

# The Ring<sup>3</sup>

Trimpin

In which patterns move the three spheres roll?



Watch the movement of the spheres.

The relation 3 to 4 to 5 is a recurring element in mathematics, physics, and also music. There is a right-angled triangle with sides of these lengths, and the 3rd, 4th and 5th overtone of a note form a major chord.

This artwork uses these relationships in its measurements – the diameters of the rings are 3, 4 and 5 metres – and also in its movements. The red number shows the current mode.

### **1. Manual mode**

**2. Clock:** This mode is too slow for an exhibition and will therefore not be demonstrated.

**3. Ramping mode:** Starting from rest, the spheres move faster and faster and then slow down to a complete stop again.

**4. Planetary mode:** The circulation times are in the same proportions as the years of Venus (225 days), Earth (365 days) and Mars (687 days): 8, 12 and 20 seconds.

**5. Rotational velocity:** The spheres all orbit in the same time, but the linear velocities of the spheres have the relationship 3 to 4 to 5.

**6. Linear velocity:** The linear velocities of the spheres are the same, but the orbital times are in the proportions 3 to 4 to 5.

**7. phæno mode:** Cycling through modes 3 to 6.