ANGLE JACK

MED 03.05

Material:

Item-no.	Qty.	Description
DS101-1G	1	Support base, large, L=500 mm
DS093-04	1	Sliding saddle "Sepp", H=40 mm
DS201-75	1	Support rod, round, L=750 mm, D=12 mm
DS400-3K	1	Bosshead cross-pattern, Demo, green
C7002-1A	1	Universal clamp, 0 - 80 mm
DS502-30	1	Support ring on support clamp, D=30 mm
C3020-6D	1	Erlenmeyer flask glass, 250 ml, SB 29
P7422-2B	1	Glass tube straight, L=80 mm
C7320-4B	1	Stopper silicone, 26/32/30 mm, 1 hole, for SB 29
C7320-4C	1	Stopper silicone, 26/32/30 mm, 2 holes, for SB 29
C6210-1B	1	One-way tap
C7445-7S	1	Hose, silicone, D=7/9 mm, L=100cm
C1000-1G	1	Beaker glass, 600 ml, low form, Borosilicate

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Purpose
Demonstration of the effect of an angle lifter

Preparation
Place the sliding saddle in the centre of the large support base and insert the support rod into the sliding saddle; afterwards mount the support ring on support clamp at the top of the support rod, the bosshead is mounted 15 cm below.

Insert the universal clamp into the bosshead as shown on the image on the left side.

Pour 200 ml coloured water into the Erlenmeyer flask, afterwards moisten the 80 mm glass tube on one end and push it 5 mm into the small hole of the silicone stopper with two holes.

The one-way tap is pushed into the same hole from the other side. Moisten the silicone hose on one end and connect it to the one-way tap.

Mount the Erlenmeyer flask on its neck at the universal clamp. The loose end of the silicone hose is inserted into the beaker as shown on the image.

Experiment 1
If you suck on the bottom end of the hose the water will start to flow until the Erlenmeyer flask is nearly empty. If desired the water flow can be turned on and off with the one-way tap.

Experiment 2
Replace the silicone stopper with 2 holes with the silicone stopper with one hole and repeat the experiment as before.

The resulting underpressure in the Erlenmeyer flask prevents the water from flowing further.

Explanation
The mass of the flowing (falling) water causes an underpressure; therefore water is pressed into the angle jack by the atmospheric air pressure until its suction port is exposed.

If you lift the beaker the water flow stops as soon as the two liquid levels are equal.