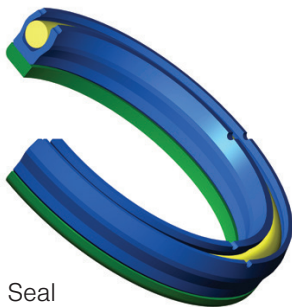


ESE Seal (Elastomeric Spring Energized)

Superior Performance in Tandem Systems



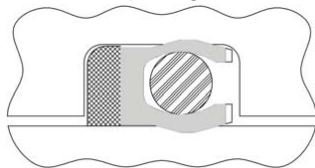
ESE Seal

Applications

- Primary and secondary flight control actuators (rudder, aileron, stabilizer, flaps, e.g.,)
- Tandem, “closed-groove” rod configurations
- Utility actuators

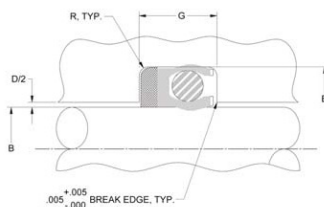
ESE Configuration

ESE with Backup Ring



Gland Dimensions

Rod



Note: Dimensions as specified in AS4716.

Contact Us

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Self-Venting Design

Generally used as a primary rod seal in dynamic tandem systems, Greene Tweed’s new ESE design is available for use in either one or two backup gland widths.

The ESE provides superior performance in tandem seal applications. Its unidirectional, “self-venting” design is complemented with a high modulus backup ring that is installable into “closed-groove” configurations for most sizes (unlike that of many standard, metal-spring-energized [MSE®] types). Along with the “self-venting” capability, the ESE design offers low operating friction along a wide operational temperature range.

The seal assembly itself consists of an extremely durable, PTFE jacket with an elastomeric energizer and high modulus backup ring. To help optimize seal life, Greene Tweed recommends the use of our high-performance Avalon® PTFE materials. The combination of a thermoplastic Avalon® jacket with one of our specially formulated, elastomeric o-ring energizers delivers enhanced performance over a wide temperature range. Generally this range extends from -65°F to 450°F (-54°C to 232°C), depending on materials selected. Greene Tweed’s ESE also features a high-strength backup ring to provide additional stability in the gland and help prevent any possibility of extrusion.

Features and Benefits

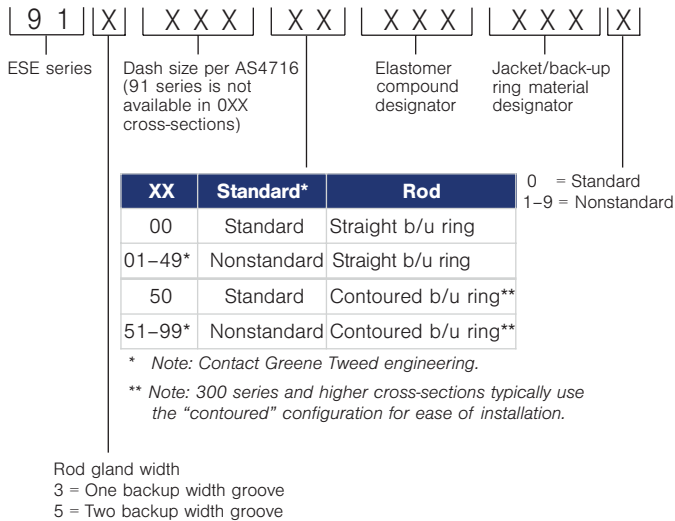
- Specialized, unidirectional, “self-venting” design
- Resilient Avalon® jacket coupled with a durable elastomeric energizer plus anti-extrusion back-up ring for enhanced performance over a wide temperature range
- Installable into most existing AS4716 configurations for ease of maintenance

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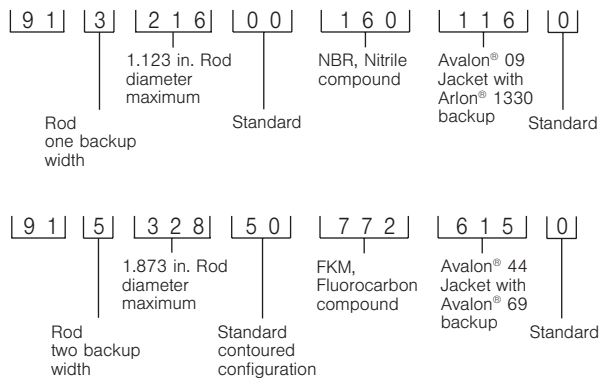
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ESE Part Numbering System

The part numbering system requires the use of the material designator tables found in the next column. For nonstandard designs, contact Greene Tweed engineering.



Part Numbering Examples



Contact your local Greene Tweed representative for specific recommendations to suit higher performance requirements.

Material Designator Tables

Code	Elastomer Compound
160	NBR, Nitrile
161	NBR, Nitrile
409	FVMQ, Fluorosilicone
410	FVMQ, Fluorosilicone
731	FKM, Fluorocarbon
772	FKM, Fluorocarbon
952	EPM, Ethylene Propylene
954	EPDM, Ethylene Propylene
964	NBR, Nitrile

Code	Jacket/Backup Material
116	Avalon® 09 Jacket/Arlon® 1330 Backup
120	Avalon® 09 Jacket/NWR Backup
601	Avalon® 89 Jacket/NWR Backup
605	Avalon® 50 Jacket/Arlon® 1330 Backup
606	Avalon® 89 Jacket/Arlon® 1330 Backup
608	Avalon® 89 Jacket/Avalon® 69 Backup
614	Avalon® 44 Jacket/Avalon® 44 Backup
615	Avalon® 44 Jacket/Avalon® 69 Backup
616	Avalon® 44 Jacket/Arlon® 1330 Backup
617	Avalon® 89 Jacket/Avalon® 89 Backup

Note: All backup rings are scarf cut. For solid back-up rings contact Greene Tweed engineering.

See Greene Tweed Surface Finish guidelines.

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