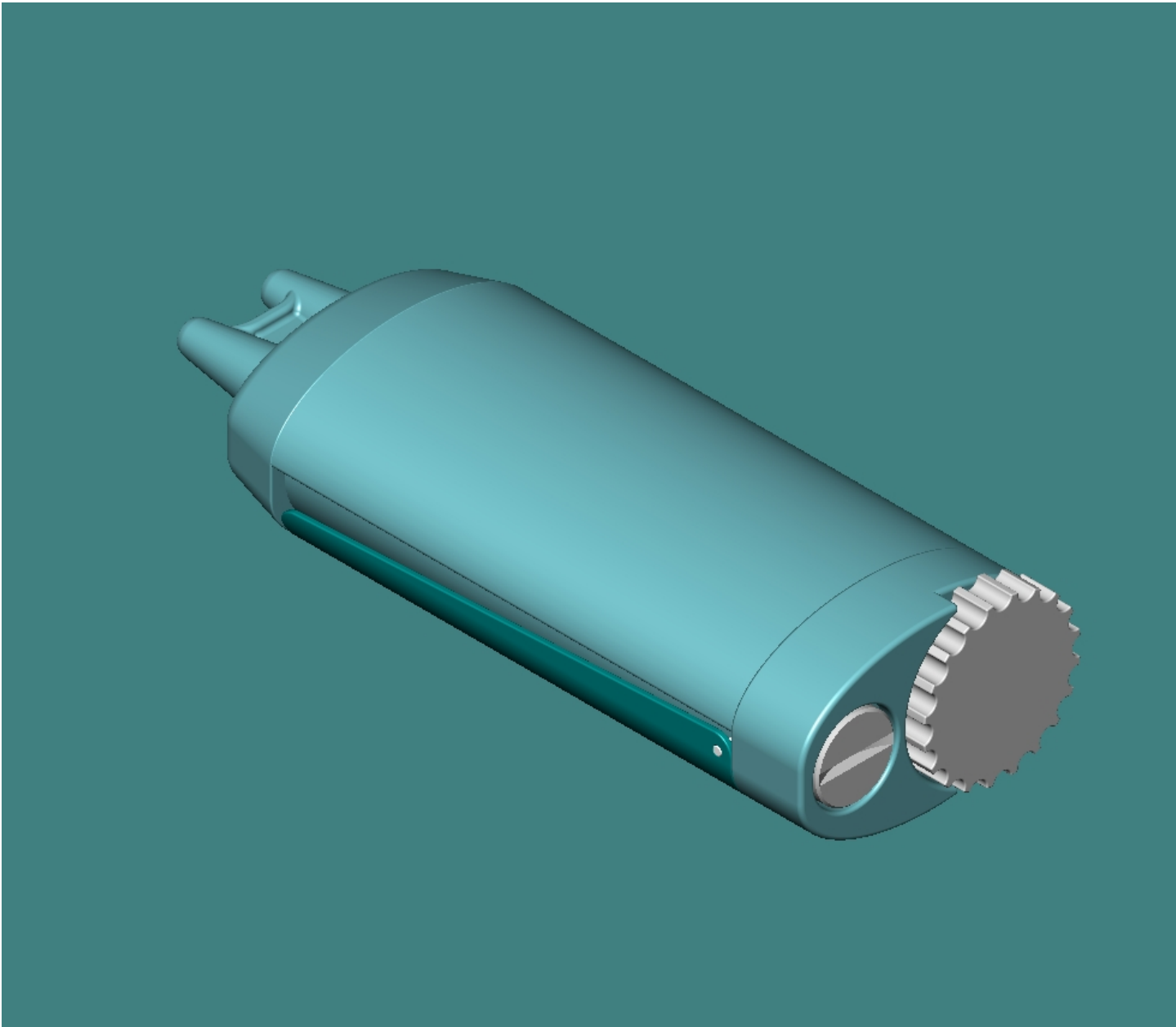


OXYGEN DISPENSER

The dark green top panel is the actuator that can be squeezed to dispense a predetermined amount of oxygen. The red light indicates low gas.

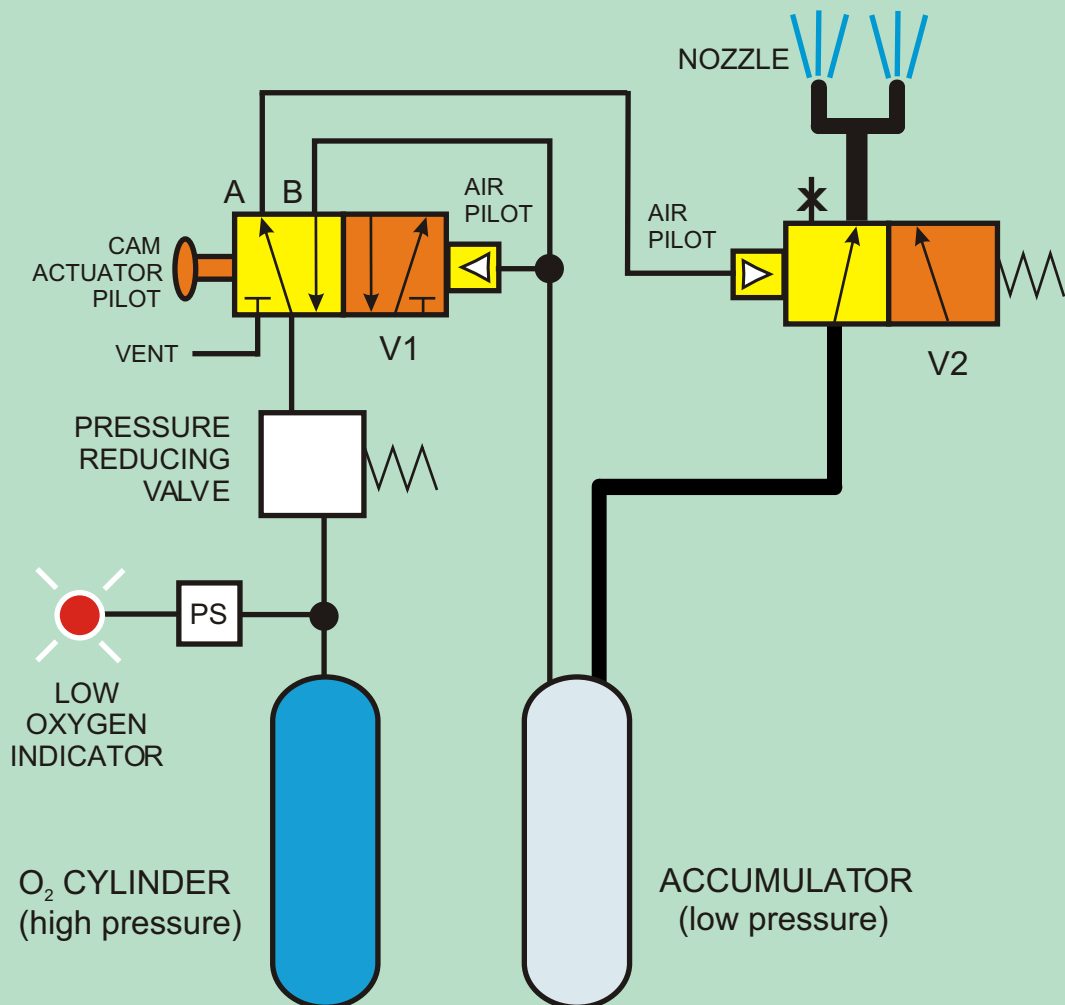


The large wheel gains access to the gas cylinder and the smaller, coin slot cover gains access to the button battery.

PNEUMATIC CONTROL CIRCUIT

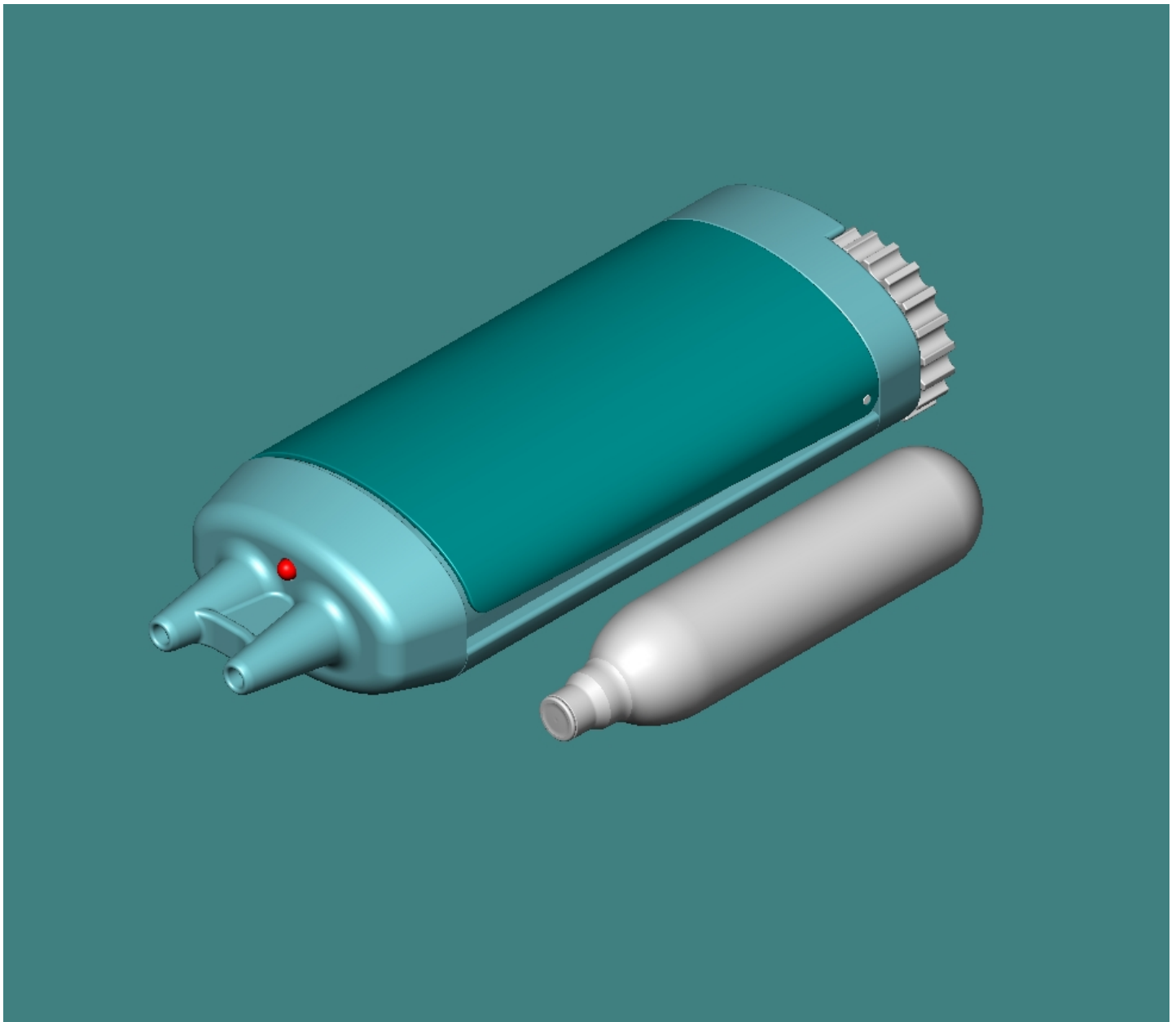
How to read the Valve Diagrams:

The pilots are the mechanisms that shift the valve from one position to the other. To see how the valve passes oxygen, look at the color coding. When the air pilot shifts the V1 valve, the gas flow through it will be in the direction shown in the yellow block. When the cam pilot shifts the V1 valve, the gas will flow in the direction shown in the orange block. In other words, mentally move the orange colored block to the position where the yellow block is and leave the "to and from" gas lines unmoved.

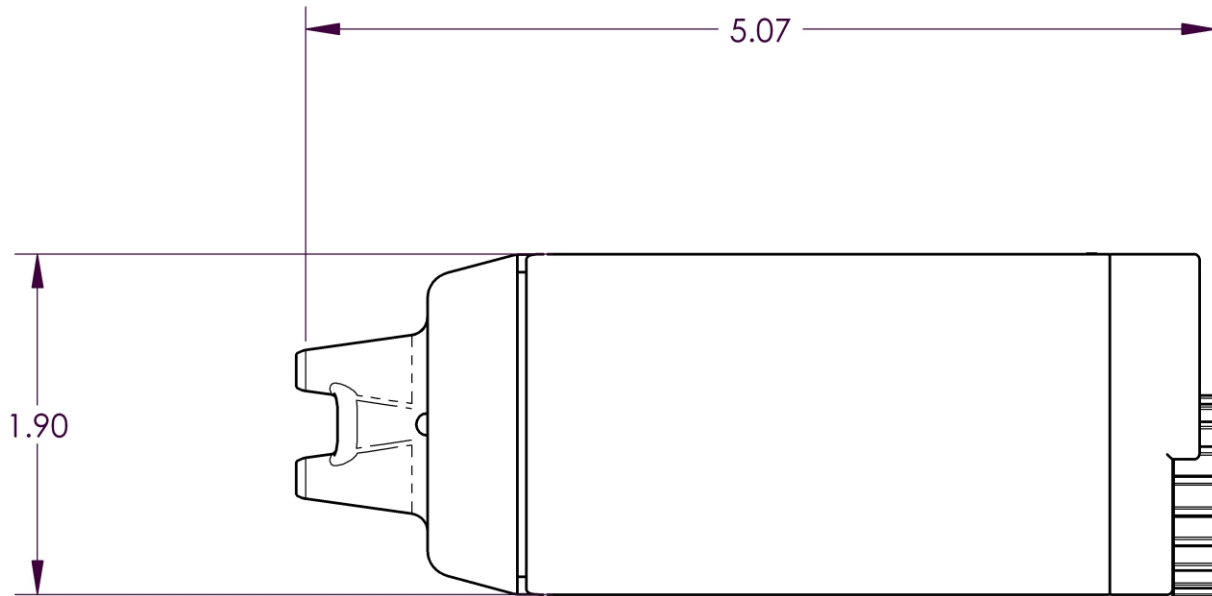


HOW IT WORKS:

In the at rest condition, the O₂ cylinder pressure is sensed by pressure sensor PS and if the pressure is below the set point, the low oxygen indicator will illuminate. The pressure reducing valve reduces the gas pressure to the optimum for operation. Valve V1 is a detented valve that maintains its position until acted upon by either pilot. Initially V1 is open to port A (yellow block) which actuates the air pilot of Valve V2 (yellow block) opening the accumulator line to the discharge nozzle. No oxygen is yet in the accumulator. When the user squeezes the dispenser, the cam actuator pilot shifts V1 to the orange position passing oxygen to port B at optimum pressure into the accumulator and simultaneously venting the pilot of valve V2, allowing the spring to shift it to the orange block, closing the line from the accumulator to the nozzle. (V2 is a spring return valve that will be in the orange block until the air pilot causes it to shift to the yellow). Oxygen will flow into the accumulator until the optimum pressure is reached. At that point, the air pilot of valve V1 will shift it to the yellow block to pass oxygen to port A, actuating the air pilot of V2, opening the accumulator to vent its charge of oxygen through the nozzle.



COMPARISON OF STANDARD 12GRAM CO₂ CYLINDER TO DISPENSER



SQUEEZE TO ACTUATE

