(фотография кальяна полностью)

In this article we are going to tell you about a hookah structure, the purpose of its components and briefly about smoking from a physics point of view.

**Bowl**

It is put on a hookah stem. Tobacco is placed in a bowl. Perforated foil is pulled on atop and smoldering coals are laid out on the foil. As the bowl heats, the tobacco in it is heated too and there appears the smoke we inhale. Bowls are usually made of ceramics or glass, examples of iron ones or silicone ones are met less often. There are holes on the bottom of the bowl through which the smoke gets in the stem.

(чашка глиняная без забивки)

(чашка, вид на отверстия)

(чашка с табаком)

(чашка с фольгой и дырочками)

**Stem**

A stem is inserted in a hookah base and smoke from a bowl goes through it to liquid poured in the base. The stem may be integral or consist of a few joining components. It is predominantly made of iron and glass. There are also a hose port and, often, valve on the stem (see below).

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(фото шахты)

**Hookah Base**

Liquid is poured in a hookah base. Smoke goes through it while smoking and leaving there a portion of harmful substances. In most cases we use normal water. To get an additional taste you can also add juices, milk, different alcoholic drinks or flavoring there. The hookah bases are predominantly made of glass, although you may see iron ones sometimes. Liquid is poured in the hookah base with the calculation that the end of the stem was submerged in it 1-2 cm deep.

(фото колбы с водой)

**Hose**

A hose is inserted in a hose port and ends with a mouthpiece which you hold in your hand while smoking.

It is made of silicone, leather, leather substitute, plastic.

(фото нескольких видов шлангов)

**Valve**

Surplus of smoke is removed with a valve if you blow in a hose. The properly functioning valve doesn’t let air in while inhaling and let it out when you exhale. For instance, if a hookah starts harshing, you may reduce the amount of heat (to replace an excess coal) and blow the hookah out, so that bitter smoke went out through the valve.

(фото клапана)

**Mouthpiece**

Mouthpieces are removable on some hoses and you may pick up the one with the form/color you like. There are also disposable plastic mouthpieces that are put on the main one and are used in hygienic purposes when few people smoke from a single hose.

(фото нескольких разных мундштуков)

(фото одноразового пластикового мундштука)

**Tray**

A tray is situated in the top part of a stem, under a bowl. Coals are folded on it and ashes are shaken off on it.

(фото блюдца)

**Grommets**

Silicone or rubber grommets are used in the junctions of the components of a hookah for sealing. For instance, between a bowl and a stem, a hookah base and a stem, a hose and a stem.

(фото нескольких уплотнителей)

**Tongs**

They are used to carry coals and to shake off ashes.

(фото щипцов)

**Coolers of Smoke**

Hot smoke when going through a stem and a hose is cooled, but for those who like cooling it even more there are special devices. For instance, in construction of some stems “chiller” is provided - a special space where ice is laid.

(фото шахты с чиллером)

Cooling elements may also be integrated right in a hose itself or put on it.

(фото шланга мия с охлаждающим элементом)

(фото “кул бриза”)

**Wind Cover**

A wind cover is needed for heat adjustment. It is put on a plate covering a bowl and keeping more heat around it. The wind cover is very useful when you smoke outdoors if the wind cools the bowl. If there is no wind cover in combination with your hookah, you can buy it separately or make out of some layers of foil on your own (see appropriate instruction).

(фото купленного колпака)

(фото колпака из фольги)

**Diffuser**

It makes the process of smoking quieter. It is put on the end of a stem submerged in a hookah base. There are model of hookahs with an integrated diffuser, but in most cases it is bought separately.

(фото купленного диффузора) (фото встроенного диффузора)

**Physics of The Process**

Shisha is a mixture of glycerin, flavors and a tobacco leaf. When heated glycerin turns into steam. When you inhale through a hose, a low-pressure area forms in a hookah base. The air, that goes through the holes in the foil into the bowl with tobacco and gets mixed with glycerin steam, rushes there. And then the smoke passes through the water, purifies and gets in the hose :)

(фото девушки, выдыхающей дым)