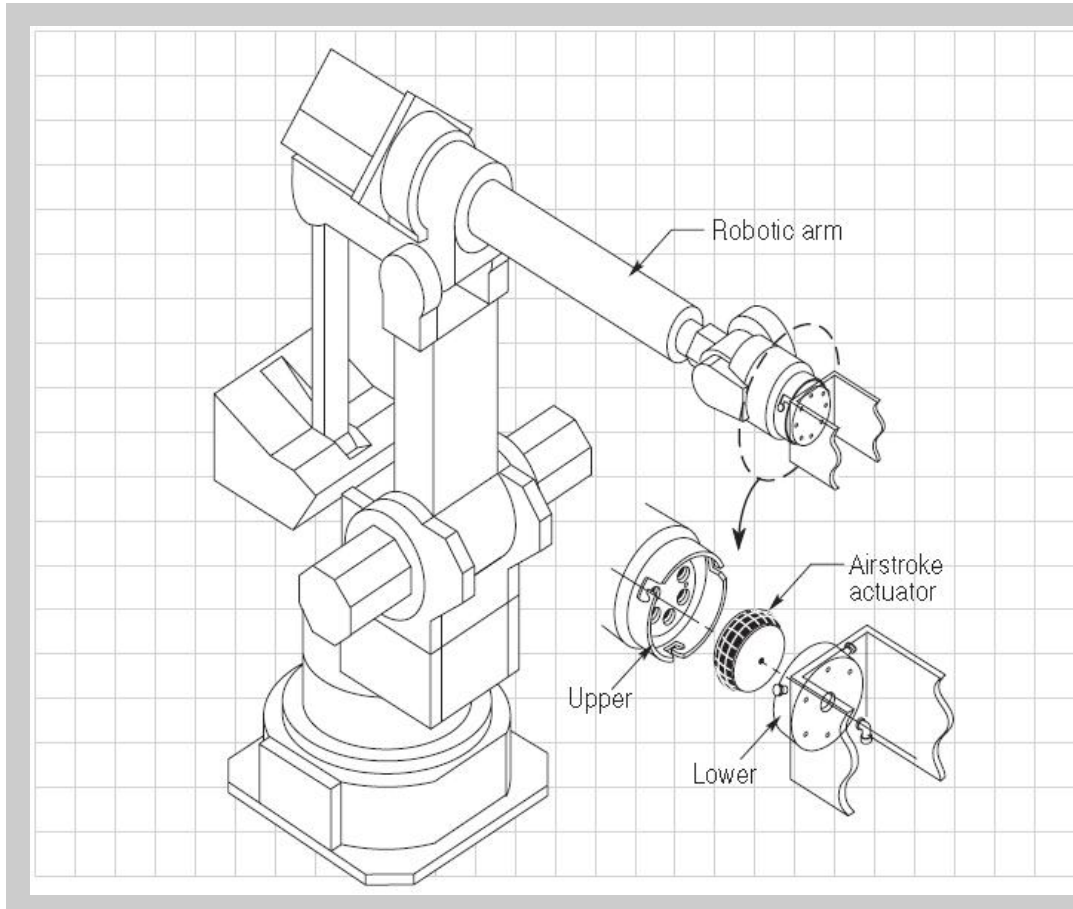




## Application example: Robotic Coupling - Spring clutch mechanism alternative



[Firestone Airstroke™ actuators](#) are flexible walled pneumatic actuator that are durable, operate well in corrosive and abrasive industrial environments, easily accepts misalignment, and has a high ratio of stroke to collapsed height. Each of these features give Firestone Airstroke™ actuators the advantage over traditional cylinders.



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### **Problem:**

Spring clutch mechanisms are used between the "joint" and end tooling of robot systems. In the event of a "collision", the mechanism allows compliance and an electric switch shuts down the robot. To assure proper operation, the mechanisms require constant and labor-intensive screw adjustments.

### **Solution:**

Utilize an Airstroke actuator between the "joint" and end tooling to provide the force and multi-directional compliance when needed during a collision.

### **Benefits:**

Instead of tedious screw adjustments, the actuator can be quickly and incrementally adjusted with a pressure regulator. Replacing and changing end tools to perform different robotic functions is also made possible.