

What's New in the Gym?

THE EQUIPMENT

Here we highlight what's happening in exercise equipment technology. We have room for only a sampling of the dozens of companies currently making commercial-grade exercise equipment. Inclusion in this section does not imply an endorsement by *MUSCLE & FITNESS*; however, the authors consider these manufacturers to be among the best and their experiences with all the equipment discussed have been satisfactory at the very least. The costs of these products vary, as do other qualities and characteristics.

Research over the past 20 years indicates that the average machine, such as a bench press, at an average, fairly busy health club, will be subjected to approximately 1 million strokes (reps) a year. Some machines, such as ab machines, may get double that use or more.

Don't expect the equipment you purchase for home use at a fraction of the cost to meet the same criteria for training effectiveness, user-friendliness, durability, safety or aesthetics.

CUTTING EDGE

Accentuating the Negative

YOYO TECHNOLOGY

A yoyo on space station Mir? For exercise, no less? Somebody must be joking! At least that's what we thought until we experienced this device firsthand. Although the principle is indeed the same as that of a toy yoyo, believe us, this is no joke! This technology is the simple



YOYO
Quadriceps & calf press

but brilliant idea of a group of Swedish scientists for a machine that could be used to maintain muscle and bone mass in a zero-gravity environment.

EQUIPMENT LINE: Leg and calf-press machine, so far. This unique patented technology, on the cutting edge of training concepts and equipment development, hopefully will soon be available in the U.S. on

home as well as commercial single- and multistation units.

FEATURES: 1) A simple flywheel, made of plastic in the prototype, replaces the weight stack to provide a unique and killer form of overload, particularly during the eccentric contraction. 2) The resistance is accommodating, with no inherent resistance, so you can push as hard as you want or can. If you want to train fast and explosively, you use lighter flywheels, for heavy strength training, the flywheels are heavier. 3) The concentric motion of the leg press, for example, feels a little unusual but the pattern of force output is extremely similar to natural movements like jumping in basketball or track, or like that of a football player exploding upward from a three-point stance.

HOW IT WORKS: Every bit of the force you apply, all the energy you generate all the way through the motion, is stored in that spinning flywheel. What's mind-boggling about this lightweight, compact little device is that when you get to the end of your range of motion, the flywheel reverses directions and it all comes back at you, just like when a toy yoyo returns. At that point it's up to you to "apply the brakes."

If you're capable of pushing 1,000 pounds at the end of your squat or leg press, imagine the potential growth- and strength-promoting effects of that force coming back at you rather than just the force you can exert in the weakest point in

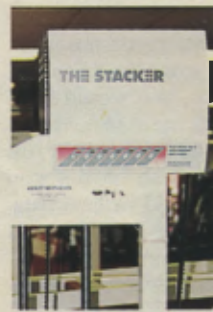
your range of motion. You can resist immediately where you're strongest, or as you get stronger and better adapted to this form of overload, you can resist all that force further back in your range of motion.

The flywheel concept has to date been applied to a leg- and calf-press machine that has been used effectively by a number of champion alpine skiers and hockey and basketball players.

TO CONTACT: YoYo Technology AB, Drottninggatan 106, S-111 60 Stockholm, Sweden. FAX (from U.S.): (011)46-8-7202810.

THE STACKER

A new device can make each rep more productive by increasing the resistance on the eccentric portion of the motion. This device, called the Stacker, has already been adapted to fit all Cybex and Body Masters machines,



THE STACKER

and is designed to be easily retrofitted to any belt or cable machine. It provides no extra force while the user raises the weight

(concentric or positive motion), but as the weight is lowered, the Stacker provides a preselected amount of extra force (10, 20, 30, 40, 50 or 60 pounds).

It felt great to us when we used it and we highly recommend it as a means to increase the muscle- and strength-building efficiency of each rep you do — safely and without the need for a partner or spotter.

TO CONTACT: Computer Sports Medicine, Inc., 135 Beaver St., Waltham MA 02154, 617-894-7751.

UNIQUE LINES



KEISER
Pull-down
& seated row

KEISER SPORTS HEALTH EQUIPMENT

In 1978 Keiser introduced the first commercial exercise equipment that provided positive and negative resistance without using a weight stack. The resistance comes from air pressure.

Quality of design, materials and manufacturing are superlative. No more extensive testing or quality control system exists in the industry. This radical technology has only begun to make inroads into the weight-stack mind-set, but look for that to change as people become aware of its phenomenal potential.

EQUIPMENT LINE: A variety of machines for all bodyparts.

FEATURES: 1) The resistance is provided by air and the system enables the user to instantaneously change — with the touch of a thumb or toe — the resistance at any point in the range of motion, including both the positive and negative movements. The feel is unique. 2) The system has virtually no momentum, which essentially prevents cheating and gives the user maximum intensity through the full range of motion. 3) The resistance is low impact and is easy on the joints and connective tissue. 4) One line offers both bilateral and unilateral options.

TO CONTACT: 411 S. West Ave., Fresno CA 93706-1320, 800-888-7009 or 209-265-4770.



LIDO
Seated
chest press

LIDO STRENGTH-TRAINING SYSTEMS

Loredan has been in business since 1981 producing advanced computer-controlled rehabilitation equipment and exercise machines.

EQUIPMENT LINE: In addition

to rehab equipment, 14 unique, variable-resistance, single-station machines with innovative designs that represent the leading edge of lever technology.

FEATURES: 1) Small footprint. 2) No selector pins or piggyback weights needed. 3) Lower starting weight and smaller weight increments are possible. 4) Extremely smooth operation. 5) Buildup of momentum drastically limited.

TO CONTACT: Loredan Biomedical, Inc., 3650 Industrial Blvd., W. Sacramento CA 95691, 800-729-5436 or 916-374-8009.



MEDX
Triceps extension

MEDX CORP.

Arthur Jones, the inventor of Nautilus, established a new company in 1986, MedX Corp., which initially manufactured and distributed machines to the medical community for lumbar-spinal, cervical-spinal

and knee functions.

EQUIPMENT LINE: 16 sophisticated selectorized resistance exercise machines for the torso, shoulder, arm and leg.

FEATURES: 1) High number of resistance levels (140 levels in some machines and 240 in others). 2) Lowest minimal resistance level on the market (20 foot-pounds). 3) Small incremental changes of resistance (2 foot-pounds). 4) Reduced machine friction levels (MedX eliminates the weight-stack guide rods). 5) Reduced inertial forces. 6) Variable resistance. 7) Range-of-motion limiters at both ends of the movement.

TO CONTACT: 1155 N.E. 77th St., Ocala FL 32670, 800-876-6339 or 904-622-2112.



NAUTILUS
Overhead press

NAUTILUS

Founded more than 20 years ago by Arthur Jones (now of MedX). Although Nautilus has changed hands and moved, the company continues to produce innovative equipment.

EQUIPMENT LINE: More than 50 cam-action selectorized machines, free-weight equipment, cardiovascular equipment (a stair stepper, two recumbent bikes and a treadmill) and a women's line.

FEATURES: 1) The Nautilus for Women line has 25 selectorized machines specifi-

cally adapted to the female body frame and strength capacity. This is the first full line of strength-training equipment that actually fits the female form. Some unique features: a repositioned axis of rotation for each machine; redesigned cam; shortened movement arms to improve leverage; new gearing mechanism with a smaller incremental weight stack; a range limiter option. 2) The Power Plus line that belongs in the combo machine category offers 12 machines that are plate-loaded, have independent arms and provide cam-driven variable resistance.

TO CONTACT: 709 Powerhouse Rd., Independence VA 24348, 800-628-8458 or 703-773-2881.

GYM TREK—THE NEXT GENERATION

Computerized machines



LIFE CENTER
Interactive fitness system

LIFE FITNESS

Life Fitness began in the early 1980s as Lifecycle Inc., marketing the first computerized exercise equipment, the Lifecycle.

EQUIPMENT LINE: Over time the company developed other computerized equipment

including a recumbent bike, the Lifestep, Liferower and Lifestride treadmill. In 1989, the 12-station Lifecircuit computerized strength-training equipment was introduced.

FEATURES: 1) Lifecircuit machines replace weight stacks and variable-resistance cams with electronic resistance while approximating the feel of traditional weight-training machines. 2) The user can select a strength test (set-up test), the Lifecircuit program with standard or "heavy-negative" options, or the regular program with standard or the "heavy-negative" option. 3) By using the set-up test, the user can effectively determine what resistance should be used. 4) Lifecenter Interactive Fitness System, a computerized information tower that stands in the center of the Lifecircuit. Upon insertion of a personalized card, the Lifecenter will display your previous workout data and recommend an ideal workout. After your workout, your personalized, updated fitness information will appear, with a summary that includes the date, time, completed sets, weights lifted, calories burned and other information. The system is scheduled to be interactive with Life Fitness' aerobic and anaerobic equipment as well.