

## RETAINING RING SELECTION GUIDE

**STEP 1: Do you need to meet any specifications?**

**YES**

Specification	Smalley Series
Military MIL- DTL-27426/3	WH
Military MIL- DTL-27426/1	WS
Military MIL- DTL-27426/4	WHM
Military MIL- DTL-27426/2	WSM
Aerospace AS4299, AS3217, AS3219	WH
Aerospace AS4299, AS3218, AS3219	WS
Aerospace AS4299, AS3215, AS3219	WHM
Aerospace AS4299, AS3216, AS3219	WSM
Metric Aerospace MA 4017	EH
Metric Aerospace MA 4016	ES

**NO**

**STEP 2: Do you need to match a snap ring groove?**

**YES**

Manufacturer	Smalley Series
Truarc N5000 & 5008	WHM
Truarc 5100 & 5108	WSM
Eaton NAN	WHT
Eaton XAN	WST
Eaton I-N	WHM
Eaton E-N	WSM
Industrial RR 3000 & 4000	WHM
Industrial RR 3100 & 4100	WSM
Anderton N1300	WHM
Anderton N1400	WSM
Anderton D1300	DNH
Anderton D1400	DNS
European Specification DIN 472	DNH
European Specification DIN 471	DNS

**NO**

**STEP 3A: Choose by the Thrust Capacity needed OR see step 3B**

**Standard Units (inches)**

Series	Load <sup>1</sup>	Housing	Shaft
Light Duty	4100	VH	VS
Medium Duty	4950	WH	WS
Medium Heavy Duty	7070	WHT	WST
Heavy Duty	8340	WHM	WSM
Snap Rings	8341	FHE	FSE
WaveRing	—	WHW	WSW

**Metric Units (mm)**

Series	Load <sup>1</sup>	Housing	Shaft
Light Duty	18.03	VHM	VSM
DIN Series <sup>2</sup>	36.55	DNH	DNS
Aerospace Series	38.96	EH	ES
Snap Rings	36.53	FH	FS

<sup>1</sup> Representative example shows the load capacity (lb) for a 2" ring.

<sup>1</sup> Representative example shows the load capacity (kN) for a 50 mm ring.

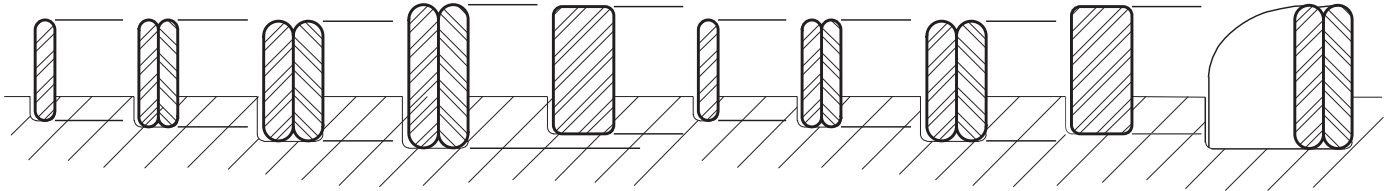
<sup>2</sup> Manufactured to DIN groove specifications.

**Step 3B: Still not sure? Use Smalley's most popular series, Medium Duty WH (internal) or WS (external).  
Ask for a free sample.**

## RELATIVE PROPORTIONS OF RINGS IN GROOVES

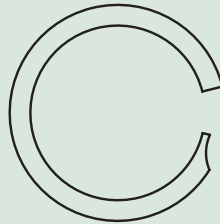
A cross-section of each Smalley Retaining Ring configuration is illustrated, comparing groove and ring sections in the same diameter bore or shaft. The heavier retaining ring cross-sections are in deeper and wider grooves, to provide significantly greater thrust capacity.

- |   |  |  |   |   |  |   |   |  |   |
|---|--|--|---|---|--|---|---|--|---|
| <b>VH &amp; VS</b><br>Light Duty Series | <b>WH &amp; WS</b><br>Medium Duty Series | <b>WHT &amp; WST</b><br>Medium Heavy Duty Series | <b>WHM &amp; WSM</b><br>Heavy Duty Series | <b>FHE &amp; FSE</b><br>Heavy Duty Series | <b>VHM &amp; VSM</b><br>Light Duty Metric Series | <b>EH &amp; ES</b><br>Metric Aerospace Series | <b>DNH &amp; DNS</b><br>DIN Metric Series | <b>FH &amp; FS</b><br>Heavy Duty Metric Series | <b>WHW &amp; WSW</b><br>WaveRing Series |
|---|--|--|---|---|--|---|---|--|---|

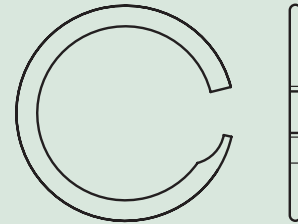


## RING TYPES

**SPIRAL RETAINING RINGS  
SINGLE TURN (1-TURN)**  
VH & VS – Light Duty, inch  
VHM & VSM – Light Duty, metric

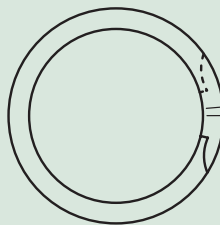


INTERNAL

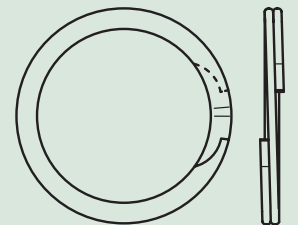


EXTERNAL

**SPIRAL RETAINING RINGS  
2-TURN**  
WH & WS – Medium Duty, inch  
WHT & WST – Medium Heavy Duty, inch  
WHM & WSM – Heavy Duty, inch  
EH & ES – Medium Duty, Metric Aerospace  
DNH & DNS – Heavy Duty DIN, metric

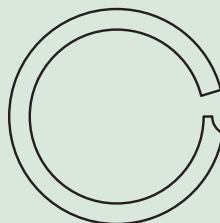


INTERNAL

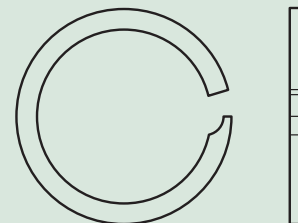


EXTERNAL

**SNAP RINGS**  
FHE & FSE – Heavy Duty, inch  
FH & FS – Heavy Duty, metric

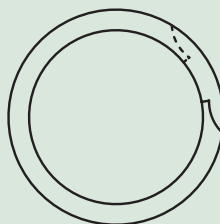


INTERNAL

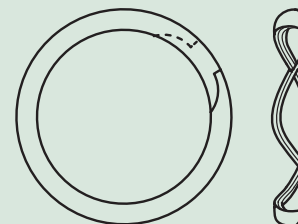


EXTERNAL

**WAVERINGS**  
WHW & WSW – inch



INTERNAL



EXTERNAL

RINGS