



super fast + and Fly Piercing

Specification:

- Enable Fly Piercing (①②③)
- Globals-lead-up set to Sync. (④⑤)
- Globals-Advanced (⑥) -execution mode-superfast (⑦)
- lead-in speed lower than 2000

The screenshot displays a control panel for a laser system. At the top, it shows material and thickness information:

Material	Thickness	Code
MS Air (碳钢-空气)	3	1081

Below this, there are navigation buttons: Working Lines, Accessories Lines, Piercing Lines (highlighted with a red box and a '1' in a red circle), and Globals Parameters. There are also left and right arrow buttons and a 'Line' selector set to '1'.

The main parameter area is divided into several sections:

- Piercing Time (sec):** 0.1
- Offset (mm):** 6
- Laser Section:**
 - Power (W): 3000
 - Frequency (Hz): 0
 - Duty Cycle (%): 100
- Gas Section:**
 - Type: Air
 - Pressure (Bar): 5
- Ramp Section:**
 - Focal Position (mm): -8
 - Ramp Time (sec): 0
 - Step Time (sec): 0
 - Final Frequency (Hz): 0
 - Final Duty Cycle (%): 100

At the bottom right, there is an 'Advanced' button (highlighted with a red box and a '2' in a red circle). At the bottom center, there is a 'Fly Piercing' status indicator (highlighted with a red box and a '3' in a red circle) set to 'Enabled'.



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Material	Thickness	Code
MS Air (碳钢-空气)	3	1081

Working Lines Accessories Lines Piercing Lines **4** Globals Parameters

← Line →

Nozzle

Diameter (mm)	3.5
Height offset (mm)	0
Type	Booster

Film

Piercing Offset (mm)	0
Piercing Time (sec)	0
Focal Position (mm)	0
Accessory Line	1

Lens (in) 7.87

Lead Up

5 Type	Synchronous
Height (mm)	35
Minimum Distance (mm)	0

6 Advanced

Working Lines Accessories Lines Piercing Lines Globals Parameters ← Line →

Gas in Repositioning

Pressure (Bar)	5
Early Opening (sec)	1

7 Execution Mode Superfast

Duration of Initial Gas Purge (sec)	1
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- Super Fast+ Attention:

- Lead-in line must longer than 3mm, too long is not suggested, will increase the cutting time, we recommend to 3mm-4mm (so contrminal cutting is not recommended to use Super Fast+)
- About Piercing Config. The piercing offset should set to shorter than 9mm, Piercing time less than 0.1 Sec., We usually set the offset to 6mm, Piercing time to 0.01 Sec, For thick material, we could increase the piercing time, but less than 0.1 Sec., If the lead-in line of small hole is shorter than 3mm, we suggest offset lower than 6mm. Recommend use high pulse to piercing

The screenshot displays the 'Piercing Lines' configuration screen. The interface includes a top navigation bar with tabs for 'Working Lines', 'Accessories Lines', 'Piercing Lines', and 'Globals Parameters'. A 'Line' selector is set to '1'. The main area contains several parameter fields:

Parameter	Value
Piercing Time (sec)	0.1
Offset (mm)	6
Focal Position (mm)	-8
Power (W)	3000
Frequency (Hz)	0
Duty Cycle (%)	100
Ramp Time (sec)	0
Step Time (sec)	0
Final Frequency (Hz)	0
Final Duty Cycle (%)	100
Type	Air
Pressure (Bar)	5

An 'Advanced' button is located at the bottom right of the screen.



Working Lines **Accessories Lines** Piercing Lines Globals Parameters ← **Line 1** →

Feed (mm/min)	2000
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Laser

Power (W)	6000
Frequency (Hz)	0
Duty Cycle (%)	100

Gas

Type	Air
Pressure (Bar)	10

Work Positioning

Type	Sensor
Offset (mm)	0.3
Focal Position (mm)	✘ 0

Lead-in CFG:1st layer of Accessories



Attentions:

- Nozzle lowest offset;
Booster 0.3mm, Normal
0.5mm
- Synchronize Hight
recommend to 40

Lead Up	
Type	Synchronous
Height (mm)	35
Minimum Distance (mm)	0

Working Lines	Accessories Lines	Piercing Lines	Globals Parameters	Line
				1
Feed (mm/min)		19000		
Laser				
Power (W)		6000		
Frequency (Hz)		0		
Duty Cycle (%)		100		
Work Positioning				
Type		Sensor		
Offset (mm)		0.3		
Focal Position (mm)		-1		
Piercing Line		1		
Lead-In Line		1		
Lead-Out Line		1		
Advanced				

Attentions:

- Cutting Gas , Piercing Gas, Repositioning GAS, lead-in cutting Gas should set to be same

Working Lines	Accessories Lines	Piercing Lines	Globals Parameters
Feed (mm/min)	2000		
Laser			
Power (W)	6000		
Frequency (Hz)	0		
Duty Cycle (%)	100		
Gas			
Type	Air		
Pressure (Bar)	10		

Working Lines	Accessories Lines	Piercing Lines	Globals Parameters
Piercing Time (sec)	0.1		Offset (mm)
Laser			
Power (W)	3000		Focal Position (mm)
Frequency (Hz)	0		Ramp
Duty Cycle (%)	100		Ramp Time (sec)
Gas			
Type	Air		Step Time (sec)
Pressure (Bar)	10		Final Frequency
			Final Duty Cycle

Working Lines	Accessories Lines	Piercing Lines	Globals Parameters
Feed (mm/min)	19000		Work Positioning
Laser			
Power (W)	6000		Type
Frequency (Hz)	0		Offset (mm)
Duty Cycle (%)	100		Focal Position (mm)
Gas			
Type	Air		Piercing Line
Pressure (Bar)	10		Lead-In Line
			Lead-Out Line

Working Lines	Accessories Lines	Piercing Lines	Globals Parameters
Gas in Repositioning			
Pressure (Bar)	10		
Early Opening (sec)	1		