

OVERPRESSURE AND UNDERPRESSURE (BUBBLE BURSTER)

MED 16.10a



Material:

Item-no.	Qty.	Description
DM530-1A	1	Bubble burster set, demo
Set consisting of:		
DM530-1B	1	Bubble burster, demo
DM530-2R	2	Rubber band, wide
DM530-1S	1	Hose securing clamp 100 – 110 mm
P3520-2E	1	Polyethylene rubber pad
C7445-5S	1	Hose, silicone, D=5/8 mm, L=100 cm
C6100-2G	1	Syringe plastics, 120 ml, for vacuum-experiments

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Goal:

Generation and demonstration of overpressure and underpressure by increasing and decreasing the density

Setup:

The PE film is stretched over the bubble burster.

The film is tightened with the two wide rubber bands. The two rubber bands should cover the entire inner surface of the groove and must not be twisted.

If the surface of the film is not smooth, it should now be retightened. The hose safety clamp is pressed together at the handles, held over the rubber rings and released again. Both metal rings must be in the groove.

The plunger of the syringe is completely retracted and connected to the bubble burster by the vacuum hose.



Experiment 1:

Push the piston slowly back into syringe.

Experiment 2:

Remove the hose from the syringe.

Again re-stretch the film to smoothen the surface. Push the piston completely in and connect the hose again.

Draw up the piston slowly again.



Result:

By pressing in the air, the film is curved outwards. An overpressure is created.

When the air is sucked out, the film is sucked into the interior. An underpressure is generated.

Note:

A similar effect is achieved on the cheeks by pressing air out of the lungs. This compresses the air in the oral cavity and pushes the cheeks outward.