*Pneumatics – part 2 (teacher version)*

 **Task 1 PNEUMATIC CYLINDERS**

**Watch the video on pneumatic cylinders and decide whether these statements are true or false. Then correct the false statements.** *Link: https://www.youtube.com/watch?v=VgKFoC3K5UI*

1. Pneumatic cylinders are used to push things forward and backward. (T)
2. The distance the shaft (piston) of a cylinder comes out is called its bore size. (F)
3. Stroke refers to the capacity inside the cylinder body. (F)
4. A bigger bore results in bigger force exerted by the cylinder. (T)
5. As the bore size increases, the shaft decreases. (F)
6. The most common type of cylinder is the double acting cylinder. (T)
7. Double acting cylinders have two air ports, one to extend the cylinder and the other one to retract it. (T)
8. The shaft in a single acting cylinder is originally in the extended position. (F)
9. Both reverse acting and single acting cylinders have springs. (T)
10. Universal mounting means that the cylinder can be mounted on both sides. (T)
11. Nose mount cylinders can only be mounted from the top. (T)
12. Stainless steel cylinders are cheaper than their aluminium counterparts. (F)

 **Task 2 PNEUMATIC SYMBOLS**

**Write down the English term for the following symbols.**

|  |  |
| --- | --- |
| Description: http://egradiva.scng.si/strojnistvo/Kazalo/simbol_ENOSMERNI_CILINDRI.gif | Description: http://egradiva.scng.si/strojnistvo/Kazalo/stikalo.gif |
| **(1) SINGLE ACTING CYLINDER** | **(2) PUSH BUTTON** |
|  |  |
| Description: http://egradiva.scng.si/strojnistvo/Kazalo/simbol_DVOSMERNI__CILINDRI.gif | Description: http://egradiva.scng.si/strojnistvo/Kazalo/6b6f6ec48d6e6f2d6d656a6e6f5f7374696b616c6f.gif |
| **(3) DOUBLE ACTING CYLINDER** | **(4) LIMIT SWITCH** |
|  |  |
| Description: http://egradiva.scng.si/strojnistvo/Kazalo/tipka.gif |  |
| **(5) SWITCH** | **(6) DIRECTIONAL VALVES** (monostable) (bistable) |

 **Task 3**  **Match the key terms about pneumatics to their definitions. There is one term too many.**

|  |  |  |  |
| --- | --- | --- | --- |
| limit switch | relay | double acting cylinder | directional valve |
| power supply | compressed air | conveyor belt | switch |
| single acting cylinder | actuator | solenoid operated | manually operated |
| flow control valve | air supply system | piston | button |

|  |  |
| --- | --- |
| **Definition** | **Key term** |
| 1. air kept under a pressure that is greater than atmospheric pressure
 | compressed air |
| 1. controlled or processed by hand
 | manually operated |
| 1. a device for making and breaking the connection in an electric circuit
 | switch |
| 1. a small device on a piece of electrical or electronic equipment which is pressed to operate it
 | button |
| 1. the moving component that is contained by a pneumatic cylinder
 | piston |
| 1. a cylinder in which the compressed air acts alternately on both sides of the piston
 | double acting cylinder |
| 1. an electrically operated switch
 | relay |
| 1. a switch operated by the motion of a machine part or presence of an object
 | limit switch |
| 1. device that supplies electric power to a system
 | power supply |
| 1. a valve that allows compressed air to flow into different paths from one or more sources
 | directional valve |
| 1. a valve that regulates the flow or pressure of air into a pneumatic system
 | flow control valve |
| 1. an electrically driven compressor pumping air into the storage tank at high pressure
 | air supply system |
| 1. a type of motor for moving or controlling a mechanism or system
 | actuator |
| 1. controlled by an electric current through a solenoid
 | solenoid operated |
| 1. a cylinder in which the compressed air acts on one side of the piston only
 | single acting cylinder |