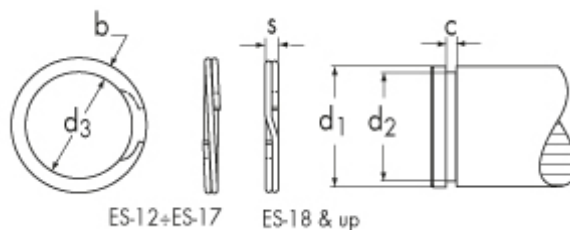


# SMALLEY® SPIRAL RETAINING RINGS

SAE 1070-90  
Carbon Steel

surface treatment:  
Oil dipped

Example of designation: ES-6



d1=shaft diameter  
d2=groove diameter  
d3=internal ring diameter  
S=thickness

Medium duty  
series  
ES - for shafts



| description | Price<br>Euro x100 | % Price Change |   | Package |
|-------------|--------------------|----------------|---|---------|
|             |                    | 1              | 2 |         |
| ES-13       | 21,00              | + 20%          | - | 1000    |

| DESCRIPTION                  | GROOVE     | THRUST CAPACITY                                                                                              |
|------------------------------|------------|--------------------------------------------------------------------------------------------------------------|
| ES-13                        | d2         | ring shear Newtons 12.100<br>(safety factor =3)                                                              |
| d1 mm 13.00                  | mm 12.24   |                                                                                                              |
|                              | Toll. d2   | groove yield Newtons 2.410<br>(based on a groove material yield strength of 310/mm and a safety factor of 2) |
|                              | mm +/-0,06 |                                                                                                              |
|                              | c          |                                                                                                              |
|                              | mm 1.00    |                                                                                                              |
|                              | Toll. c    |                                                                                                              |
|                              | mm +0,080  |                                                                                                              |
| RING IN THE UNSTRESSED STATE |            |                                                                                                              |
| d3                           |            |                                                                                                              |
| mm 12.13                     |            |                                                                                                              |
| Toll. d3                     |            |                                                                                                              |
| mm -0,33                     |            |                                                                                                              |
| b                            |            |                                                                                                              |
| mm 1.27                      |            |                                                                                                              |
| Toll. b                      |            |                                                                                                              |
| mm +.08/-0,13                |            |                                                                                                              |
| s                            |            |                                                                                                              |
| mm 0.89                      |            |                                                                                                              |
| Toll. s                      |            |                                                                                                              |
| mm +/-0,05                   |            |                                                                                                              |
| Weight Kg/1000               |            |                                                                                                              |
| 0.33                         |            |                                                                                                              |

Technical informations are indicative and can be updated.

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