

## X-Force Muscle Machinery

Back in the 1960s Arthur Jones started the muscle-machine revolution with Nautilus. His early machines used chains to increase resistance throughout the range of motion—as more links lifted off the floor, the resistance became heavier. His breakthrough was a cam shaped like a nautilus shell that varied the resistance in accordance with the strength curve of the muscle being trained, eliminating the need for chain resistance.

Jones' next leap in effective machinery came with his MedX line. Each machine was designed so that the weight stack drag was minimal. Jones realized that the negative, or eccentric, stroke of an exercise was most important, so the less drag from the weight plates on the guide rods the better—zero drag made for a heavier, more effective negative. He also recommended doing pure-negative workouts every so often, using 20 percent more weight than on a normal set and performing only the lowering phase. In most cases it required partner assistance, but that negative overload created more muscle trauma and a better growth response.

Now X-Force takes the critical negative stroke even further. On the upward, or positive stroke, the weight stack moves at an angle, so it's lighter. When you reach the top of the stroke, the stack shifts to vertical, creating a heavier negative on every rep—ingenious. In fact, each nega-

tive rep is about 40 percent heavier than the positive.

X-Force is efficiency of effort at its best, making for a greater workload lifted in less time. According to the manufacturer, "Negative training means that it takes less time to reach muscular failure and therefore to enhance muscular size and strength. It also involves a heavier-than-normal overload, which means more force output and more muscle fibers recruited. The scientific support for that is extensive. This type of training ensures a higher level of stress per motor unit, which supplies greater stimulation of the involved muscle fibers and works the entire joint structure. That results in more strength, stability, range motion and healing process."

Because negative-accuated training puts more load on the muscles and creates more trauma, you need more recovery time between workouts, something Jones stressed as well.

X-Force developer Mats Thulin met Arthur Jones in 1980 and was so impressed with Nautilus that he brought the machines to Sweden. Over the years he and his two business partners started and managed 127 fitness centers throughout Scandinavia. Thulin also spent a lot of time trying to figure out a better approach to machine training. That's how the idea of tilting the weight stack came to him.

That's the X-Force innovation: A tilting weight stack that unloads the positive phase and then overloads the negative. It's now patented, in full production and set to revolutionize the weight-training industry.

For more information visit [www.X-Force.se](http://www.X-Force.se).

—Steve Holman

