

# Bending Curve Adjustment

The screenshot shows the 'ParameterSetting' window with several key parameters highlighted in red boxes:

- Bender L/R Idle Stroke (Degree):** 21.5
- Mill-Bender Distance (MM):** 179.0

Other visible parameters include:

- Encoder Pulse/MM: 130.128988
- Feeding Pulse/MM: 134.939724
- Bending Pulse/Deg: 640
- Bender Adjustment (Deg): -70.5
- Use Encoder:
- Mill Vertical Pulse/MM: 436.36573
- Mill Vertical Stroke (MM): 88.0
- Min Len for Bender (MM): 0.0
- OuterLine Compensation (MM): 0.0
- InnerLine Compensation (MM): 0.0
- Mill Rotating Pulse/Degree: 195.555555
- Mill R Search Stroke (MM): -32.0
- Outer Angel (mm): -0.6
- Inner Angel (mm): 0.6
- Single Cut:
- Splice Len (MM): 0.0
- End-Slot Degree: 90.0
- M. V. Stroke (MM): 50.0
- Min continuous Lines Len (MM): 72.0

A table on the right side of the window shows the 'Angle(deg)/Bend Radius(mm)' for various sections:

No.	M.Angle	L.Radius	R.Radius	Pat L.Radius	Pat R.Radius
1	3.0		2162.73		
2	4.0	903.58	968.58		
3	5.0	605.13	549.35		
4	6.0	471.16	310.11		
5	7.0	314.59	174.5		
6	8.0	212.71	135.58		
7	9.0	173.05	104.12		
8	10.0	124.04	88.04		
9	11.0	98.74	76.1		
10	12.0	79.02	67.54		
11	13.0	64.87	57.94		
12	14.0	55.33	50.24		
13	15.0	47.06	43.17		
14	16.0	42.39	38.69		
15	17.0	37.73	34.98		
16	18.0	33.89	32.86		
17	19.0	31.06	30.31		
18	20.0	28.05	27.97		
19	21.0	26.69	25.64		

Usually it is impossible to bend the letter return 100% confirm to router-cut letter face and letter back because of the following reason:

- 1) The measure way of curves-radius list itself have technical defects.
- 2) Aluminum material difference
- 3) The bending tool will block the curves during the curves moving in both directions.
- 4) The machine limitation on minimum bending curve degree.

Even it is impossible to bend the letter return 100% confirm to touter-cut letter face and back, we could make the return and face/back come to the best match by adjusting the following parameters:

- 1) **Mill-Bender Distance(MM)**
- 2) **Bender L/R Idle Stroke(Degree)**

## 1. Mill-Bender Distance(MM)

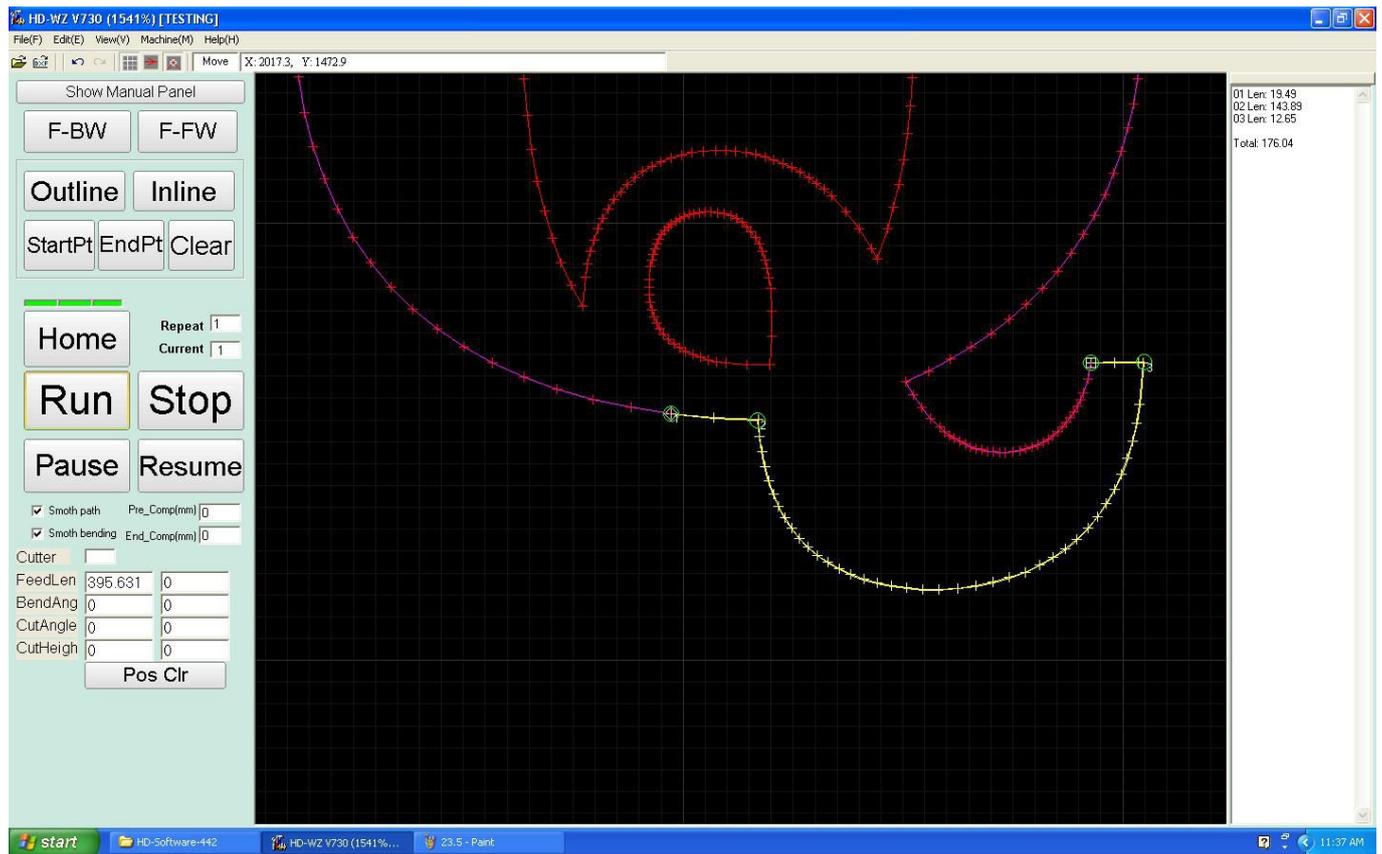
It is the distance between cutting and bending. You must make sure this distance correct. If not correct, it will cause the bending coming earlier or later. Once the bending coming earlier or later, the letter return can't match the letter face and letter back.

## 2. Bender L/R Idle Stroke(Degree)

There are two bending directions, Left Bend and Right Bend.

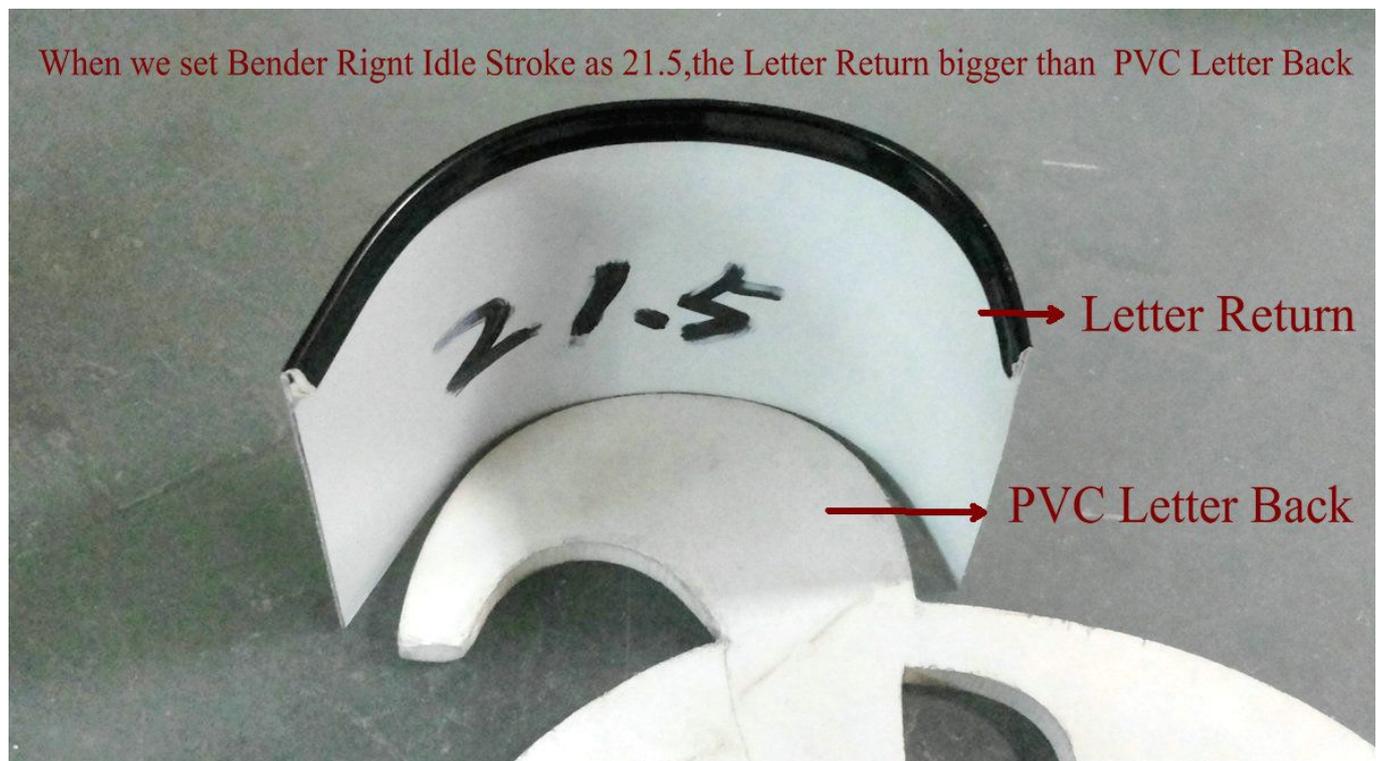
**Note:** Here Left Bend is the anti-clockwise bend and Right Bend is the clockwise bend.

Here we take a file as example:

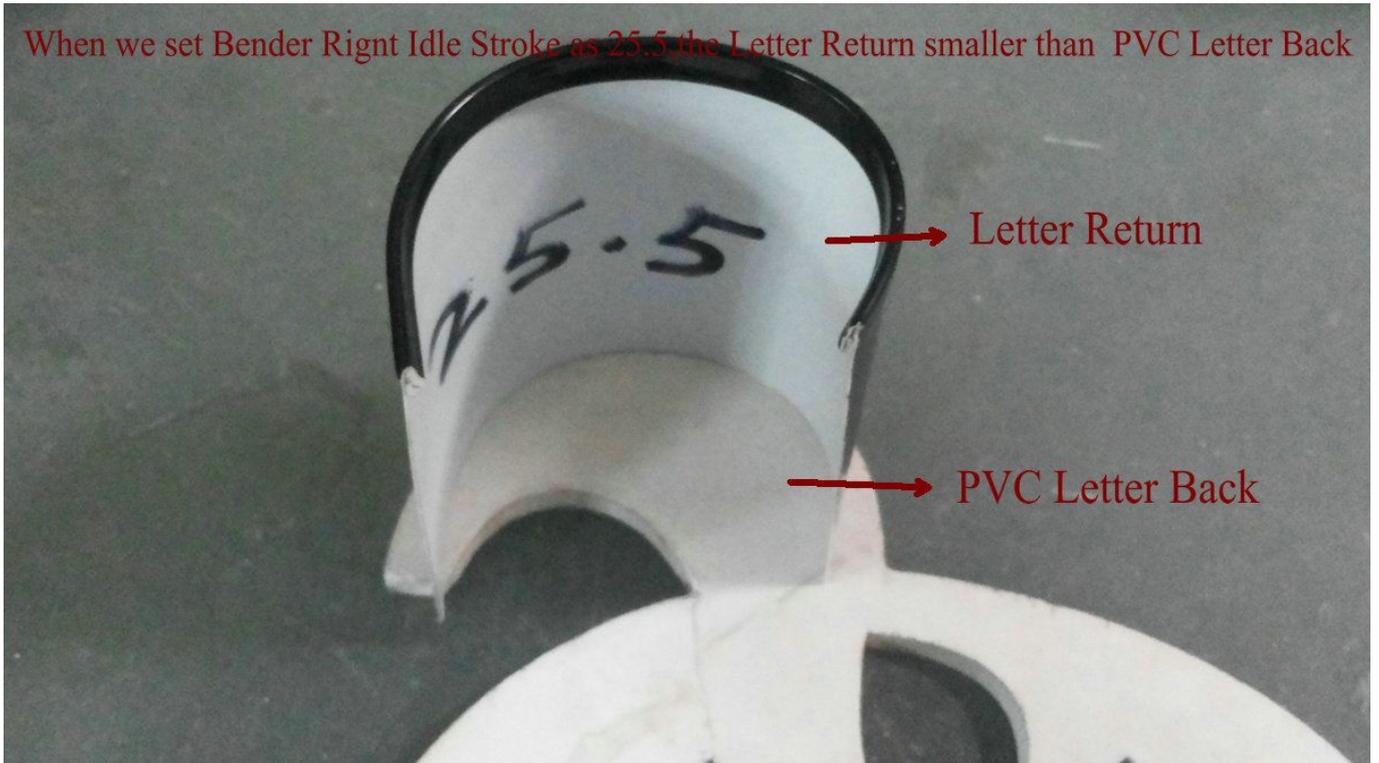


We chose the the Yellow part(it is a Right Bend) to make, like the pic. 2 shown.

1. When we set **Bender L/R idle Stroke (Degree)** 21.5 **21.5** as 21.5, the Letter Return bigger than the PVC Letter back.



2. When we set Bender L/R idle Stroke (Degree) 21.5  as 25.5, the Letter Return smaller than the PVC Letter back.



3. No matter 1 or 2, neither are what we want. 1 is coming bigger and 2 coming smaller. Here we set Bender L/R idle Stroke (Degree) 21.5  as 23.5, we got the following result.



So this result is exactly what we want. 23.5 is a right setting. It means, increase the idle stroke value, the Letter Return will be bent more, otherwise, bend less.

We could take the **Bender Light/Right Idle Stroke(Degree)** as an extra force on the material when bending curves. If we set these two parameters above mentioned to the best value, the curves of letter return will come to the best match with the letter face and back,Which will less our labour-working and save your time.