

Understanding the Gage Table

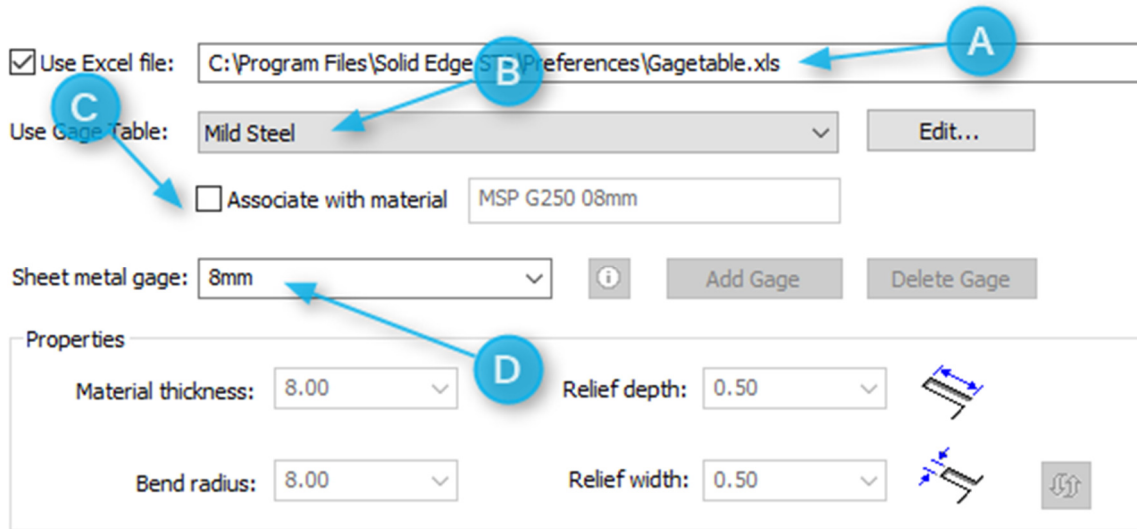
This Tech Tip explains how the gage table spreadsheet is laid out and what you need to edit.

The image below shows the gagetable.xls, which at first glance is a little confusing, but it is quite simple once you understand it's layout.

	A	B	C	D	E	F
1	Process Type					
2	Units	mm				
3	*100					
4	Gage Name	3mm				
5	Material Thickness	3				
6	Bend Radius	3.5				
7	Relief Depth	5				
8	Relief Width	2.75				
9	*200	Radius				
10	Angle	10	20	25	30	
11	5	0.1	0.1	0.15	0.2	
12	15	0.17	0.1	0.15	0.25	
13	30	0.19	0.15	0.2	0.3	
14	45	0.2	0.2	0.25	0.35	
15	60	0.21	0.2	0.25	0.4	
16	75	0.22	0.3	0.35	0.45	
17	90	0.23	0.3	0.35	0.5	
18	120	0.24	0.4	0.4	0.65	
19	135	0.25	0.4	0.5	0.68	
20	180	0.3	0.5	0.6	0.7	
21	*400					
22	Notes:	Neutral Factors derived for demo				
23	*500					
24						
25	*100					
26	Gage Name	4mm				
27	Material Thickness	4				
28	Bend Radius	5				
29	Relief Depth	1.8				
30	Relief Width	1				
31	*200	Radius				
32	Angle	3	5	6.5	10	
33	5	0.1	0.1	0.05	0.1	
34	15	0.17	0.15	0.1	0.1	
35	30	0.19	0.2	0.13	0.2	
36	45	0.2	0.21	0.23	0.25	
37	60	0.21	0.25	0.26	0.3	
38	75	0.22	0.25	0.3	0.4	

1. These tabs represent the material used (See item B in Figure 2)
2. These represent the different sections of the table. *100 Gage Start, *200 NF Table Start, *400 NF Table End, *500 Gage End (NF = Neutral factor)
3. Gauge Name (See item B in Figure 2)
4. Material Thickness
5. Bend Radius
6. Radius range
7. Relief Depth (See Figure 2)
8. Relief width (See Figure 2)

Key Aluminum 6061 Mild Steel Stainless Steel

**Figure 1**

*200 to *400 the Neutral Factor table. This is a simple table and of little use in most situations but does allow great flexibility. The blue column is the angle range and the purple row is the radius range. The white area marked with a red border is the neutral factor.

So for any angle between 0 and 5° at a bend radius between 0 and 10mm the K factor will be 0.1

If you are bending a 3mm Aluminium plate at 65° with a bend radius of 23mm then the K factor will be 0.2

In the "Gauge Properties" tab in the Material Table you can select the sheet metal gage (Figure 2, item D) and then associate it to a Material Property (Figure 2, item C).