Ueli Schweizer, born in 1952, qualified sports instructor, self-employed entrepreneur in the health, training and sports science sectors.

In 1974, he graduated from the Swiss Federal Institute of Technology (SFIT) in Zurich with a Swiss degree in sport and excercise science.

Dr. Benno Nigg, head of the University's Biomechanical Institute and currently director of the famous Human Performance Laboratory in Calgary, Canada, whose work made human movement, its forces and directions consistently measurable, and Professor Wartenweiler who clearly linked the disciplines psychology, philosophy, ethics and training sciences, had a formative impact on him.

A young ski, windsurfing, sailing, tennis and fitness instructor, he went beyond merely relishing sports activities and nature. The scientific methodology and exact analysis models of these disciplines fascinated him equally. He focussed especially on the various outdoor and indoor endurance disciplines, and practising, understanding, measuring and intelligently controlling these activities was always an exciting challenge for him.

In the 1980s, he was employed in Zurich as director of one of the largest and most beautiful fitness and wellness centres of Europe. He then established his own company for the design and development of fitness centres. His most important and successful sales promotion strategy was the on-going training of customers and staff based on forward-looking training concepts.

However, the enormous administrative and organisational effort required to do this was not what he wanted to do forever. He therefore seized the opportunity to establish a training centre with a sports medicine and performance diagnostics department in Engadin, St Moritz, together with Dr F. Peroni, an Italian specialist consultant for sports medicine. This was the renowned high altitude training centre, part of the Gut Clinic. At the same time he continued his successful work as trainer and lecturer.

From 2005, as a self-employed entrepreneur, he has been focussing his activities mainly on company seminars and lectures world-wide, his lactate seminars and also on his movement and test laboratory. He also contributes regular articles for publication to the trade press.

He is holder of the internationally recognised SILVER Strenflex Fitness Sport Badge.

schweizerTEST labor

Ueli Schweizer, sports & health science instructor,

... tests the ...

Precor AMT

Adaptive Motion Trainer

Objective overall impression

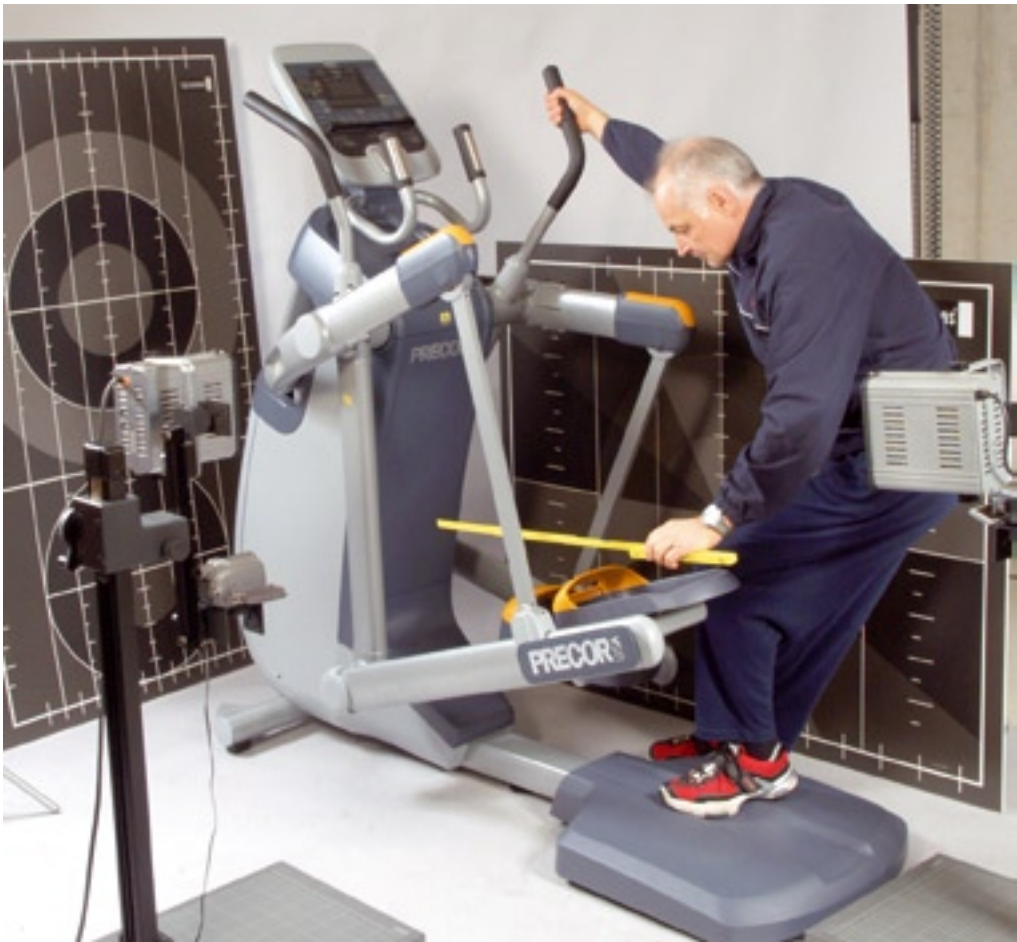
Using a tabular overview, we have tried to give an accurate assessment of the Precor AMT. Figures, facts, measurements and video analyses all aim at achieving the highest possible degree of objectivity, seen from two angles: from that of the exercising person or user and from that of the fitness club operator. **The Precor AMT achieves the rating "Very good".**

Subjective overall impression

A training machine must however also be assessed on the basis of both the spontaneous and long-term impression it makes on the user. The way the customer reacts, consciously or subconsciously, is almost the main decisive factor for the success or otherwise of a machine - and of the gym as a whole. Facts serve to persuade the customer to start training. Emotions keep him/her coming back to the gym, and emotions are a big factor in ensuring that the client never stops training!

The continuously variable stride length and pace of the AMT, which can be seamlessly adjusted to your body's requirements at any time, is superb. The changes of movement direction are soft, making for a comfortable feel. There are countless variants depending on your mood. They are fun, they motivate and they even make long training sessions seem short.

What is a shame though, and this is the only real weakness of the AMT, is that unfit clients will be overtaxed. The minimum stress that has to be overcome is too high. The sum of the body weight of the user, the adjustable minimum resistance and the minimum stride cadence is simply too hard for many unfit and overweight clients.



Cardio Testing

Since January 2006, and coinciding with the FT100 anniversary issue, Fitness Tribune has commissioned the Dr. Gottlob INSTITUT in Heidelberg to carry out regular equipment tests for professional machines of all types for the strength, fitness sport and rehabilitation sectors in particular. From January 2008, the Schweizer TEST Labor in Rüschlikon will also be testing cardio training equipment on behalf of Fitness Tribune.

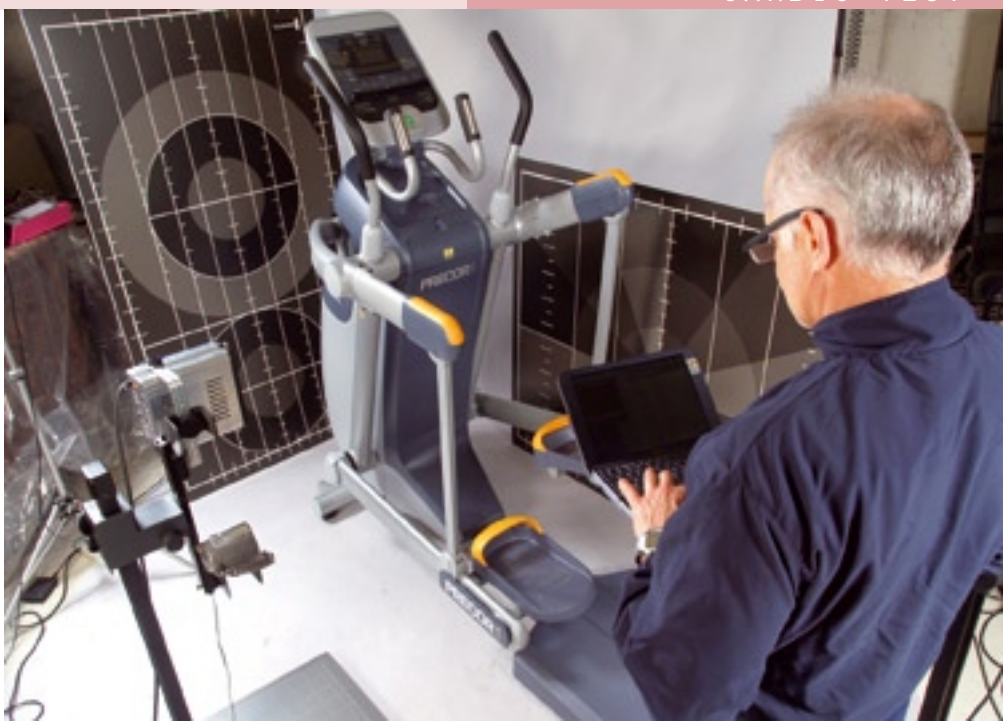
The fitness industry has of course seen many different tests in the past. They were all however, limited to listing brochure data and already apparent technical details. What was required was a "real comparison", i.e. real test criteria such as evaluation factors, impartial additional information, critical points, support in making purchasing decisions and, most of all, a rating.

This requirement however involves 2 difficulties: First, a real benchmark test means that there will also be losers. The risk here is that we might lose potential advertising clients by publishing an "unfavourable result". Second, it's important to find the right tester – a reputable, impartial company with a combined expert knowledge in a whole range of different specialities.

We are therefore very pleased to have been able to win qualified sports instructor Ueli Schweizer as an additional expert for testing professional equipment on behalf of Fitness Tribune. Ueli Schweizer, profiled here, will bring his vast experience and knowledge to cardio equipment testing.

Fascination of endurance

Through meadows, fields and forests, along streams, rivers and lakes, up hills and mountains – walking, jogging, climbing, cycling, racing, mountain biking, skiing, snow-shoeing and skating – that was, and is, the "endurance sports world" of Ueli Schweizer. Adventure and enjoyment rather than competition and ambition. For him, endurance in all its forms, and as inspiring as nature itself, has always been linked to scientific inquisitiveness. The biomechanics of human walking, neuromuscular studies of walking and running, energy provision to the muscles, intelligent control of training, the positive impact of training on the body, the obvious and the unrecognised catastrophes brought about by over-training – all these are exciting subjects that have fascinated him for decades.



Company Profile	Precor, Amer Sports
Brief company history	1980 Precor established by industrial designer David Smith 1990 Formation of the Precor Commercial Product Division 1993 First overseas branch in Europe (Precor UK) 1995 Product introduction of Elliptical Fitness Crosstrainer EFX 544 – the first cardio machine with an elliptical training motion 2002 Take over of the Precor brand by Amer Sports – today the leading sports equipment manufacturer world-wide with the brands Atomic, Wilson, Salomon and Suunto 2007 Product introduction of the Adaptive Motion Trainer (AMT) – the first cardio machine to directly adjust to the motion of the user. Today, Precor is one of the leading fitness equipment brands with branches in over 100 countries around the world.
Head office	The international head office is located in Woodinville close to Seattle in the US State of Washington.
Manufacturing	Cardio machines in Woodinville, WA, USA Strength equipment in Valencia, CA, USA
Equipment ranges (Commercial Fitness)	Experience Line (cardio machines) Icarian Line (strength equipment)
Contact address	**Precor Germany** Amer Sports Deutschland GmbH Hainbuchenring 9 D-82061 Neuried www.precor.de Tel.: +49 (0) 89-89801-370 **Precor Switzerland** Amer Sports SA Bachtalen 33 CH-6332 Hagendorn www.precor.ch Tel.: +41 (0) 41-78426-26 **Precor Austria** Atomic Austria GmbH Lackengasse 301 A-5541 Altenmarkt www.precor.at Tel.: +43 (0) 6452-3900
Guarantee	**Cardio machines** Professional cardio machines: 2 year comprehensive guarantee Can be extended as required **Strength equipment** Icarian Line: 10 year guarantee on frame and weight stacks, 3 year guarantee on mechanical components, all other parts covered by statutory warranty only
Certification	Cardio machines, Experience Line: FCC, ETL, CE, EN 957 Strength equipment, Icarian Line: EN 957
Delivery	Original packaging, pallet with cardboard packaging, dismantled, assembly on site by Precor installation team
Delivery times	Cardio machines 4-6 weeks Strength equipment 12 weeks

Test results

PRECOR® USA

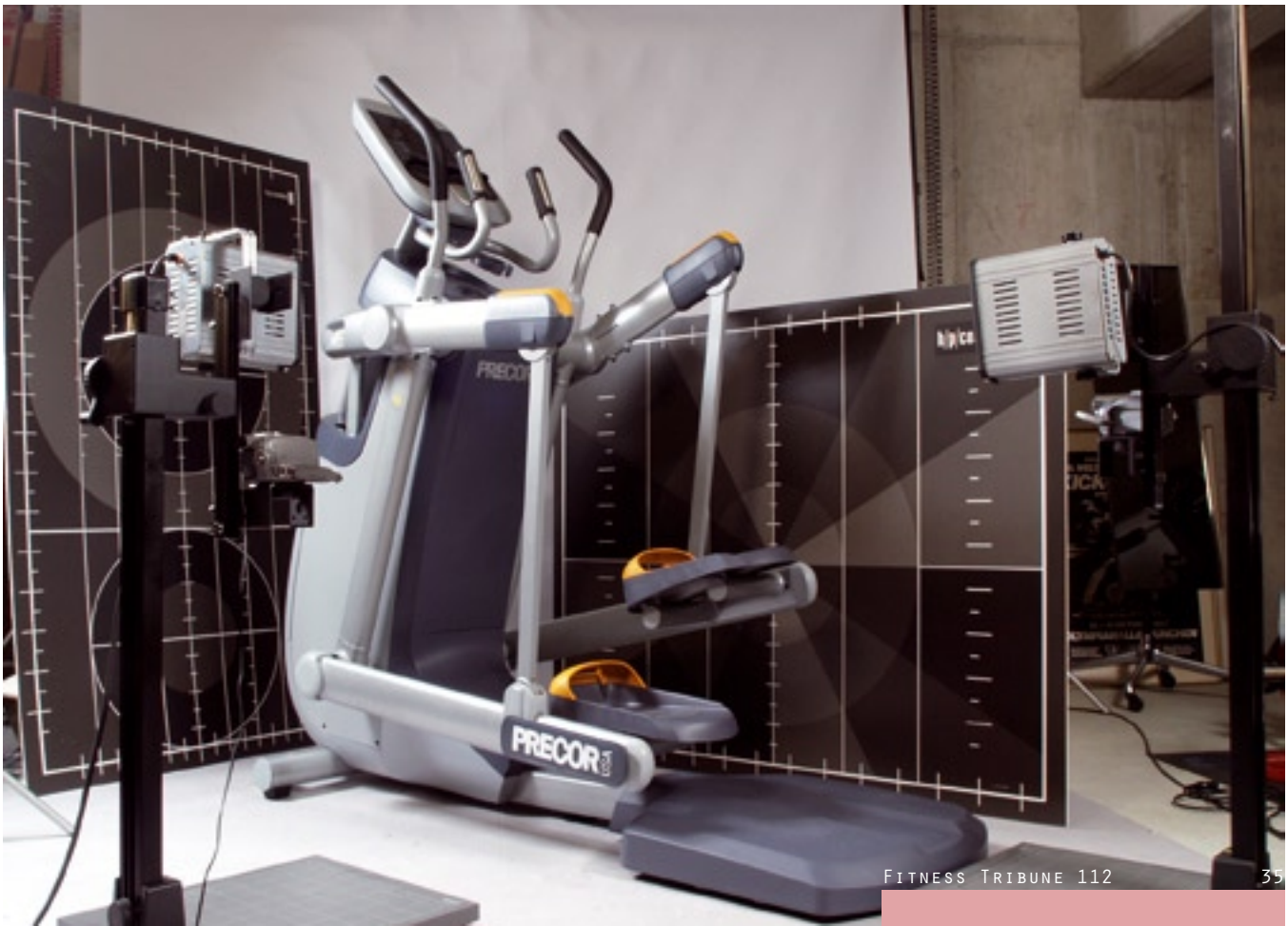
AMT

Cardio Equipment Test©
Manufacturer: Precor
Product: AMT
Test score: VERY GOOD (1.5)
FITNESS TRIBUNE
Conferred by: fitnesstribune.com & schweizerTESTlabor
Test result valid until: 03/2010

Machine name	***Precor AMT*** (Adaptive Motion Trainer)	
Machine type	Cardio training machine / crosstrainer	
Criteria	*From a customer's viewpoint*	*From a fitness club operator's viewpoint*
Special notes etc	The machine has a new and /or outstanding characteristic that inspires the customer, enhancing his motivation to train and increasing his training success. ☼☼☼! Unlimited and flowing variation of stride length. This also varies the stride height and type. The user can at will, change the direction of the stride from forwards to backwards and vice-versa. The AMT does all this with a flowing and gentle action with no need to push any buttons or knobs.	The machine has a new and /or outstanding characteristic that can contribute to achieving greater success for the gym. ☼☼☼ Every customer can train according to his own taste. Shorter, longer, forwards, backwards, faster, slower, (but with at least 56 strides per minute, otherwise the machine shuts down)
Rating	**Excellent (1.0 !) Only awarded in exceptional circumstances.**	**Very good (1.0)**
Aesthetics / design	*How does the machine appear to the average customer?*	*How does the machine appear in the room and by itself?*
Shape	☼☼☼ Crosstrainers are always huge machines. Despite this the AMT has an elegant and relatively light shape.	☼☼☼ The AMT is neutral, it fits in with any room and matches the other machines.
Colour	☼☼☼ Pleasant, light grey shades with four interesting, unobtrusive, splashes of yellow colour.	☼☼☼ Light grey shades that do not dominate a room and that match with everything. The splashes of yellow colour create excitement without being disruptive.
Size	☼☼☼ For a crosstrainer the AMT has compact dimensions and an overall size that has neither an awe-inspiring nor overbearing effect on the customer.	☼☼☼ Due to the compact dimensions the room does not feel over filled, even if there are several rows of AMTs. The base area is quite a space saving feature.
Rating	**Very good (1.0)**	**Very good (1.0)**
Recognisability	*The customer immediately sees what sort of machine this is.*	*How much explanation is required by the trainer?*
Movement	☼☼ If the machine is not in operation the motion is not immediately recognisable.	☼☼ The machine's motion requires a small amount of explanation.
Entry	☼ Getting onto the AMT is not unproblematic for older / overweight / clumsy / customers.	☼ Initially the machine requires explanation and problem customers will definitely require the trainer's help, also for reasons of safety.
Electronics	☼☼ The fast start function is immediately apparent. Other inputs however, are not quite so simple as the user must keep the machine in constant motion because this motion generates the required electric current.	☼☼ The amount of time necessary to explain the programs is not so great. It is minimal for the quick start function.
Starting	☼ Starting the AMT in motion presents problems for many users in the beginning.	☼☼ The trainer's support is often required at the start of the movement.
Rating	**Satisfactory (2.6)**	**Good (2.0)**
Comfort	*The machine regales the customer.*	*Do the customers feel good on the machine?*
Points of contact	☼☼☼ Grips and steps are pleasant to the touch and there are no pressure points even when training on the machine for long periods. Cleaning is fast and simple.	☼☼☼ The comfort issue is unproblematic for both trainer and operator.
Entertainment	☼☼☼ The electronic display shows interesting biofeedback data. The optional audio visual system allows the customer a free choice of what to watch or listen to.	☼☼☼ Interesting audio visual options.
Rating	**Very good (1.0)**	**Very good (1.0)**
Control over training	*Selective, individual and intelligent cardio training.*	*Is the control of training simple, safe and successful?*
Programmes	☼☼☼ Good programs for continuous cardio training (heart frequency/ resistance controlled) or for interval and alternating methods.	☼☼☼ Safe and simple control over training. No test programs, because there are no scientifically standardised tests for crosstrainers.
Heart rate monitoring	☼ Transmitted via a chest strap and with the fixed hand grips. The pulse is not transmitted through the moving hand grips.	☼☼ Pulse transmission through the moving hand grips would be a desirable feature.
Resistance	☼ A minimum resistance that is too high, together with a minimum stride frequency and the body weight (this in particular) is too much for many users	☼☼ Unfit, older, overweight customers are always overtaxed, even at the minimum setting.

Stride length, stride height, stride frequency	☼☼☼ At will, the user can adjust all 3 of these parameters as often as he desires simply through his body movements. It is possible to vary the movement without having to press any buttons whilst the intensity of training remains constant. The training session is entertaining and motivating.	☼☼☼ This is the outstanding characteristic of the AMT
Rating	**Good (2.0)**	**Very good (1.5)**
Ergonomics and biomechanics	*Does the machine fit the user, his height, his leverage, his mass? Is joint loading physiologically effective? Are neuromuscular factors taken into consideration?.*	*Is the machine safe? Is there a risk of incorrect posture, defective positioning or physiologic wear?*
Adjustments	☼☼☼ No adjustments are necessary. Conforms with practically all adult body dimensions.	☼☼☼ No time required for explaining the adjustments.
Load transmission system	☼☼ The AMT offers neuromuscular, intelligent transmission of loads. Pushing off to the rear via the first metatarsophalangeal joint is possible and this activates the whole of the body's musculature together with the joint stabilising muscles (co-contraction of hamstrings and quadriceps). The training benefit affects the whole of the body. Most customers will have to practice this push off. But the AMT also tends to provoke a slightly seated posture with unstabilised joints and crooked posture.	☼☼ In contrast to many other cardio machines a perfect motion is possible. It does however, require a trained instructor and corresponding amount of time for user support.
Shearing stresses / evasive movements	☼ No shearing stresses are generated if an intelligent push off to the rear via the first metatarsophalangeal joint is carried out. With a physiologically poor, slightly seated posture, large shearing stresses can arise in the hip joint and in the spinal column.	● Caution: High shearing stresses can arise during physiologically poor stepping movements. The results include back and hip problems. Avoiding this involves a relatively great amount of time for supervision.
Gait analysis	☼ Because the feet are placed hip width apart on the footplates the body's centre of gravity must always be repositioned above the rearwards/downwards pushing leg with a sideways movement of the upper torso. This movement is similar to climbing steps. During normal walking or running the leg moves beneath the centre of the body.	☼☼ A certain amount of time for supervision is required.
Rating	**Good (2.25)**	**Good (2.25)**
Safety	☼☼☼ There are no pinch or impact hazards for the user. The stability of the machine is high.	☼☼ The footplate lever arms protrude slightly beyond the machine. This therefore presents a slight risk of impact hazard for users
Rating	**Very good (1.0)**	**Good (2.0)**
Overall rating	**Very good (1.5)**	**Very good (1.5)**
Technical data	Length: 188 cm / Width: 71 cm / Height: 175 cm / Weight: 202 kg / Self-generating power supply	
Price	Germany, Austria: Euro 7'990.– Switzerland: CHF 13'950.–	

Rating: ☼☼☼ very good, ☼☼ good, ☼ satisfactory, ● unsatisfactory, ●● poor
The categories, with the percentage score stated, are incorporated into the calculation of the overall score.
All machine tests were carried out impartially and in good faith, however no guarantiees of any type are given or implied.

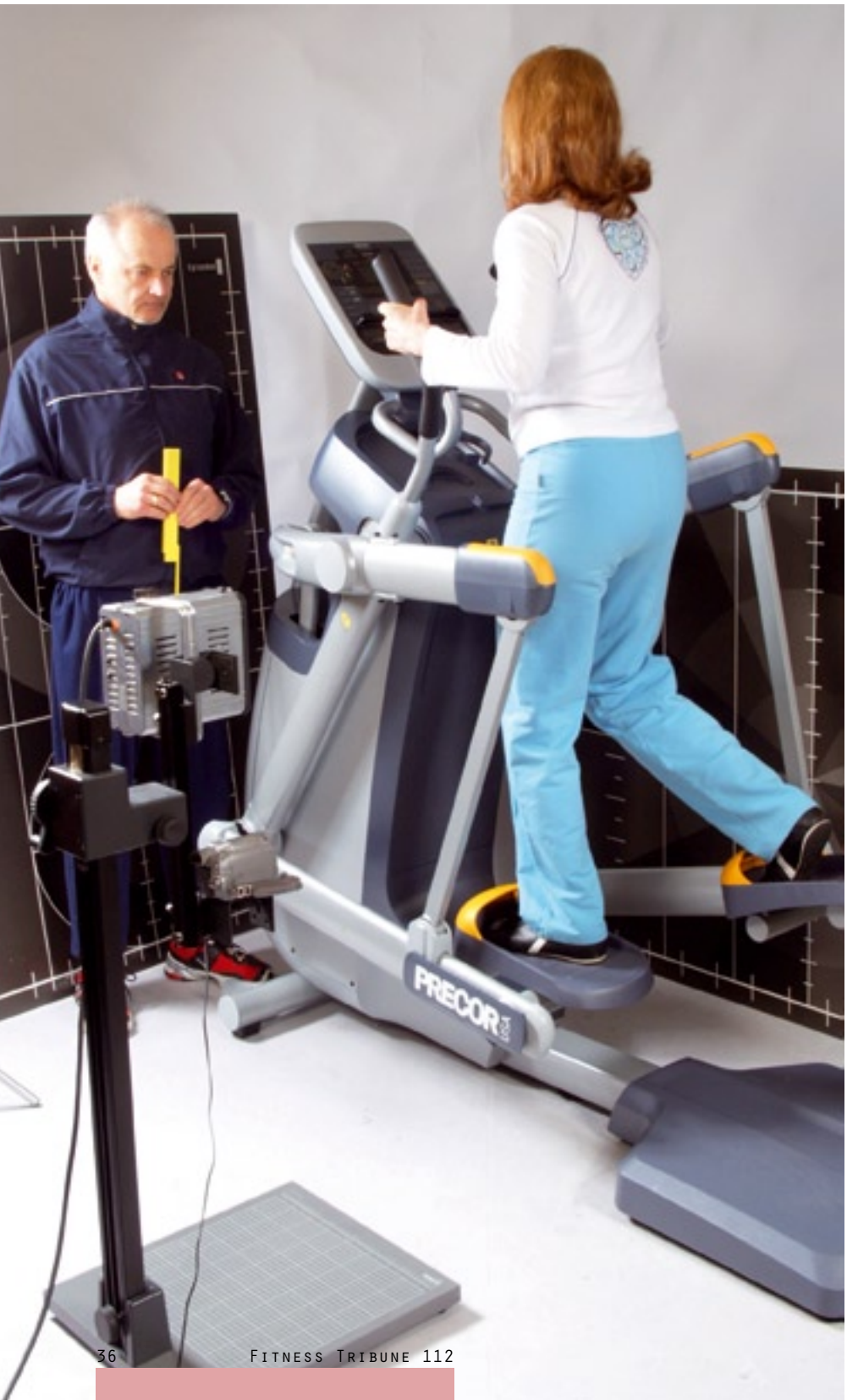


Pioneering work

In the early 1980s, as owner of sales outlets for David and Gym 80 professional strength training equipment in Switzerland, Ueli Schweizer was unhappy that endurance training and endurance training equipment (cardio equipment) was not readily available at most gyms. He began searching out cardio equipment for professional use in gyms. To his surprise he discovered two gems: the Dynavit cycle ergometer and Woodway treadmills. Two products that uncompromisingly placed intelligent, individual training and user comfort at the centre of attention.

From the training technology angle, the Dynavit cycle ergometers of 30 years ago achieved more than most contemporary cycle ergometers. Unfortunately however, they were not able to withstand the long-term wear and tear to which they were subjected in everyday gym use. Why does such and such a part break, why does another wear too quickly – these were the sort of everyday questions that needed to be addressed. The answers to these questions became the basis for fundamental new findings on technology, functionality and quality features of the numerous cardio machines.

The Woodway treadmill's running surface was a unique T-slat system designed to allow running in as natural a form as possible. By investigating this T-slat system in comparison with conventional treadmill systems, Ueli Schweizer gained a huge amount of knowledge in treadmill technology. Unfortunately these two top products have now lost their importance, probably as a result of poor management.



Modern times

Over the years, more and more new machines were included in the product range offered by his company and by gyms: Rowing machines, steppers, climbers, cross trainers as well as many obscure exotic machines.

Invariably, the biomechanical and muscular physiological effects, customer friendliness and programme control, service and maintenance of the machines would come under scrutiny.

Following the sale of his sales business, and after managing a training centre with a sports medicine and performance diagnostics department in St. Moritz, he identified additional specifications that cardio equipment should exhibit: Precision and repeatability with resistance, inclinations and speeds that would remain fully consistent under load over months and years. There should also be test and training programmes that wouldn't succumb to the fun factor but would be based on science. Lactate step tests, spiro-ergonometric tests, video aided walking and running analyses required different qualities of the cardio machines.

Natural Strength

For Schwinn, he designed the revolutionary Natural Strength training concept using special machines. At David, he was involved from the outset in the introduction of the unique excenter technology and the back training programme. At Springboost, the latest in training shoe design, he is engaged in academic publications. Ueli Schweizer is familiar with all facets of professional training equipment – as athlete, developer, producer, mechanic, cleaner, sales person, gym manager, researcher and academic.

schweizerTESTlabor

For the last 3 years in his own laboratory, Ueli Schweizer has not only been carrying out a range of performance

tests on people using walking and running analyses, he has also been testing training equipment. Always from the viewpoint of the training person: diverse individuals with a wide variety of different requirements, needs and requests.

But he also tests machines with the requirements of gym operators in mind. Because a good machine must satisfy and even inspire customers as well as operators/investors over many years.

Since endurance and cardio equipment are his specialities and preferred areas; since he is a critical thinker with an open mind, always questioning things to find better solutions; since he is both a hands-on man and an academic spirit, we definitely wanted to recruit him, the best German speaking independent expert, to carry out test projects for us.

To put the sceptic's minds at rest: Despite surrounding himself with all those fantastic training machines, Ueli Schweizer still runs through meadows, fields and forests, does chin-ups, press-ups and squats. Because nature remains his model, benchmark and – as long as you appreciate it – the best critic of all things artificial!

F.T.