

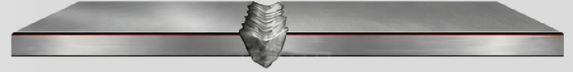
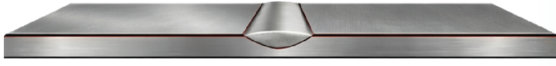
VISUAL PARAMETER GUIDE: MS20 LASER WELDER

Effect of variables on penetration and appearance

LOWER

POWER

HIGHER



- PENETRATION
Less strength

+ APPEARANCE
Smooth finish

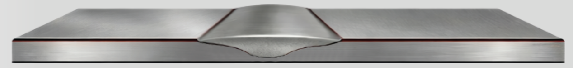
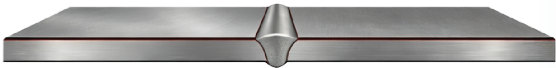
+ PENETRATION
Risk of burn-through

- APPEARANCE
Irregular surface

LOWER

BEAD WIDTH

HIGHER



+ PENETRATION
Concentrated energy

- APPEARANCE
Narrow crown

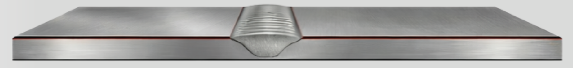
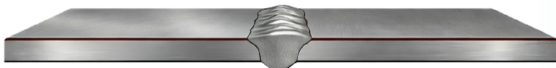
- PENETRATION
Energy dispersion

+ APPEARANCE
Wide and uniform

LOWER

FREQUENCY (HERTZ)

HIGHER



+ PENETRATION
Slow and hot arc

- APPEARANCE
Pulse marks

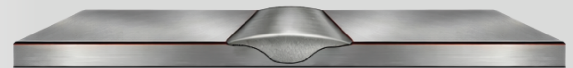
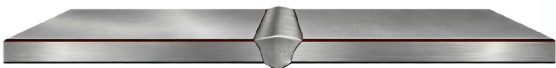
- PENETRATION
Fast and cold arc

+ APPEARANCE
Fine micro-marks

LOWER

FEED SPEED

HIGHER



+ PENETRATION
Higher base heat input

- APPEARANCE
Less filler

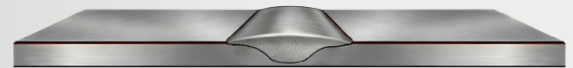
- PENETRATION
Lower base heat input

+ APPEARANCE
More reinforcement

SINGLE WIRE / SMALLER DIAMETER

FILLER AMOUNT

DOUBLE WIRE / LARGER DIAMETER



+ PENETRATION
Higher base heat input

- FILLER
Less filler

- PENETRATION
Lower base heat input

+ FILLER
More reinforcement