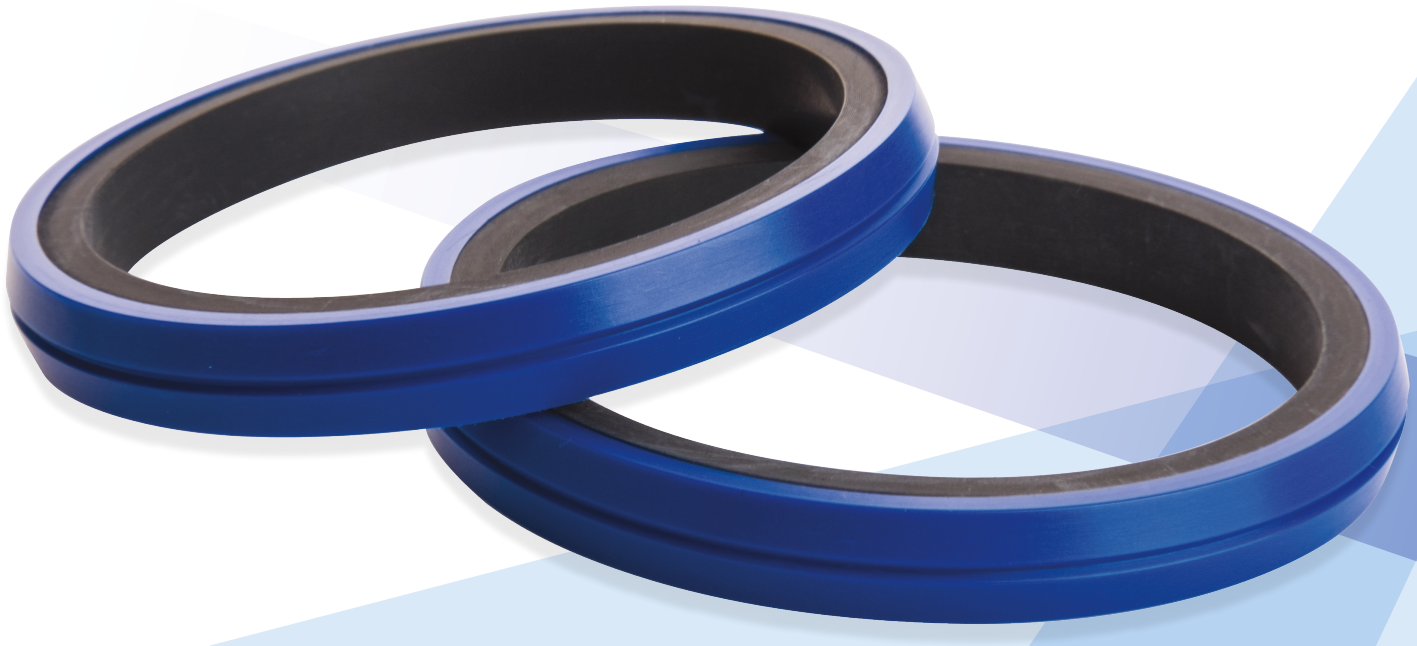
ESC
ENGINEERED SEALS & COMPONENTS, LLC.

PISTON SEALS
M-SEAL
300 SERIES

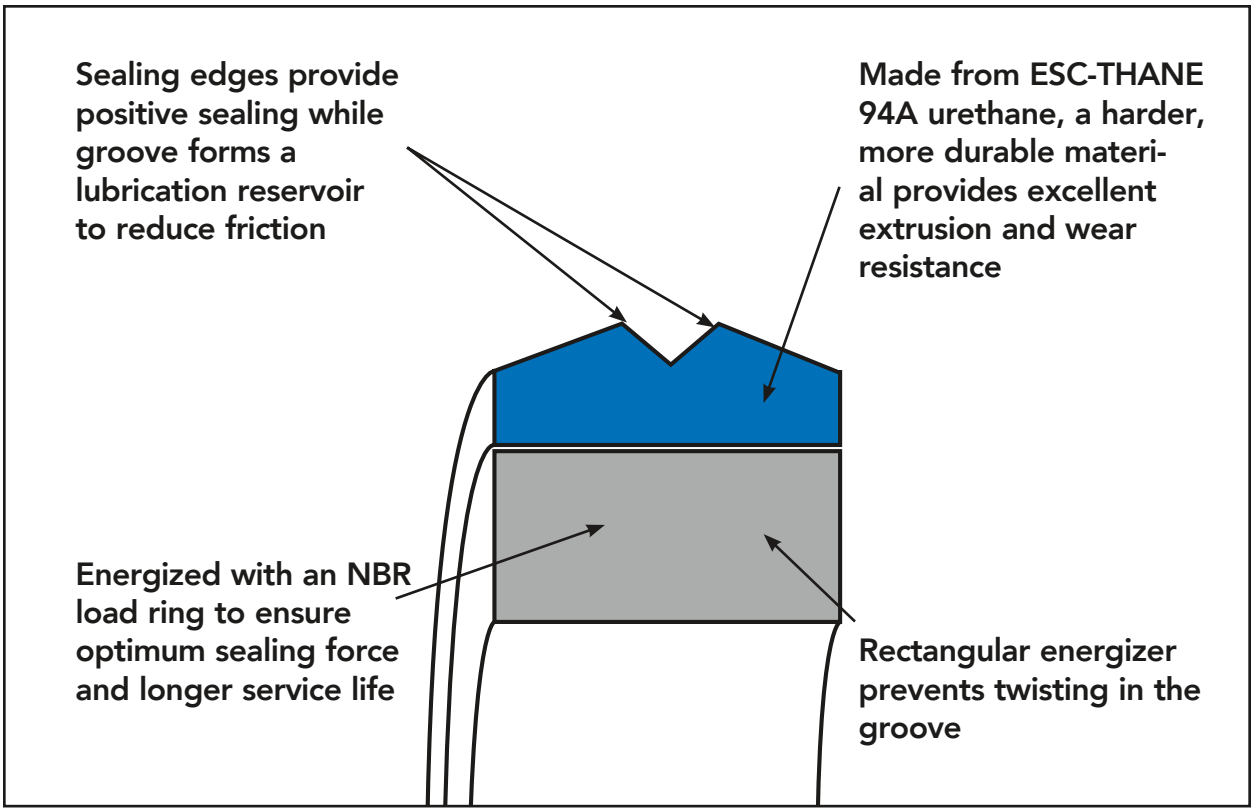
KEY FEATURES OF SERIES 300 M-SEAL:

- 2 Piece Design for Maximum Performance
- Resists Twisting & Spiral Failure
- Easy to Install
- High Pressure Range
- Unique Seal Geometry
- Temperature Range: -40°F to +220°F



PISTON SEALS M-SEAL

SERIES 300



* **UNIQUE SEAL GEOMETRY:** The geometry of the M-Seal allows a fluid reservoir between the two points of the M (in between the two separate sealing surfaces). This provides extra lubrication for reduced breakaway and running friction. The rectangular load ring provide positive, no drift sealing in many cylinder applications.

* **RESISTS SPIRAL FAILURE:** M-SEAL Seals are generally rectangular in cross section providing improved stability to resist cocking, twisting, sticking, and rolling.

* **EASY TO INSTALL:** Because of the unique 2 piece design M-Seals are a SNAP to install. No more resizing as is the case with many other types of seals.

* **FLUID PRESSURE RANGE: ESC M-Seals** are rated to withstand pressure up to 5000 psi at recommended groove dimensions and tolerances.

* **FLUID & TEMPERATURE RANGE:** Temperature limits of -65° to +300° F can be attained with POLY-TREL. ESC-THANE compound has a range of -40° F to +220° F and is the standard compound.

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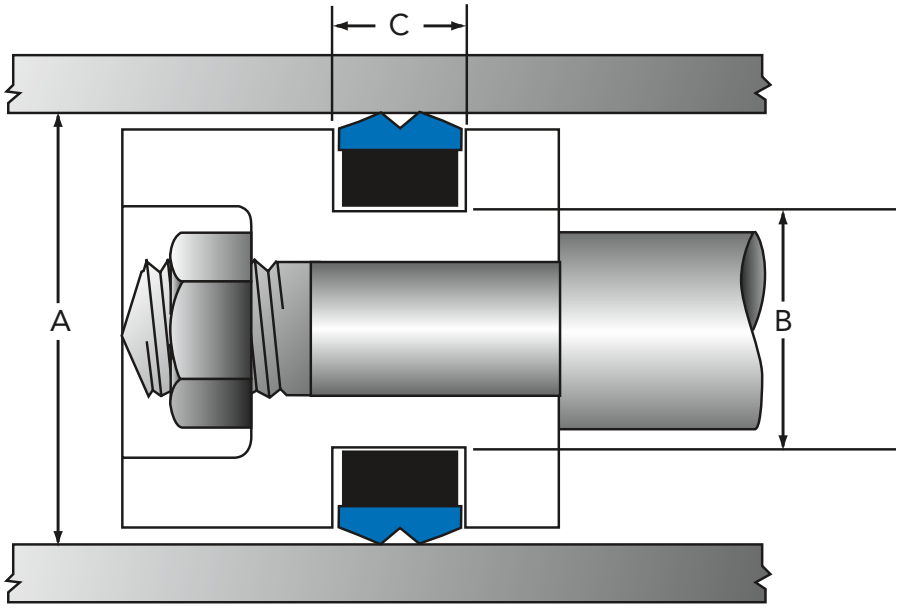

SERIES 300

Part No.	Nominal Bore A.	Nominal Part Dims. (inch)				Groove Dims. (inch)			
300-024-250	1.500	1.500	1.125	0.188	0.250	1.125		0.263	
300-032-312	2.000	2.000	1.625	0.188	0.312	1.625	+.004	0.328	
300-040-312	2.500	2.500	2.125	0.188	0.312	2.125	-.000	0.328	
300-048-312	3.000	3.000	2.625	0.188	0.312	2.625		0.328	
300-056-312	3.500	3.500	3.125	0.188	0.312	3.125		0.328	
300-064-375	4.000	4.000	3.500	0.250	0.375	3.500		0.394	
300-072-375	4.500	4.500	4.000	0.250	0.375	4.000	+.005	0.394	+.015
300-080-375	5.000	5.000	4.500	0.250	0.375	4.500	-.000	0.394	-.000
300-096-375	6.000	6.000	5.500	0.250	0.375	5.500		0.394	
300-112-375	7.000	7.000	6.500	0.250	0.375	6.500		0.374	
300-128-625	8.000	8.000	7.250	0.375	0.625	7.250		0.657	
300-144-625	9.000	9.000	8.250	0.375	0.625	8.250		0.657	
300-160-625	10.000	10.000	9.250	0.375	0.625	9.250	+.007	0.657	
300-176-625	11.000	11.000	10.250	0.375	0.625	10.250	-.000	0.657	
300-192-625	12.000	12.000	11.250	0.375	0.625	11.250		0.657	
300-224-625	14.000	14.000	13.250	0.375	0.625	13.250		0.657	

* More sizes available. Consult factory if you do not see the size you need.

SERIES 300 STANDARD COMPOUND

ESC-thane Compound U94

TPU thermoplastic polyester urethane

Property	Test Method	Units	Value
Mechanical			
Tensile Modulus	ASTM D 412	MPa (psi)	
@50% Elongation			8.4 (2250)
@100% Elongation			11.0 (1600)
@300% Elongation			27.6 (4000)
Ultimate Tensile Strength	ASTM D 412	MPa (psi)	44.8 (6500)
Ultimate Elongation	ASTM D 412	%	400
Elongation Set After Break	ASTM D 412	%	30
Tear Strength, Die "C"	ASTM D 624	KN/m (PLI)	145 (830)
Compression Set	ASTM D 395		
22 hours at 25 C (77 F)	Method B	%	25
22 hours at 70 C (158 F)		%	29
Hardness , Shore A	ASTM D 2240		90-98A
Taber Abrasion Resistance	ASTM D 1044		
1000 g, 1,000 cycles;			
H-22 wheel (coarser)		10	mg
Flexural Modulas	ASTM D 790	Mpa (psi)	82.7 (12,000)
Reinforcement	NO		

The information provided in this data sheet corresponds to our knowledge on the subject at the date of this publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such materials used in combination with any other material, additives or pigments or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specifications limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to do to determine the suitability of a specific compound for your particular purpose. Since Engineered Seals, LLC cannot anticipate all variation in actual end-use conditions ESC makes no warranties and assumes no liability in connection with any use of this information. Caution: Do not use this product in medical application involving permanent implantation in the human body.

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