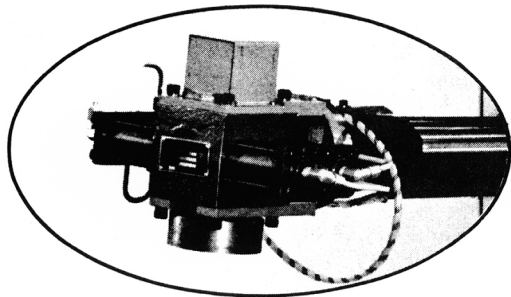
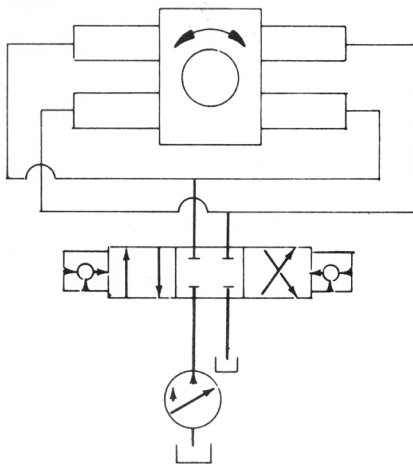


WELDING ROBOT DUPLICATES ARM & WRIST MOTION



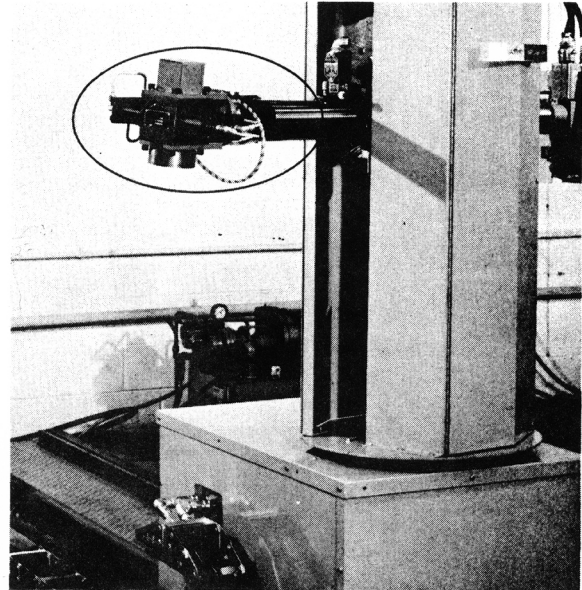
The Actuator

The two Moog Flo-Tork hydraulic rotary actuators on each manipulator are of standard design, Model 7500 using 180° or 270° rotation. Each actuator is equipped with anti-friction bearings, one-piece heat treated ductile iron racks and pistons and one-piece, heat treated steel pinion and shaft.



How it Operates

The position of the actuator shaft is controlled by an electronic programmer acting through a servo valve. The controller compares the shaft position with the programmed position and operates the servo valve, which directs flow from the pump to the actuator, rotating it to the programmed position. The controller receives the position feed back signal from the potentiometer attached to the back side of the actuator shaft.



The Application

The AMF Versatran manipulator is designed to locate and position a portable welding gun in three planes X, Y, Z and is controlled by a Versatran electronic controller. The Moog Flo-Tork rotary actuators simulate the arm and wrist motions of an operator. Other linear drives provide the vertical and horizontal positioning. Accuracy of the unit is maintained by servos and a feed back system. The unit is ideal for automation and offers repeatability to within ± 0.030 " and with speeds up to 36"/sec.

Advantages

The Moog Flo-Tork rotary actuators give the robot the ability to duplicate the arm and wrist motions of a welding gun operator...essential for the precise positioning needed on the assembly line. The Moog Flo-Tork actuator features:

- Heavy overhang load capabilities
- Zero drift positive position holding
- High cycle life capability
- Minimum maintenance and down time