

# Smart Gravity 3D

## Safety and performance information

### Technical Specification

Dimensions	420 x 390 x 282 cm (Length x Width x Height)
Weight	300 Kg
Capacity	0 - 150 Kg
Vertical excursion	120 cm
Supply	230 VAC, 50 Hz
Absorbed power	900 W

### Functionality

- Subject's body weight support (during therapy/exercises)
- Subject's fall protection (during therapy/exercise)
- Re-education of walking
- Balance re-education with weight bearing and/or in a safe condition
- Training in different mobility modes and aerobic training
- Training of postural alignment during movement
- Training of segmental and global coordination and sensorimotor skills
- Training for the correction of joint dysmetries / asymmetries (presence of dysmorphisms and/or paramorphisms), focus on hips and knees.

### Use in orthopedic treatment (post -acute phase where feasible and/or practicable):

- Hip prosthetisation
- Knee prosthetisation
- Ligament reconstruction (hips, knees)
- Ligament instability and laxity (hips, knees)
- Tendon rehabilitations of different entities
- Spinal problems
- Problems of a degenerative nature
- Patellar tendon
- Tonic recovery

## Smart Gravity 3D

- Dynamic trophism
- Parkinson's disease (PD)

### Use in neurological treatment (post-acute phase where feasible and/or practicable):

- Recovery of global motor skills
- Recovery of motricity in the lower limb
- Neurological problems of a degenerative nature
- Motor/sensory deficits in ischemic or hemorrhagic stroke outcomes (hemiplegia/hemiparesis)
- Spastic paraparesis or tetraparesis in PCI outcomes
- Motor/sensory deficits in outcomes of Cranio Encephalic Trauma
- Ataxia
- Multiple Sclerosis (MS)
- Kinesthetic motor control disorders
- Paraparesis (Spine Core Injure)

### Additional use for normotype users:

- Training for postural and functional movement
- Training for maintaining and increasing performance
- Training for prevention and adapted physical activity

## Contraindications

Before use, all patients should be assessed as medically stable and fit by a trained health care professional. Patients with diagnoses, symptoms, or conditions listed below should not use the Smart Gravity 3D system. The following list serves as a reference only, while the final decision on suitability for use of the Smart Gravity 3D system must be made by the treating physician.

### Absolute contraindications

- Uncontrolled hypertension
- Unstable fractures (including ribs and lower extremities)
- Severe osteoporosis
- Halo cervical supports
- Unstable skin structures (e.g., skin grafts)
- Chest tubes (does not refer to PEG tubes)

## Smart Gravity 3D

- Conditions in which pressure around the abdomen, thighs, groin, or shoulders is contraindicated
- Patients weighing more than 150 kg
- Patients with height greater than 190 cm
- Uncontrolled diabetes
- Acute myocardial infarction (within the last 2 days)
- Unstable angina pectoris
- Cardiac arrhythmia and/or limited haemodynamics
- Symptomatic massive aortic stenosis
- Uncompensated/uncontrolled heart failure
- Acute pulmonary embolism or pulmonary infarction
- Myocarditis, pericarditis, acute endocarditis
- Acute aortic dissection
- Acute coronary syndrome
- Acute phlebothrombosis of the lower extremities
- Febrile infections
- Acute thrombosis
- Recent injuries, eg. after surgery (general surgery)
- Acute fracture
- Acute headache

**Relative contraindications (the asset may be commenced if the possible benefits outweigh the risks. The decision must be made by the doctor before the treadmill is used)**

- Left main coronary artery stenosis
- Main artery disease
- Heart valve disease, moderate severity
- Electrolytic imbalance established
- Arterial Hypertonia (RR > 200 mmHg syst. > 110 mmHg dyast.)
- Tachyarrhythmia or bradyarrhythmia
- Hypertrophic cardiomyopathy and other forms of outflow tract obstruction
- Higher grade atrioventricular block (AV)
- Anaemia
- Physical and/or mental disorders that cause inability to exercise properly

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## Smart Gravity 3D

- Partially invasive medical devices (probes, infusers, catheters, external fixators, etc.)
- Cardiac pacemaker
- Visual disability (vision < 30% according to WHO)
- Pregnancy
- Damaged disc or traumatic illness of the spine
- Inflammations
- Epilepsy