



Pineapple Bio-Oscillation





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The Pineapple brand image and range has been described as "cool, fresh, funky & stylish backed up with ultimate versatility and function."

Pineapple is an evolution from traditional high frequency 'whole body vibration' training using a methodology we term Bio-Oscillation.

Pineapple Bio-Oscillation works with lower frequencies than traditional WBV (whole body vibration), and oscillates precisely on one even vertical plane; therefore minimising G-forces this modality gives the same accelerated performance benefits as three way vibration plane platforms that with high frequencies, however Pineapple Bio-Oscillation is less aggressive and gives the user a smoother, calmer work-out experience, but still allows for intensity and optimised results. From a safety standpoint the pure vertical movement combined with the low frequency used virtually eliminates the shearing forces associated with tri-planar movement and therefore reduces risk of shearing injuries to the soft tissue and connective tissues.

Pineapple allows for a full body work-out at frequencies not exceeding 20Hz. For those interested in relaxation, meditation, yoga, Pilates and other well-being activities. Pineapple Bio-Oscillation can be used to support and enhance these techniques working at frequencies below 15Hz.

What is Bio-Oscillation?

The variables for training with vibration are:

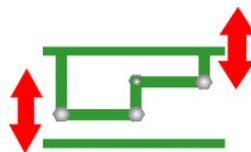
Frequency, Amplitude, Duration and Plane of movement.

Pineapple uses lower frequency, single (vertical) plane movement which allows a variety of amplitudes to be applied thus longer durations can be safely endured which offers enhanced possibilities, applications and results,

Bio-Oscillation – A term used to describe the most effective method to transfer vibration energy into the human being

"Bio-oscillation – the communication of energy into living cells" –
Dr. Carmine J. Gangemi, DC, CSCS

Pineapple is a total vertical movement, low frequency platform (Bio-Oscillation machine)



Pineapple Linkage Action
(World Wide Patent)



Three Key Principles

Total Vertical Movement

Less than 1 G-Force

Functional Design



Principle 1: Total Vertical Movement

Your body's greatest receptor network is in a vertical plane; hence it makes most sense to use this plane to ensure the most efficient transfer of stimulus into your body.

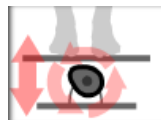
This is imperative for safety.

Due to this effective method of energy transfer there is no need to increase the frequency.

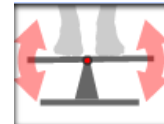
Other Styles of WBV Training Mechanics



Motor Action



Crank Action



Sea Saw Action

All the above mechanical actions have the effect of either a three way movement or four way movement on the body giving a shaking effect. All these methods cause an unfavorable horizontal movement. This can produce an uncomfortable feeling for the user and can also be damaging to many bodies, potentially causing shearing. The other action that is not above is the sonic action, this uses speakers and amplifiers, this method is unproven and untested as all research has only been done through mechanical action and not sound.

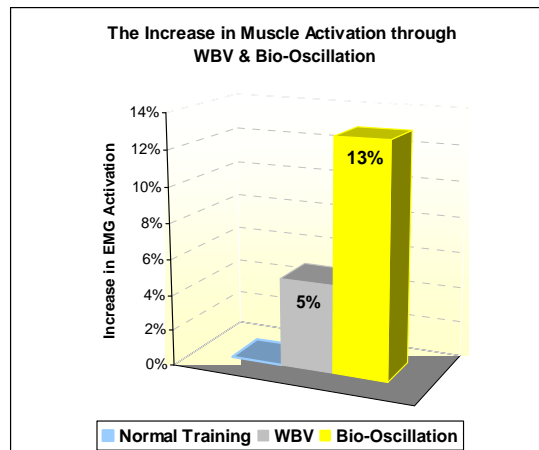
Principle 2: Less than 1 G-Force

All Pineapple's are set with between 0.1 and 0.9 g-force effect. This provides a near-floating effect onto your body (i.e. Ultra low impact) – without reducing any transfer of stimulation to your muscles. Frequencies do not exceed 20Hz;

Models that have amplitudes of 30mm have a frequency no higher than 3.5hz, models that have amplitudes of 1 & 2mm have frequencies no higher than 20Hz; thus all models keep the g-force effect low.

This also ensures a smoother super-comfortable feel

Pineapple gives an increased effect on EMG activation shown below



Control / Normal Training (No additional muscle action)

PowerPlate WBV: WBV-induced increase in leg muscle activity during different squat exercise. Roelants, M, Verschueren, S, Delecluse, C, Levin, O, and Stijnen, V. Journal of Strength and Conditioning Research, 20(1), 124–129, 2006

Pineapple Bio-Oscillation: The analysis of Quadriceps and Hamstring Muscle activations during Pineapple Optimal Vibration Fitness training-Y Song, C-C Hu, T-B Su., and H-J Lee; Biomechanics laboratory, Graduate Institute of Physical Education, Health and Leisure Studies, Department of Physical Education, National Chia-Yi University



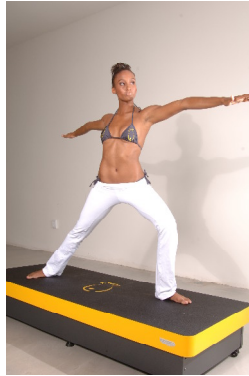
Principle 3: Functional Design

All Pineapple platforms feature an 'open' platform design with no central console mast. This enables a broad range of exercises or activities to be performed – total functional movement.

Core muscle training is made easier.



Group Studio Classes



Yoga, Pilates & Dynamic Work



Optimal Abs Class



Points of Differentiation

- No wasted energy transfer (i.e. Lateral effect)
- No risk of parallel force (i.e. Shearing) to the tendon/joint
- Efficient transfer of energy (in essence any vibration machine is a kinetic energy transfer machine) Pineapple is a concentrated, clean and subtle transfer.
- Safety and effectiveness
- Functional Fitness
- Comfortable
- Quiet - low noise levels and low noise transfers through surfaces





Benefits of The Pineapple Range:

Some Key differentiators

- No central console mast and small footprint for the entry level models for space efficient workouts
- Movement is only in vertical plane, so shear is minimised thus reducing risk of injury
- Frequency is much lower than conventional WBV systems
- Amplitude varies from 1mm to 30mm giving greater training options
- There is no central console mast so allows more exercise options for varied programming
- The platform can withstand great weights – in excess of 350 kg for entry level platform.
- The range has portable models so supports the Personal Training Market, personal use & studio class markets.
- Versatile Functionality ~ Full movement all around each machine allows dynamic functional fitness training
- Static work and dynamic workouts can be performed at various frequencies and amplitudes allowing the benefit of a broader base of exercise programs.
- All models can be used for relaxation, yoga, mediation, Pilates and wellbeing styled programs
- Ensures True Core Training
- Full Accelerated performance benefits
- Increased strength, flexibility, recovery, rejuvenation, power, stability, coordination, metabolic rate, relaxation, detoxification
- Users not exposed to G-Forces higher than 0.9
- Some models can be used with a remote control or Manual over ride
- Some models can be set to follow a specific time frame and program
- REPS accreditation training & continued support & development

Applications

- General health and fitness
- Sports specific fitness
- Increase global blood flow and metabolic rate
- Chiropractic applications - can be utilized to assist in retraining and improving postural muscles, increase the flow of fluid to the vertebral discs to help keep them healthy (discs don't have a large blood flow, so through osmosis, compress/decompression, nutrients and O2 are transferred. For rehabilitation – eg. after an ACL injury to help an athlete return to the field of play by helping improve joint stability by strengthening the relevant muscle groups.

Special Considerations

Pregnancy; Tinnitus; Bone fracture; Unstable Joints;



Specialist Education & Training

Pineapple is built on a foundation of transparent research, education and training. Pineapple Inc continues to research with an unbiased approach into methodologies, theory and practicality.

Pineapple encourages everyone to continuously enhance their knowledge to help realise their health & fitness goals. Pineapple Europe Ltd are offering REPS accredited training from Feb '09 – and will continue to develop highly efficient education and coaching modules as well as interactive learning communities online.



Pineapple Range Specifications

Three versatile Pineapple Platforms:

The Modahl ~ Ultimate Versatility

Perfect for studio classes, Personal trainers on the move and home use

| | |
|----------------|---------------------|
| Net weight | 35kgs |
| Dimensions | 0.6m x 0.3m x 0.25m |
| Carry Capacity | 450lbs |
| Amplitude | 2mm |
| Frequency (Hz) | 2 - 15 |



The Optima ~ Ultimate Function

Large bed size fantastic for full length yoga and Pilates style workouts combined with dynamic power and strength training

| | |
|----------------|---------------------|
| Net weight | 110kgs |
| Dimensions | 1.9m x 0.75m x 0.3m |
| Carry Capacity | 550 kgs |
| Amplitude | 1mm |
| Frequency (Hz) | 5 - 20 |



The Pro ~ The Workhorse

Huge carry capacity, profound strength training effects with resistance workouts, big amplitude and low frequencies

| | |
|----------------|---------------------|
| Net weight | 110kgs |
| Dimensions | 0.84m x 0.8m x 0.4m |
| Carry Capacity | 550kgs |
| Amplitude | 30mm |
| Frequency (Hz) | 1.2 – 3.5 |



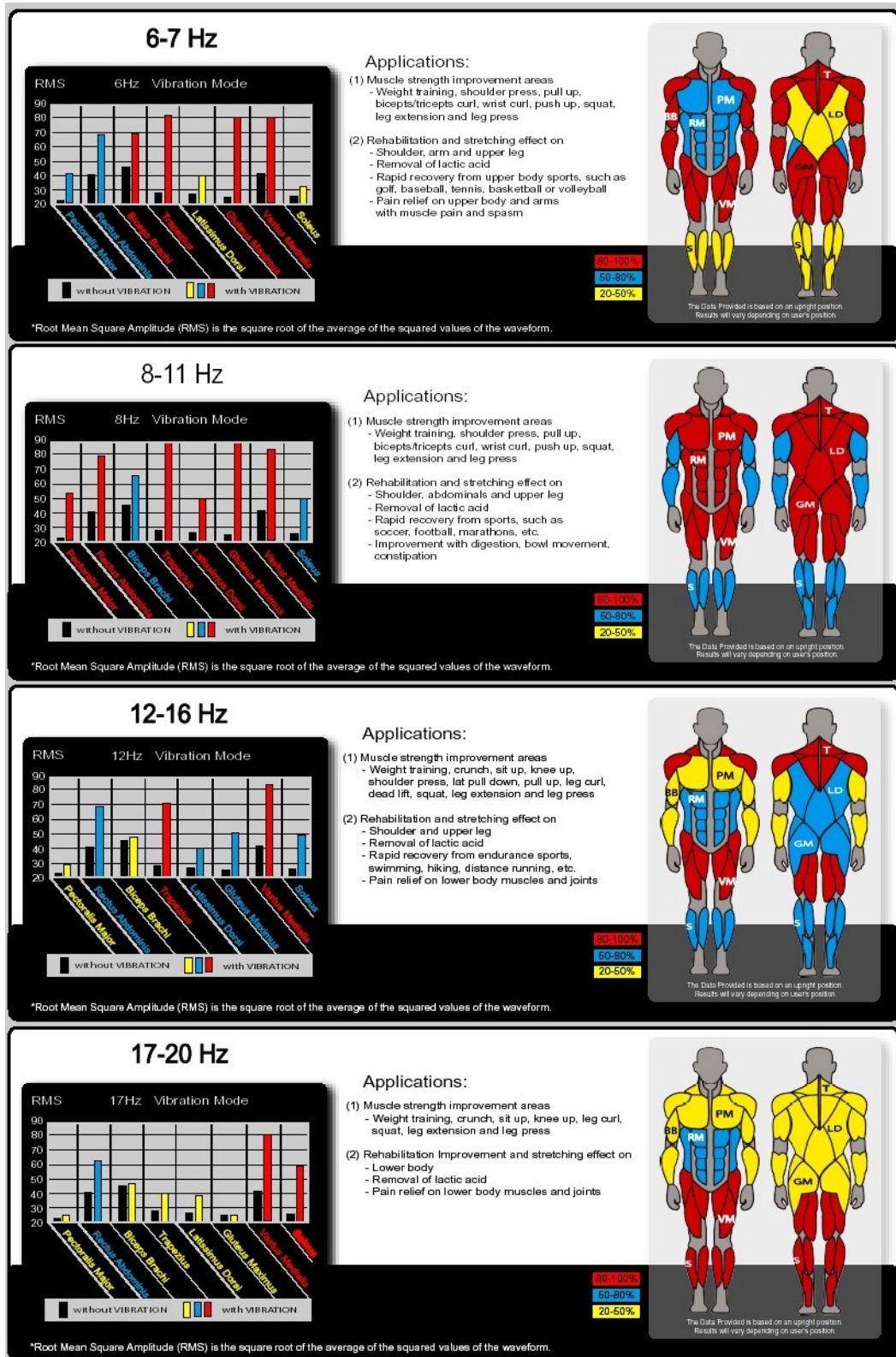
Register interest on www.pineappleeurope.com

Email info@pineapplefarm.co.uk





Examples of the effects of low frequency vibration training



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