

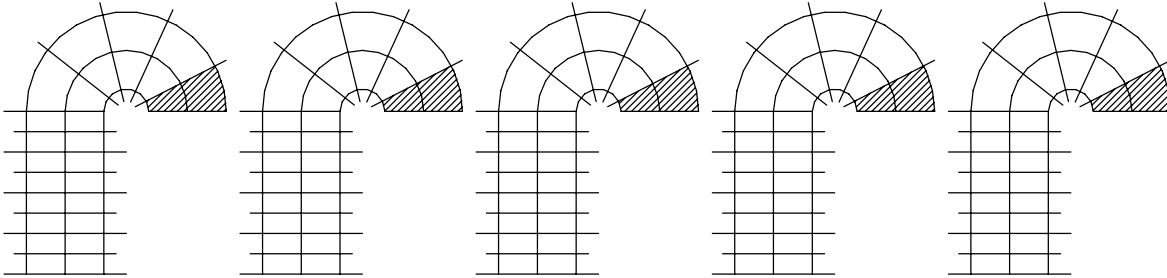
90-deg Elbow Control Sheet for 1500NP Series

Shop Name:		Work Order No.:	
Project Name:		Date:	
Author/Technician:		Page:	

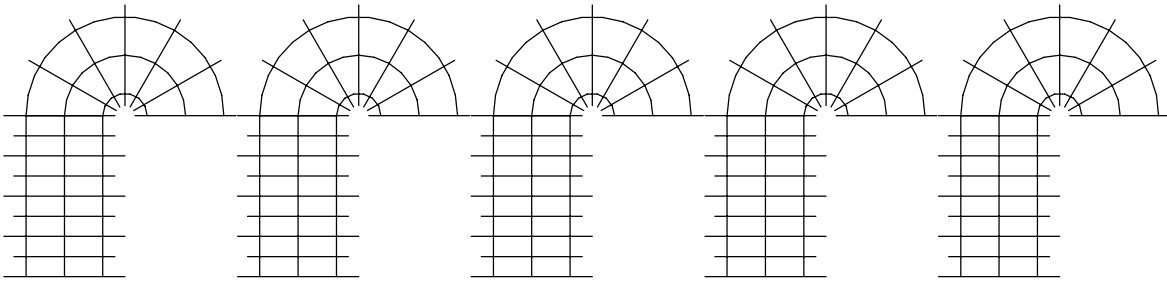
Directions for Use:

1. Upon completion of your icengineworks™-modeled exhaust header design, locate cylinder 1 and, starting at the exhaust port going downstream of flow, identify the first section of blocks with same CLR and aligned witness lines as explained in the Instructions Manual.
2. Note: the diagrams below assume 90-deg elbows are tacked together to maximize their use. They include a straight section to facilitate cutting.
3. Mark and label the corresponding blocks or spaces in the drawings below according to their CLR and number of blocks used. Write the cylinder number, the section number in that runner and label the direction of flow to avoid confusion. For example: 1a, 1b, etc., denoting the first section (a) of cylinder 1 at the port, followed by the next section (b) going downstream, and so on until all sections in that runner are accounted for. Maximize the available metal in each U-Bend to minimize expenses. Take into consideration blade thickness and tolerance build-up.
4. Move on to the next cylinder and repeat until the entire design is tallied. You may need to rearrange the drawings if empty or unused block spaces are still available. Review your information before ordering weld elbows to limit mistakes. It is wise to order extra pieces just in case something unexpected happens.
5. When cutting the actual metal elbows, remember to label each metal section as you go through all the sections to avoid confusion, particularly the flow direction. When all cut, many of them look very similar.

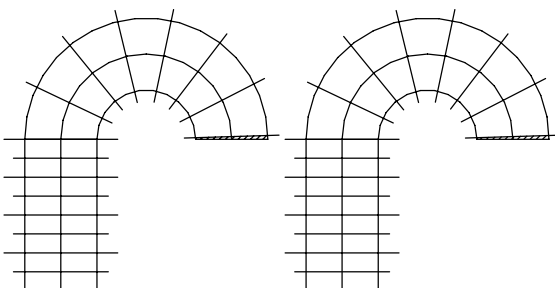
1500NP Series 1-1/2" NPS Short Radius 1.500"-CLR w/4" Leg for 1"-long blocks:



1500NP Series 1-1/2" NPS Short Radius 1.500"-CLR w/4" Leg for 30-deg blocks:



1500NP Series 1-1/2" NPS Long Radius 2.250"-CLR w/4" Leg for 1"-long blocks:



1500NP Series 1-1/2" NPS Long Radius 2.250"-CLR w/4" Leg for 15-deg and 30-deg blocks:

