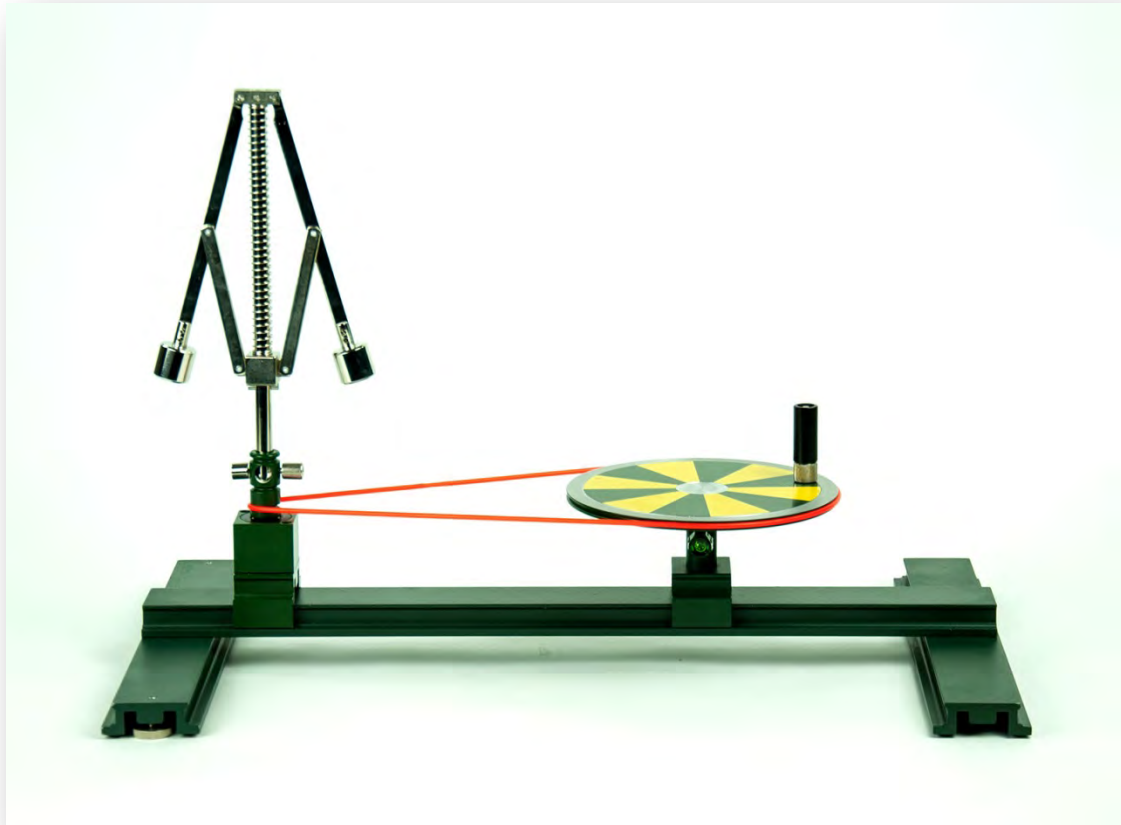


CENTRIFUGAL GOVERNOR (WATT'S GOVERNOR)

MED 09.08



Material

Item-no.	Qty.	Description
DS101-1G	1	Support base, large, L=500 mm
DS103-3G	1	Sliding saddle, H=34 mm
DS402-3B	1	Pivot bearing with transverse hole,
DS402-3S	1	Drive pulley demo, with ball bearing
DS402-2N	1	Crank pin, L=50 mm
DS401-1A	1	Drive belts, set of 2
DM352-1R	1	Watt's Governor demo

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Purpose

To demonstrate how a centrifugal regulator works (centrifugal governor)

Preparation

Mount the pivot bearing and the sliding saddle on the support base as shown on the image; afterwards screw the crank pin on the drive pulley.

Insert the drive pulley into the sliding saddle and mount the Watt's Governor on the pivot bearing.

As shown on the image below taut the long drive belt between the sliding saddle and the pivot bearing.

Experiment

Set the Watt's Governor into rotation.

Conclusion

The Watt's Governor weights are pushed outwards against the weight and spring force and thus upwards, this is depending on the rotational speed.



Note

The rotational speed can be determined with a light gate + counter; make sure that two impulses are detected for one full turn.

Usually a device that reduces the speed (e.g. a throttle valve) is connected to the Watt's Governor.

Such a controller is particularly known from the Watt steam engine but is also used for lawnmowers.