

Accuracy

HGG has distinguished itself as a pioneer in CNC plasma cutting and keeps on improving to deliver optimal cutting results. The technology keeps improving and so do our machines. With the following compensations we help you acquire optimal accuracy in a quick process.

Shape compensation

Materials are usually not perfectly straight and round. They are usually bow shaped (like a banana) and have some ovality. The machine compensates for bow shaped pipes by individually lowering bogies. The ovality of pipes is compensated by two sensor arms that are positioned slightly lower than the end of the plasma torch, keeping the torch-to-material distance optimal.

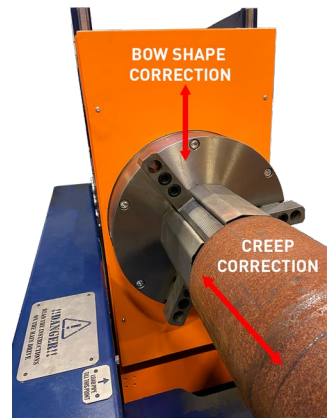
Main drive compensation

The main drive clamps pipes with its jaws and rotates them around. Though, when pipes are rotated on the bogies, they create longitudinal forces known as creep. Bow shaped pipes are also capable of exerting forces on the chuck of the main drive in vertical direction. Therefore the chuck can correct position vertically and can move longitudinally with the pipe and

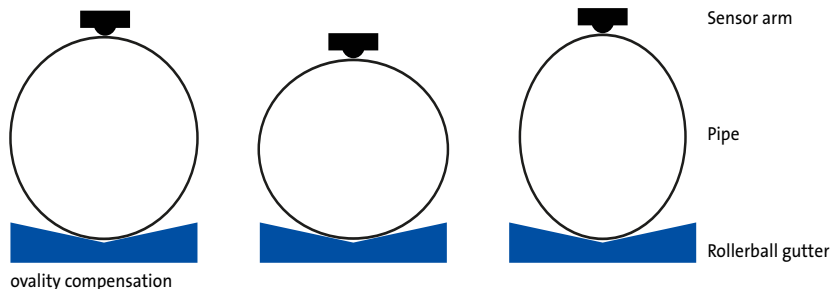
communicate this corrected position directly to the cutting trolley.

Plasma compensation

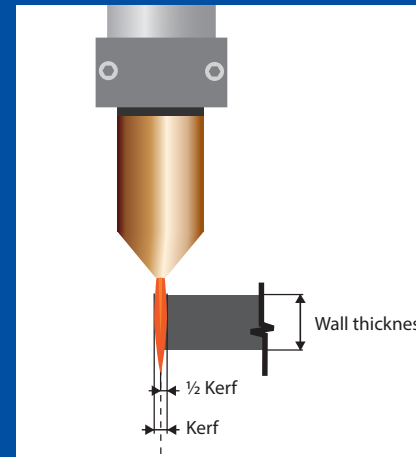
The characteristics of plasma have been studied intensely for multiple years, but in applying plasma to cut steel, there are some implications, that need to be compensated or optimized for higher preferred quality.



Main drive compensation

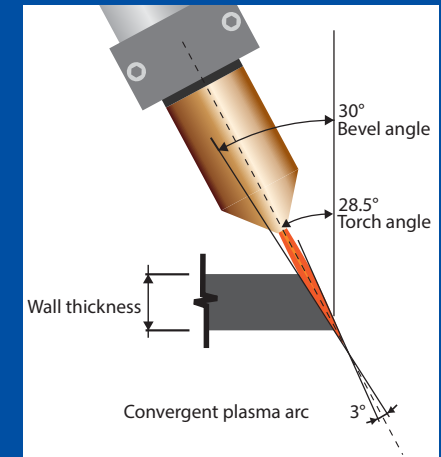


HGG Plasma technology



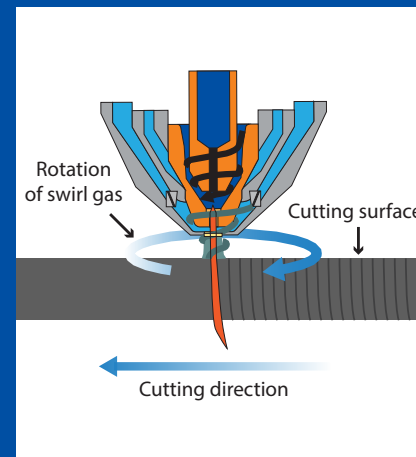
Kerf compensation

for perfect accuracy on all sides of a part, independent of the wall thickness. The compensation is usually half the kerf.



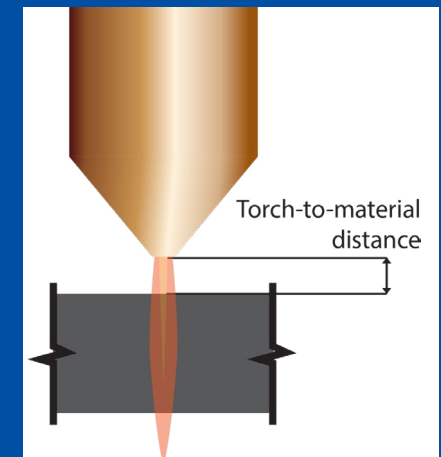
Arc shape compensation

for perfect straight and beveled cuts. The plasma arc cuts a convergent kerf which is corrected by changing the torch angle.



Optimized cutting direction

to deliver the good side of the arc to the part and the bad side to any remnant material increasing the accuracy of cuts.



Torch-to-material distance control

to maintain a constant distance that is perfect for plasma to keep the arc connected correctly.