

## PRODUCT NAME

HiPerMotion Maximized Dynamic Force Modulation Pulley  
Product code: MaxDFM V1.0

## CATEGORY

Free motion fitness vibration equipment

## DIMENSIONS/WEIGHT

L 1005 x W 805 x H 2512 mm / 100 kg

## MATERIAL

Steel baseplate and core frame, powder coated central unit, detachable hand and ankle straps, Dyneema cable, tablet mount and remote tablet. With special brackets (optional) the MaxDFM can be wall mounted.

## FUNCTIONALITY

The MaxDFM is a professional fitness device combining the characteristics of a conventional cable pulley with full dynamic force modulation and muscle vibration. The motor-controlled oscillating cable pulley allows for a wide range of exercises for upper and lower body. The MaxDFM cable pulley provides fully controlled strength training and transfers energy to the muscles in the form of vibration. The mechanical stimulus thus induced on the body causes a stretch reflex resulting in rapid and intense muscle contraction. Muscle vibration induces increase in:

- muscle strength and metabolism.
- bone density and reduction of bone decay (osteoporosis).
- blood muscle perfusion, decreasing recovery time.
- production of hormones such as serotonin and neurotrophine.
- muscle flexibility. Vibration training ideally supports stretching exercises.
- muscle coordination.

## TECHNICAL SPECIFICATIONS

Operating frequency:	0 - 60 Hz (30 Hz default)
Pulling force:	50 kgf peak 1 - 50 kgf without vibration 1 - 35 kgf with vibration
Pulley length:	3.7 m
Safety:	Quick Release Detection
Power supply:	200 - 240 VAC, 50 Hz, 6A max
Nominal Power:	1.0 kW (in operation)
Certification:	CE/MD2006-42-EG/EN957-1/2 (pending)/RoHS

## CONTROLS

Wireless control through embedded tablet or smartphone. The user interface has pre-set training programs supported with instruction graphics and video. Password protected interface allowing coaches/trainers to personalize training programs. All settings, instructions and performance feedback are through the remote unit. Control by smartphone allows for individual training set up and performance feedback tracking. The MaxDFM is network ready. Updates on software, training programs, performance and maintenance can be centrally directed.

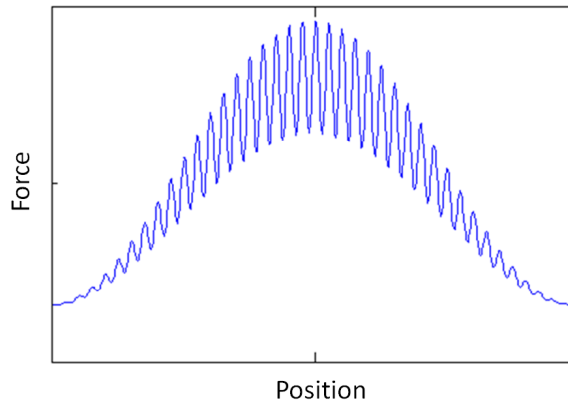




## CHARACTERISTICS

- Full cable pulling speed control.
- Dynamic force control: steady, ramp-up, ramp-down and parabolic load.
- Automatic range of motion detection.
- Full vibration frequency control.
- Cable is motor controlled, no mechanical parts.
- Personalized training programs.

Typical force/position plot



## ACCESSOIRES INCLUDED

- Tablet & User Interface
- Strap handle & Ankle strap
- Straight bar
- Instruction & training software

## ACCESSOIRES OPTIONAL

- |           |       |           |              |
|-----------|-------|-----------|--------------|
| T-bars    | Ropes | Leg strap | Body Harness |
| Floor Mat | Bench | Ropes     | Lat bars     |

## PACKAGING & SHIPPING

- Complete unit in cardboard box with Styrofoam inserts
- 1200 x 900 x 2600 mm, international shipping marking
- Nett weight 100 kg Gross weight 110 kg



## MaxDFM



### ABOUT

The scientific research and technology behind the MaxDFM is developed by dr.ir. Massimo Mischi at the Eindhoven University of Technology. Massimo Mischi received the MSc degree in electrical engineering from La Sapienza University, Rome, Italy, in 1999, and the PhD degree from the Eindhoven University of Technology (TU/e), Eindhoven, the Netherlands, in 2004. In 2007, he became an assistant professor, and since 2011, he has been an associate professor in the Department of Electrical Engineering at the TU/e, where he coordinates the Biomedical Diagnostics Research Labs and the Healthcare Research program of the department. His research interests include model-based quantitative analysis of biomedical signals, with focus on ultrasound and magnetic resonance imaging, as well as on electrophysiology and muscle conditioning. Among several national and international scientific awards, dr. Mischi was awarded the prestigious Dutch VIDI Grant (2009) and European ERC Starting Grant (2011) for his research on angiogenesis imaging by contrast enhanced ultrasound. He is senior member of the IEEE, vice-chairman of the IEEE EMBS Benelux Chapter, and secretary of the Dutch Society of Medical Ultrasound. Dr. Mischi has coauthored of over 150 scientific publications, six book chapters, and six patent applications.

# HIPERMOTION

HIGHLY PERSONALIZED MOTION



### CONTACT

For more information and pricing options, please contact us at [info@hipermotion.com](mailto:info@hipermotion.com) or visit our website at [www.hipermotion.com](http://www.hipermotion.com). We provide full installation and maintenance services. On site installation and instruction is available. Custom options are possible. We ship and install worldwide.



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