








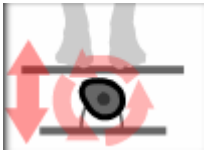

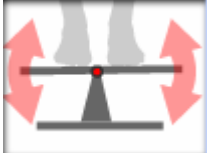





Comparison Table of WBV technology

Type of Vibration	“LINKAGE “ 	“Motor”	“Crank”	“Sonic”	“See-Saw”
Overview					
Frequency (Hz)	Unlimited: From 1 Hz ~ 50Hz	20 – 40 Hz	30 - 50Hz	6 - 45 Hz	5 – 30 Hz
Amplitude (mm)	Unlimited: 0.35 – 35 mm	Set – one level only. Zero or 3mm	2-4 mm	Power only	No amplitude, change your feet position
Power Control	Incremental and remote control available	Set in units and manual operation only	Set in units, and manual operation	Incremental and manual control only.	Incremental and remote control.
Acceleration	Ultra smooth	Irregular	Irregular	Smooth	Irregular
Noise	Very low noise	High	Medium	Very low noise	Medium
Platform Size	Unlimited size	Small-Medium	Large	Medium-Large	Medium-Large
Carry Capacity	Unlimited	80-120 kg	Up to 300 kg	Up to 300 kg	Up to 300 kg
Mechanical Reliability	Ultra durable, very low wear Industrial AC Motor	High wear, Low durability AC motor	High wear, low durability	Durable, but susceptible to electric problem	Medium wear, medium durability
Cost	Best value	Very low to medium	High	Very High	High
Exercise Postures	Fitness, Yoga, Meditation	Fitness	Fitness	Fitness, relaxation	Fitness
Exercise Effect	Very effective at any Frequency	effective only at high frequency	Effective only high frequency	Effective at low to high frequency	High Impact on Pelvic Joints.
Products Expanding	Huge range available	Limited and low quality	Limited, medium quality	Single product, good quality	Limited range, good quality



Overview of Technology

<p>“LINKAGE” </p> <p>The most cutting-edge technology. Creates true and precise vertical motion Whole Body Vibration. The LINKAGE module lifts the platform up and down with total accuracy. The LINKAGE module creates the</p> <ul style="list-style-type: none"> ※Complete performance range of frequency and amplitude ※Unlimited carry capacity ※Unlimited platform size ※Long life reliable machine. ※Ultra smooth motion due to the sinusoid-inertia . ※Ultra comfortable and totally harmless. 	
<p>“Motor”</p> <p>The most common and easy method to manufacture based on the principle of action-reaction. Often very low quality with limited actual WBV effect due to lack of power and inaccurate movement.</p>	
<p>“Crank”</p> <p>The rotary cam creates the vibration in a vertical method by pushing the pedestal up and down. However, horizontal movement also occurs, which can cause dangerous ‘shearing’ at joints. At high frequency the vibrations can occur in random places in your body, which may also have negative impact.</p>	
<p>“Sonic”</p> <p>Modern technology that uses audio amplifiers and speaker systems. Unproven scientific results as all current research has been undertaken with mechanical vibration not sound.</p>	
<p>“Seesaw”</p> <p>Mechanical crank style that moves in a seesaw movement (right-up, left-down). Has unfavorable horizontal motion, which can be uncomfortable and damaging to many bodies. Separate units needed for upper body activity.</p>	

An Overview of the Technology with examples of the leading manufacturers of each style

	Safety	Comfort	Reliability	Performance	Extra
<p>Linkage</p> 	<p>All G-force are below 2G's.</p>	<p>Smooth, sinusoidal wave, gives a continuous acceleration curve, so ultra smooth, comfort.</p>	<p>Unique Link system, ensures very low wear. And allows for any weight loading. Ultra long guarantee</p>	<p>Ultra low frequency for Elite strength, Low frequency for Meditation and relaxation Medium Freq for toning, massage and energization High for Athletic performance. The complete performance answer</p>	<p>9 different styles of unit – to ensure the perfect unit for different personal requirements , all with unique settings to guarantee the best results.</p>
<p>Motor: Eg. VibeTrainer</p> 	<p>No actual vertical vibration. Only shaking. Very dangerous to consider as a WBV unit</p>	<p>Shaking effect is like a mini earthquake .</p>	<p>Very poor, due to very low quality manufacture and construction</p>	<p>Very low level physiological and psychological effect</p>	<p>A very poor imitation of a WBV machine. A liability to the WBV industry</p>
<p>Crank: Eg. PowerPlate</p> 	<p>Huge potential danger due to excessive G-Force, and</p>	<p>Shaking effect is like a mini earthquake . Excessive G-force is</p>	<p>Massive reliability issues due to overworked motors, unable to handle</p>	<p>Moderate success in the limited mode that are available, primarily fitness and athletic</p>	<p>2 styles of unit 'Commercial' and 'Home.' The 'home' unit is merely</p>

	'shearing' at joints due to the lateral motion also involved.	very uncomfortable	strong use	performance. Huge limitation to mind/body activities and actual activity that can be performed.	a dumbed down version of the commercial. A 1-machine fits all mentality, based on the limitation of the technology and only very limited settings available
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<p>Sonic E.g. TurboSonic</p> 	<p>Current diagnosis is good. Although little research on this style of WBV application</p>	<p>Smooth, comfortable application</p>	<p>Good reliability, due to reduced moving parts.</p>	<p>Unproven Scientific effect of sound WBV. Has a good frequency range, and promising anecdotal results. Primarily for therapy only</p>	<p>One unit fits all mentality. Very limited range of action available due to design limitations.</p>
<p>See-Saw E.g. Vibraflex</p> 	<p>Open debate of the danger of this style of WBV application, and the wear on joints due to the pivoting/see saw motion.</p>	<p>Pivoting see-saw effect is like mini seasickness. Excessive G-force is very uncomfortable</p>	<p>Moderate to Good reliability. Minimal mechanical malfunction and breakdown</p>	<p>Moderate to Good results. Primarily for therapy and use for bone tissue strengthening. Very limited range of complete solutions available due to technology limitation</p>	<p>4 styles of unit. 3 platform styles, all with very similar and limited settings, and one 'dumbbell' style unit for upper body action.</p>

What about Frequency and Amplitude.

Frequency

- 4 Hz Zen-state
- 5 Hz Chi exercise
- 6 Hz Memory stimulation
- 6-8 Hz Relaxation
- 6-8 Hz Yoga
- 8-10 Hz Rehabilitation
- 10 Hz Healing
- 10-12 Hz Mood enhancement
- 10-12 Hz Body Toning

10-12 Hz	Increase metabolism
12-14 Hz	Relaxation
12-14 Hz	Massage
20 Hz	Energize
30 Hz	Increase alertness
40 Hz	Endorphin release

Also there are specific Frequencies relating to muscle fiber recruitment for athletic performance

6-7 Hz

6Hz Vibration Mode

Muscle	without VIBRATION	with VIBRATION
Peroneus Pedalis	~30	~40
Peroneus Tertius	~30	~40
Peroneus Longus	~30	~40
Peroneus Brevis	~30	~40
Latissimus Dorsi	~30	~40
Rectus Abdominis	~30	~40
Rectus Femoris	~30	~40
Rectus Lateralis	~30	~40
Soleus	~30	~40

Applications:

- Muscle strength improvement areas
 - Weight training, shoulder press, pull up, biceps/triceps curl, wrist curl, push up, squat, leg extension and leg press
- Rehabilitation and stretching effect on
 - Shoulder, arm and upper leg
 - Removal of lactic acid
 - Rapid recovery from upper body sports, such as golf, baseball, tennis, basketball or volleyball
 - Pain relief on upper body and arms with muscle pain and spasm

*Root Mean Square Amplitude (RMS) is the square root of the average of the squared values of the waveform.

8-11 Hz

8Hz Vibration Mode

Muscle	without VIBRATION	with VIBRATION
Peroneus Pedalis	~30	~40
Peroneus Tertius	~30	~40
Peroneus Longus	~30	~40
Peroneus Brevis	~30	~40
Latissimus Dorsi	~30	~40
Rectus Abdominis	~30	~40
Rectus Femoris	~30	~40
Rectus Lateralis	~30	~40
Soleus	~30	~40

Applications:

- Muscle strength improvement areas
 - Weight training, shoulder press, pull up, biceps/triceps curl, wrist curl, push up, squat, leg extension and leg press
- Rehabilitation and stretching effect on
 - Shoulder, abdominals and upper leg
 - Removal of lactic acid
 - Rapid recovery from sports, such as soccer, football, marathons, etc.
 - Improvement with digestion, bowel movement, constipation

*Root Mean Square Amplitude (RMS) is the square root of the average of the squared values of the waveform.

12-16 Hz

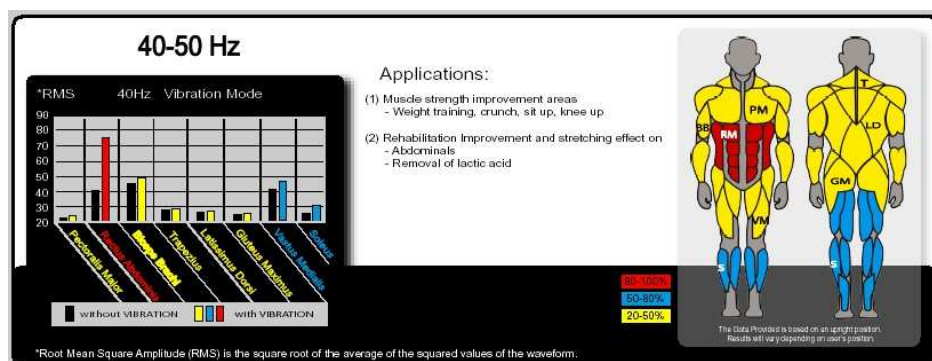
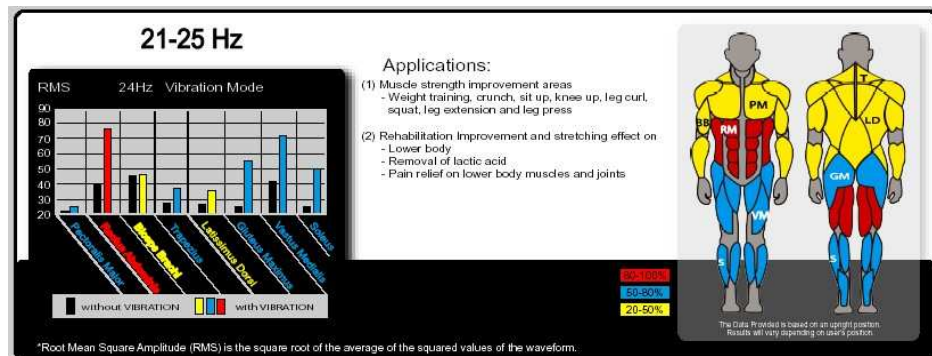
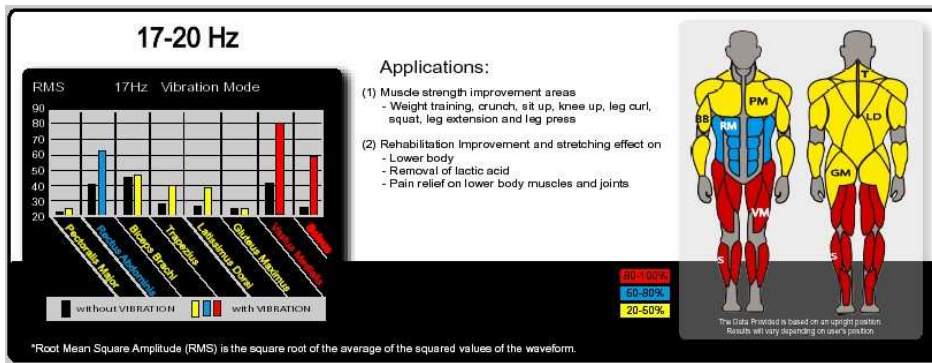
12Hz Vibration Mode

Muscle	without VIBRATION	with VIBRATION
Peroneus Pedalis	~30	~40
Peroneus Tertius	~30	~40
Peroneus Longus	~30	~40
Peroneus Brevis	~30	~40
Latissimus Dorsi	~30	~40
Rectus Abdominis	~30	~40
Rectus Femoris	~30	~40
Rectus Lateralis	~30	~40
Soleus	~30	~40

Applications:

- Muscle strength improvement areas
 - Weight training, crunch, sit up, knee up, shoulder press, lat pull down, pull up, leg curl, dead lift, squat, leg extension and leg press
- Rehabilitation and stretching effect on
 - Shoulder and upper leg
 - Removal of lactic acid
 - Rapid recovery from endurance sports, swimming, hiking, distance running, etc.
 - Pain relief on lower body muscles and joints

*Root Mean Square Amplitude (RMS) is the square root of the average of the squared values of the waveform.



AMPLITUDE

Amplitude helps create the intensity effect for WBV.

It is very important to have the correct frequency for each desired response, so that maximum effect can be applied with regards intensities.

With regards to safety, comfort and long-term performance results, all BODYGREEN's WBV machines are set to amplitude that create a G-force of less than 2G. (Jogging typical creates a 2-3G force on the body)

Using the correct frequencies ensures we can still achieve the best results as the body is

very responsive at the correct frequencies.

Other manufacturers apply excessive G-force (from 3-20 G's) to the body, as they hope to create a stimulation to various tissue in the body, which is necessary due to their inadequate and hence ineffective frequency ranges (typically 25-50Hz)