

IMPORT Vector Files \$\$\$ or S2B

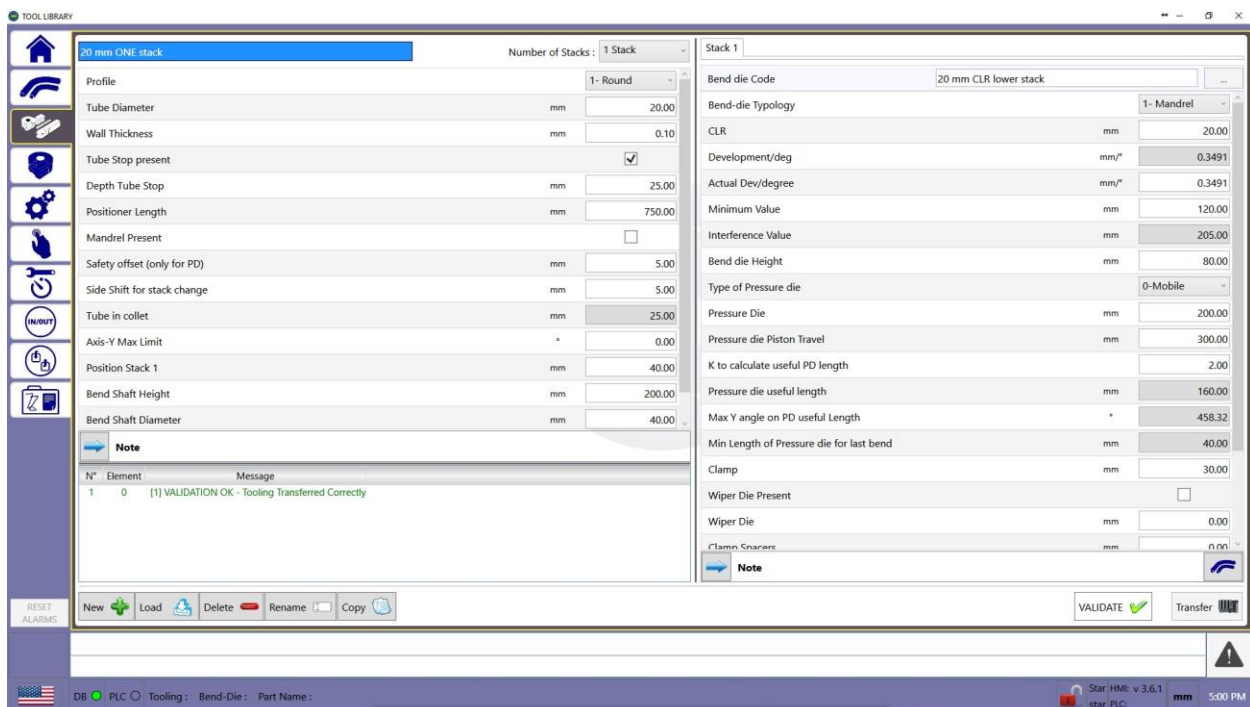
(FARO or ROMER)

To adequately import Vector files we are importing (reading from) a basic TXT file. They are saved on the Vector measuring unit as \$\$\$ (Romer) s2b (FARO)

They can be imported as inch on mm files.

You must know the Measuring machine settings that were set to measure the part so we can adequately “create” a bend die to properly import the file. If the die is not exactly as indicated on the exported file, it will not work.

Create a bend-die file as follows:

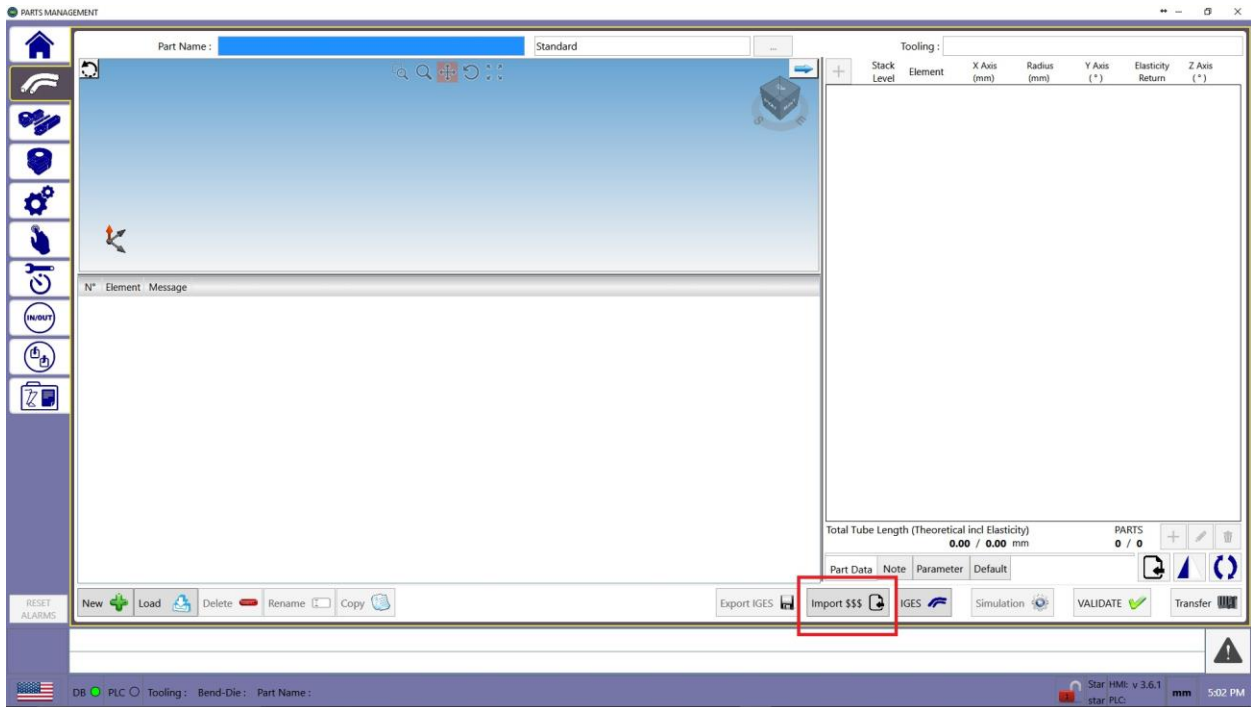


This below is a TYPICAL LRA file created by the Vector measuring device:

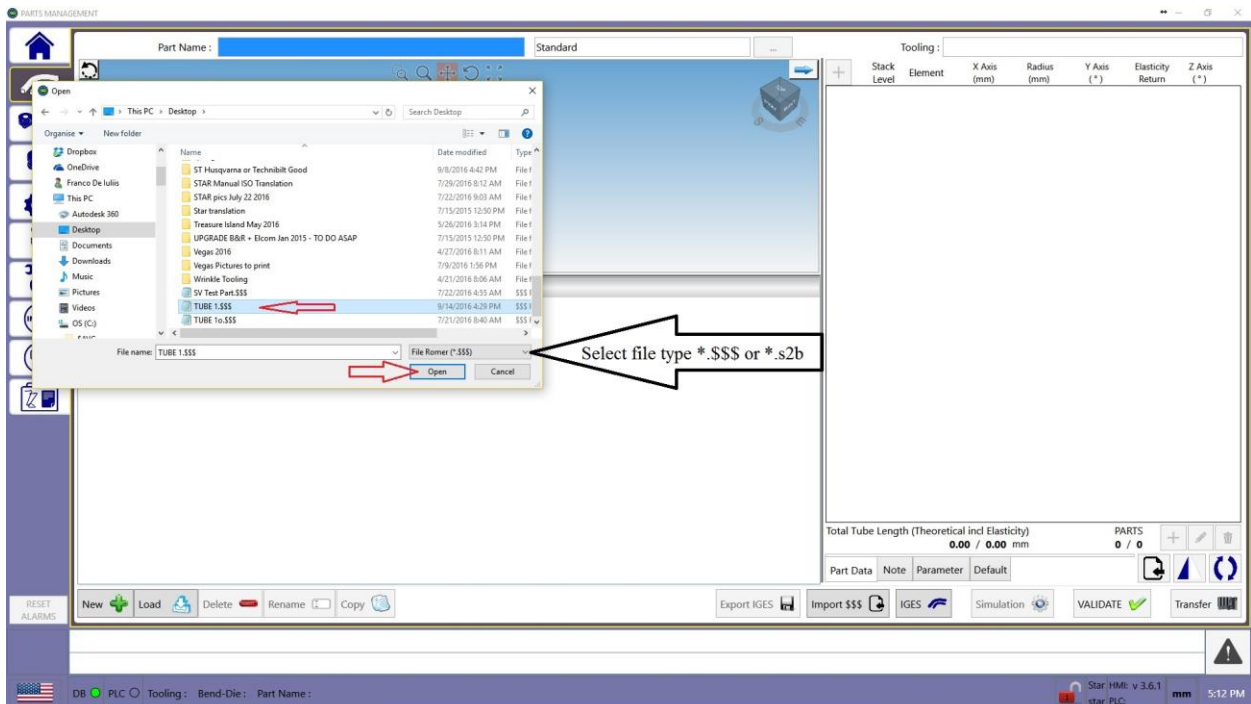
```
$clra 4  
200.419300 0 0 0 0.000000 0 0 0 20.045890 0 0 0 20.000000  
112.398323 0 0 0 -179.531673 0 0 0 100.117644 0 0 0 20.000000  
115.033581 0 0 0 -179.993625 0 0 0 45.087940 0 0 0 20.000000  
107.994572 0 0 0 179.729945 0 0 0 46.064276 0 0 0 20.000000  
76.039951 0 0 0
```

From the information above, we can confirm the part was measured with 20 mm die as being used to fabricate the part. We also can read the DBB, the rotations and bend angles from this file.

After creating the die, OPEN the Program Part page:



Click on [Import \$\$\$] radio button:

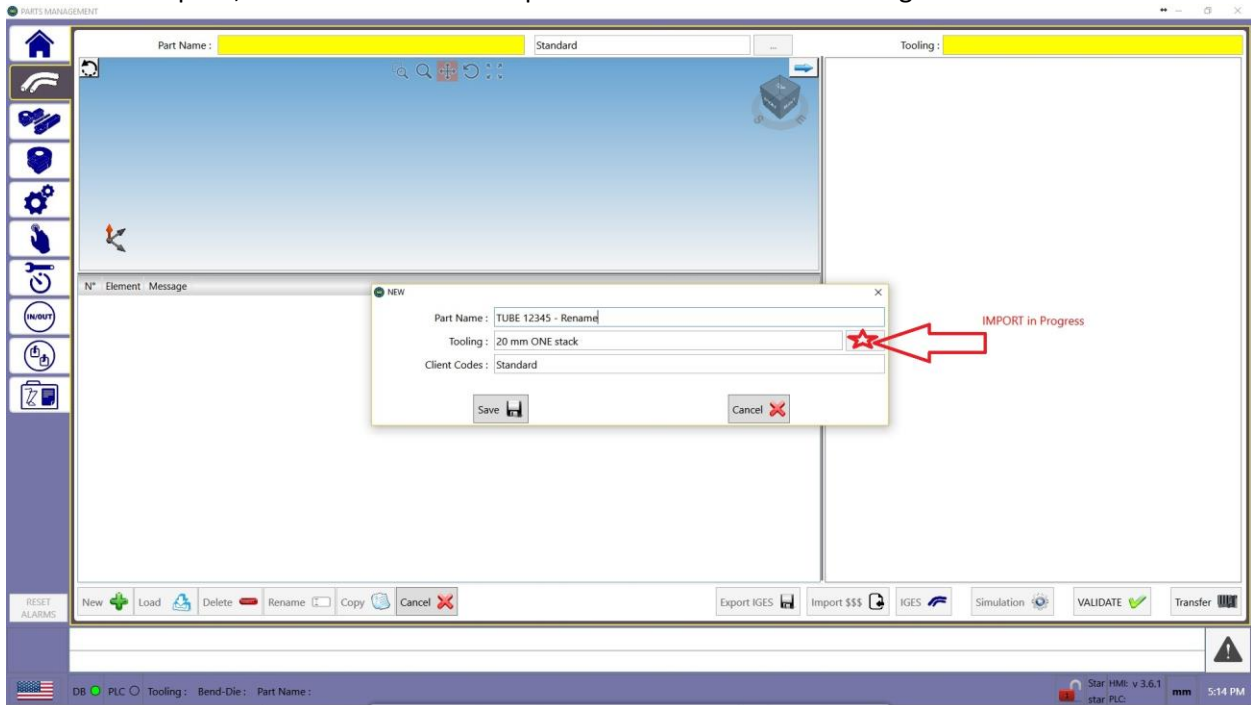


Select the file TYPE SSS or s2b by clicking the pull down tab.

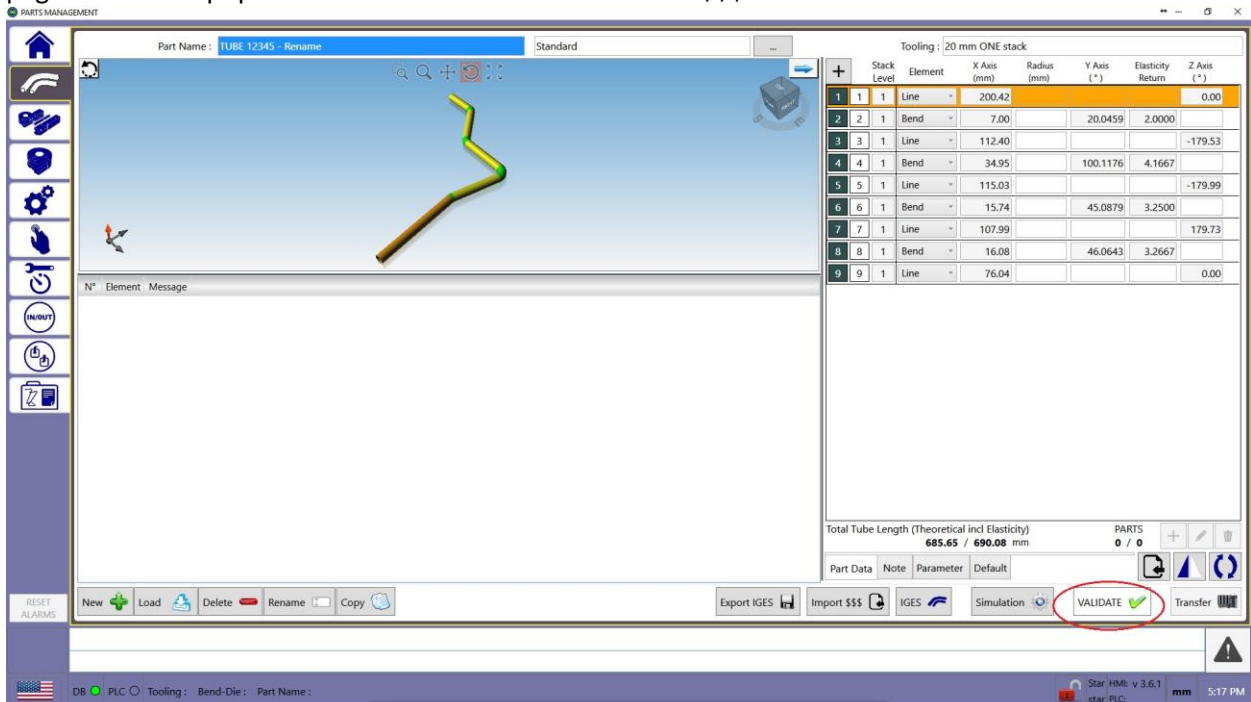
Select the file we just measured [Tube1. \$\$\$]

CLICK OPEN

This window opens, and here we insert the part name and select the tooling.



Once the Name is written and the tooling is selected, hit the [SAVE] button, and this will open a part page and will be populated with the information from the \$\$\$ file.



After changing the parameters to suit the part, we must validate the part.

Part Name: TUBE 123 Standard

Tooling: 20 mm ONE stack

| Stack Level | Element | X Axis (mm) | Radius (mm) | Y Axis (°) | Elasticity Return | Z Axis (°) |
|-------------|---------|-------------|-------------|------------|-------------------|------------|
| 1 | 1 | 200.42 | | | | 0.00 |
| 2 | 2 | Bend | 7.00 | 20.0459 | 2.0000 | |
| 3 | 3 | 1 | 112.40 | | | -179.53 |
| 4 | 4 | 1 | Bend | 34.95 | 100.1176 | 4.1667 |
| 5 | 5 | 1 | 115.03 | | | -179.99 |
| 6 | 6 | 1 | Bend | 15.74 | 45.0879 | 3.2500 |
| 7 | 7 | 1 | 107.99 | | | 179.73 |
| 8 | 8 | 1 | Bend | 16.08 | 46.0643 | 3.2667 |
| 9 | 9 | 1 | Line | 76.04 | | |

Total Tube Length (Theoretical incl Elasticity) 685.65 / 690.08 mm

Part Data Note Parameter Default

Export IGES Import \$\$\$ IGES Simulation VALIDATE Transfer

Star HMI: v 3.6.1 star PLC mm 5:23 PM

In this case, inverting the part end for end, will make the part and not require trimming

Validation yields that the back part is short; however, since this part can be easily started from the opposite end, we can invert the part by clicking the radio button as shown below:

Part Name: TUBE 123 Standard

Tooling: 20 mm ONE stack

| Stack Level | Element | X Axis (mm) | Radius (mm) | Y Axis (°) | Elasticity Return | Z Axis (°) |
|-------------|---------|-------------|-------------|------------|-------------------|------------|
| 1 | 1 | 200.42 | | | | 0.00 |
| 2 | 2 | Bend | 7.00 | 20.0459 | 2.0000 | |
| 3 | 3 | 1 | 112.40 | | | -179.53 |
| 4 | 4 | 1 | Bend | 34.95 | 100.1176 | 4.1667 |
| 5 | 5 | 1 | 115.03 | | | -179.99 |
| 6 | 6 | 1 | Bend | 15.74 | 45.0879 | 3.2500 |
| 7 | 7 | 1 | 107.99 | | | 179.73 |
| 8 | 8 | 1 | Bend | 16.08 | 46.0643 | 3.2667 |
| 9 | 9 | 1 | Line | 76.04 | | |

Total Tube Length (Theoretical incl Elasticity) 685.65 / 690.08 mm

Part Data Note Parameter Default

Export IGES Import \$\$\$ IGES Simulation VALIDATE Transfer

Star HMI: v 3.6.1 star PLC mm 5:23 PM

In this case, inverting the part end for end, will make the part and not require trimming

Once inverted, we must VALIDATE again and change any parameter we deem needing changing.

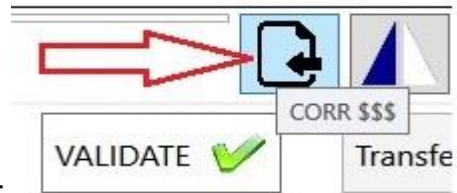
| Stack Level | Element | X Axis (mm) | Radius (mm) | Y Axis (°) | Elasticity Return | Z Axis (°) |
|-------------|---------|-------------|-------------|------------|-------------------|------------|
| 1 | 1 | Line | 76.04 | | | 0.00 |
| 2 | 2 | Bend | 16.08 | 46.0643 | 3.2667 | |
| 3 | 3 | Line | 107.99 | | | 179.73 |
| 4 | 4 | Bend | 15.74 | 45.0879 | 3.2500 | |
| 5 | 5 | Line | 115.03 | | | -179.99 |
| 6 | 6 | Bend | 34.95 | 100.1176 | 4.1667 | |
| 7 | 7 | Line | 112.40 | | | -179.53 |
| 8 | 8 | Bend | 7.00 | 20.0459 | 2.0000 | |
| 9 | 9 | Line | 200.42 | | | |

Part validates without adding material

Total Tube Length (Theoretical incl Elasticity) **685.65 / 690.08** mm

Part Data Note Parameter Default

Export IGES Import \$\$\$ IGES Simulation VALIDATE Transfer



After changing the parameters, use only the CORR \$\$\$ icon:

Assuming we changed some of the default parameters, we must proceed with importing corrections correctly, or the parameters will revert back to "default", see below:

| N° | Element | Message |
|----|---------|---|
| 1 | 2 | [100] OK - ELEMENT Validated correctly |
| 2 | 3 | [100] OK - ELEMENT Validated correctly |
| 3 | 4 | [100] OK - ELEMENT Validated correctly |
| 4 | 5 | [100] OK - ELEMENT Validated correctly |
| 5 | 6 | [100] OK - ELEMENT Validated correctly |
| 6 | 7 | [100] OK - ELEMENT Validated correctly |
| 7 | 8 | [300] CAREFUL! - This Element will require Collet recapture because it is in interference by: 21.88 |
| 8 | 0 | [1] VALIDATION OK - The part can be Transferred - PRESS TRANSFER |

You can change parameters and speeds to suit the part

When importing the CORR \$\$\$, they will NOT change back to DEFAULT

Cycle Type: 1- Chase Cycle

| | | |
|---|-----|--------------------------|
| Speed X Axis during part loading | % | 100.00 |
| Speed X Axis during the first bend | % | 100.00 |
| X Axis - Calculated Loading Value | mm | 200.00 |
| Tube length for first bend | mm | 614.04 |
| X value for the first bend | mm | 589.04 |
| Fixed Quote | mm | 25.00 |
| X Return Position | mm | 0.00 |
| Elasticity Return (yes) | | <input type="checkbox"/> |
| Boost Last Bend (Yes) | | <input type="checkbox"/> |
| Lubrication Mandrel (YES) | | <input type="checkbox"/> |
| Pause - prior to Elastic return | sec | 0.000 |
| Stack Change Speed | % | 100.00 |
| Speed - KW | % | 100.00 |
| Y Speed after the SPLIT | % | 100.00 |
| Disable Break Control of interference when changing stack | | <input type="checkbox"/> |
| Pressure Die Power On (YES) | | <input type="checkbox"/> |
| Y Last Bend Return SPEED | % | 100.00 |

Part Data Note Parameter Default

Export IGES Import \$\$\$ IGES Simulation VALIDATE Transfer

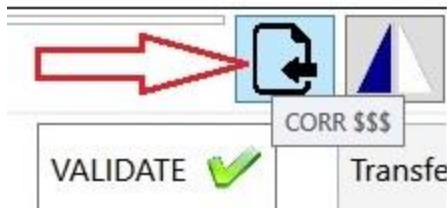
If importing the correction with the appropriate radio button, all the parameters will remain untouched:

| Stack Level | Element | X Axis (mm) | Radius (mm) | Y Axis (°) | Elasticity Return | Z Axis (°) |
|-------------|---------|-------------|-------------|------------|-------------------|------------|
| 1 | Line | 76.04 | | | | 0.00 |
| 2 | Bend | 15.80 | | 45.2643 | 3.2500 | |
| 3 | Line | 107.99 | | | | 179.73 |
| 4 | Bend | 15.74 | | 45.0879 | 3.2500 | |
| 5 | Line | 115.03 | | | | -179.99 |
| 6 | Bend | 34.95 | | 100.1176 | 4.1667 | |
| 7 | Line | 112.40 | | | | -179.53 |
| 8 | Bend | 7.00 | | 20.0459 | 2.0000 | |
| 9 | Line | 132.42 | | | | |

OPEN the new correction as corrected by the ROMER comparing the bent part to the MASTER after measuring

Total Tube Length (Theoretical incl Elasticity) PARTS
617.37 / 621.80 mm 0 / 0

Part Data Note Parameter Default VALIDATE Transfer



Once the CORR \$\$\$ is selected, the above window opens, select the “corrected” file, open it and the previous part will be re-populated and will only replace the part entries and no other change will occur, nor will you be prompted for name or bend-die changes etc.

Please remember, that if the part was inverted to permit its fabrication, YOU must measure the bent part from the opposite end so the importation of the correction will occur correctly. However if it was not, remember to invert the part again prior to validation.