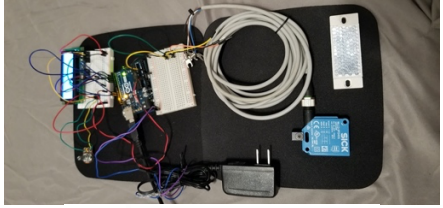

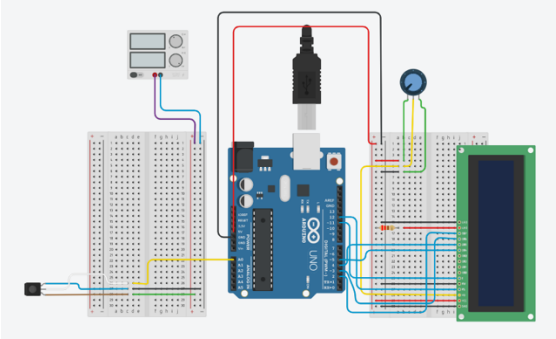
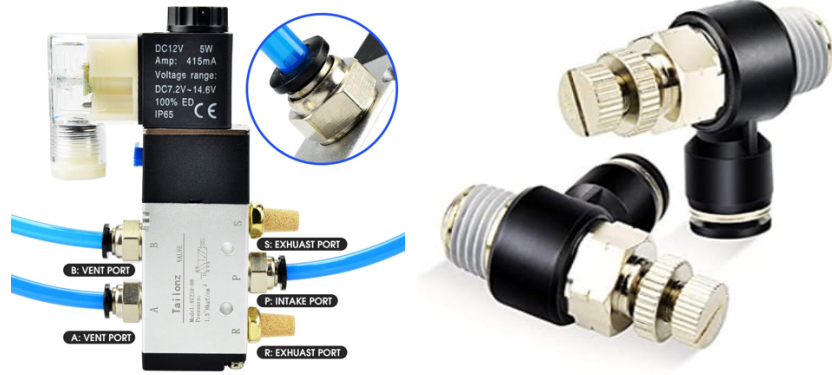


Número de Proyecto: W-3	2020.09.01		
Título del Proyecto	Automatization of the Milking Parlor		
Cliente	Tai South Farms		
Localización	Lajas		
Integrantes del Equipo	Diomedes G Hernández Julio A. Rivera Deyaneira Rodríguez		
Departamento Académico	Ingeniería Mecánica		
Descripción del Problema	It is of our interest to automate pathway for cows during this process while maintaining record how many cows have been milked. It is important to note, that while attending to the lasts groups the number of ten cows may not be achieved.		
Análisis de la Situación	There has to be caution in selecting the materials that will be utilized for this aplicacion given that the working enviroment may highly affect its durability. To help mitigate this, constructued electronic circuits should be enclosed, in addition to other components that may affected by water or weather changes such as used sensors.		
Alternativa Propuesta	<p>We propose to construct a circuit using an infrared sensor that will allow us to count cows as they are passing by; this will be strategically placed in order to reduce error sources such as cows passing in close proximity to one another.</p>  <p>In order to automize the gates in the area, we propose the use of a pneumatic system. Implementing the use of electric pneumatic valves; this can allow for quick opening and closing of the gates with the option of increasing the time it takes to accomplish this via air flow regulators.</p>		



Recomendaciones Finales

Some of the gates are damaged and highly corroded. In all practicality it would be best to first invest in the gate infrastructure before implementing the pneumatic system. This system will be applying an additional load to what they are already exposed to and may possibly lead to further damage.

Acciones Pendientes

Construct prototype

Costo

Part	Qty.	Cost
Pneumatic Valve	6	\$ 83.94
Cilinders	6	\$ 673.74
Tubing and fittings	1	\$ 12.99
Electrical wire	1	\$ 22.28
12V 2A Power supply adapter	1	\$ 10.99
Weather proof case for sensor	1	\$ 3.99
Arduino board	2	\$ 47.98
ON/OFF switch	2	\$ 25.98
Photoelectric sensor	1	\$ 203.84
Cost Estimate		\$ 1,085.73