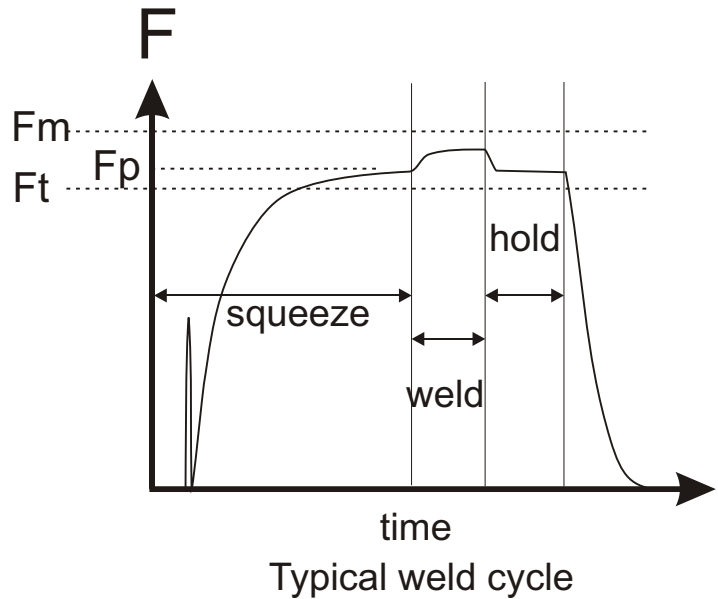


Force-Triggered Current Firing

To ensure that the correct force is achieved before welding, use a force sensor and meter with a programmable limit. The output relay will close when the trigger force, F_t , is reached which is used to fire the weld controller. This also eliminates the need for the tradition squeeze time and can lead to a shorter weld cycle. After establishing the nominal weld force, F_p , set this limit for about 5% lower.



Detecting Over Force Condition

Once the weld current is triggered, it is important that the maximum force, F_m , to achieve a good nugget is not exceeded. Set a second limit for a value approximately 10% higher than the nominal peak force, F_p . This value needs to be determined experimentally to ensure that the force during nugget expansion does not falsely trigger this second relay.

