixed-gas diving procedures.

Recognition & Enduring Impact

Dr. Bühlmann received international acclaim, including the Oceaneering Award from the Undersea and Hyperbaric Medical Society in 1977 and a posthumous lifetime achievement award from Divers Alert Network in 1993. His ZH-L algorithms continue to underpin safe diving practices worldwide, making him a lasting figure in decompression science.