

Seal Shaping Requirements for Non-Circular Seals

All standard metal seals can be formed into various shapes. The illustration below shows some of the many shapes in which metal seals can be made.

For applications as varied as fuel nozzle mounting flanges on aircraft gas turbine engines, or dies for extrusion of

plastic film, the availability of specially shaped metal seals offers the greatest design flexibility.

The table (below) provides the minimum inside bend radius for the various cross sections of metal C-rings, O-rings, spring energized C-rings, wire rings, E-rings and U-rings. All shaped seals

are custom designed by our engineers. Please send us your completed "Application Data Sheet" provided in Section F of this design guide including a sketch of the non-circular cavity and we will assist you in determining the best seal type and shape for your application.

Minimum Inside Bend Radius of Seal (inches)						
Cross Section Code	C-Ring	E-Ring	O-Ring	U-Ring	Spring Energized C-Ring	Wire Ring
01	0.20		0.40			
02	0.20		0.60			
03	0.20		0.60			0.40
04	0.20		0.90			
05	0.30	0.70	0.90	0.70	0.40	0.60
06	0.30	0.90	1.30			
07	0.50	1.50	1.30	1.00	0.60	0.90
08	0.50	0.90	0.40			
09	0.60	1.90	0.60	1.30	0.80	1.30
10	0.60	1.20	0.80			
11	0.80	1.20	1.60		0.90	
12	0.80		0.90			
13	0.90	1.90	1.90	2.00	1.10	
14	0.90		1.10			
15	1.20	2.70	2.50	2.60	1.50	
16	1.20		1.50			
17	1.80		3.80		2.30	
18	1.80		2.30			
19	2.40		5.00		3.00	
20	2.40		3.00			
21			6.30			
25			1.30			
29			0.50			
31			0.60			
32			0.90			

