Spot Servo Equalizing™ Software to enhance spot welding

Spot Servo Equalizing is a function embedded into the Spot Servo process software that allows you to solve spot welding gun equalizing without mechanical hardware.

Reduce your investment costs
Spot Servo Equalizing reduces your cost by the removal of equalizing hardware on the weld gun. Due to the approximately 5-10% lighter weld gun you can improve your cycle time as well. By removing the pneumatic equalizer, air is no longer needed for servo controlled weld guns. As a result the complete air supply chain and air consumption in the factory can be reduced.

Simplifying production
No gravitational influence means easier optimizing and compromising when programming the robot path. Furthermore, less spare parts and lower maintenance costs are achieved by removing the mechanism parts (seen exemplified in the picture).

Improved production result
Consistent performance over time will give better production results. It may seem as taken for granted but today’s mechanical equalizers do not offer consistent performance over time, basically because of the pneumatic cylinder wear. You may also combine guns with mechanical equalizing and guns using Spot Servo Equalizing in the same user program.

Spot Servo Equalizing is valid for
- Robot mounted C- and X-type guns
- Pedestal C- and X-type guns

Tool changing between guns with different equalizing data

Main functionality features
- Weld position touch up – Simplifies adjustment of the programmed weld points.
- Release of the fixed gun arm – Automatic gun arm release from the welded sheets when the robot is moving among weld points.
- Gun arm Deflection Compensation – The robot program compensates for the gun arm deflection automatically.
- Tip wear measurement and compensation – The robot program automatically compensates the weld gun TCP (Tool Center Point) for tip wear without using external sensors.
1. Removed hardware from example weld gun when using Spot Servo Equalizing.