

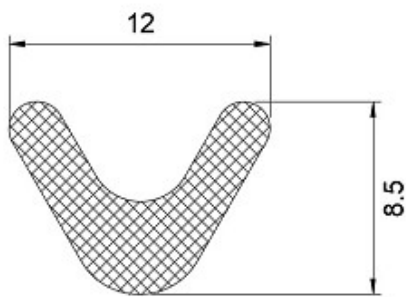
Die Design: Die Set for Circular Swaging and Non Circular Swaging (shaping) Operation to be designed in two die configuration for the following steps given below.

1. CIRCULAR SWAGING (2 Die Configurations)

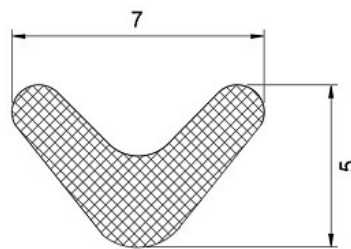
Sl. No.	Die set for diameter reduction (mm)
1	16 to 15.5
2	15.5 to 15
3	15 to 14.5
4	14.5 to 14
5	14 to 13.5
6	13.5 to 13
7	13 to 12.5
8	12.5 to 12
9	12 to 11.5
10	11.5 to 11
11	11 to 10.5
12	10.5 to 10
13	10 to 9.5
14	9.5 to 9
15	9 to 8.5
16	8.5 to 8
17	8 to 7.5
18	7.5 to 7
19	7 to 6.5
20	6.5 to 6
21	6 to 5.5
22	5.5 to 5.1
23	5.2 to 4.9
24	5 to 4.7
25	5 to 4.5
26	4.6 to 4.4
27	4.5 to 4.25
28	4.25 to 4.0

2. NON CIRCULAR SWAGING (SHAPING): Two Die Configuration

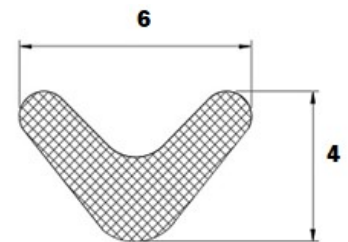
Non-circular Swaging (Shaping)		
Sl. No.	Die set for diameter reduction (mm)	
1	In feed Dia. 9.5	Shape of the work piece given below are tentative.
2	In feed Dia. 5.1	
3	In feed Dia. 4.25	
NOTE: Drawing of Shaping die set internal profile will be provided by VSSC		



(1)



(2)



(3)

3. FEEDING ROLLER PAIRS:

To meet the circular swaging requirement, 29 pairs of feeding rollers with different circular profile (as per section-1) and to meet shaping requirements 3 pairs of rollers with different V shape profile (as per section-2) mentioned are to be supplied.