

# Rod Seal BD Profile

Catalog EPS 5370/USA



## BD Profile, Premium O-ring Energized Lip Seal

The BD profile is a non-symmetrical profile rod seal. Its rectangular shaped cross section ensures stability in the gland. The o-ring energizer functions as a spring to maintain sealing contact under low pressure or vacuum applications. The knife trimmed, beveled lip does an excellent job wiping fluid film. A secondary sealing lip is located below the primary sealing lip, just above the base of the seal, to provide enhanced sealing performance and ensure a tight, stable fit in the gland. Available in Parker's proprietary urethanes, the BD profile provides long life, extrusion resistance, low compression set, shock load resistance and increased sealing performance at zero pressure. The BD profile is designed to be used as a stand alone rod seal or for use with the BR or OD profile buffer seals for more critical sealing applications. Also available with a positively-activated back-up.

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### Technical Data

Standard Materials*	Temperature Range	Pressure Range†	Surface Speed
P4300A90	-65°F to 275°F (-54°C to 135°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
P4301A90	-65°F to 275°F (-54°C to 135°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
P4700A90	-65°F to 200°F (-54°C to 93°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
P5065A88	-70°F to 200°F (-57°C to 93°C)	3500 psi (241 bar)	< 1.6 ft/s (0.5 m/s)

**\*Alternate Materials:** For applications that may require an alternate material, please contact your local Parker Seal representative.

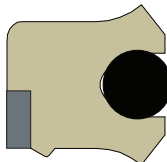
**†Pressure Range** without wear rings (see Table 2-4, page 2-5).

**Pressure Range** with positively-activated back-up to 10,000 psi (688 bar).

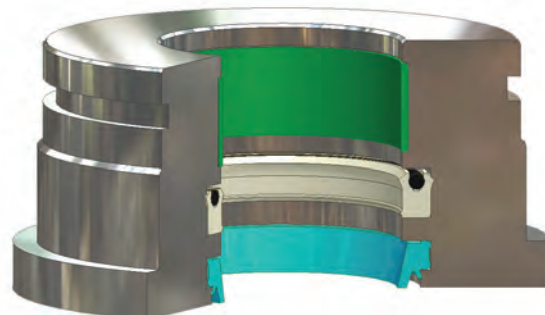
**Options:** A back-up ring located in the heel of the BD profile can be provided for enhanced extrusion protection. See part number nomenclature for designating this option. Contact your local Parker Seal representative for price and availability.



BD Cross-Section



BD Cross-Section  
with Back-up



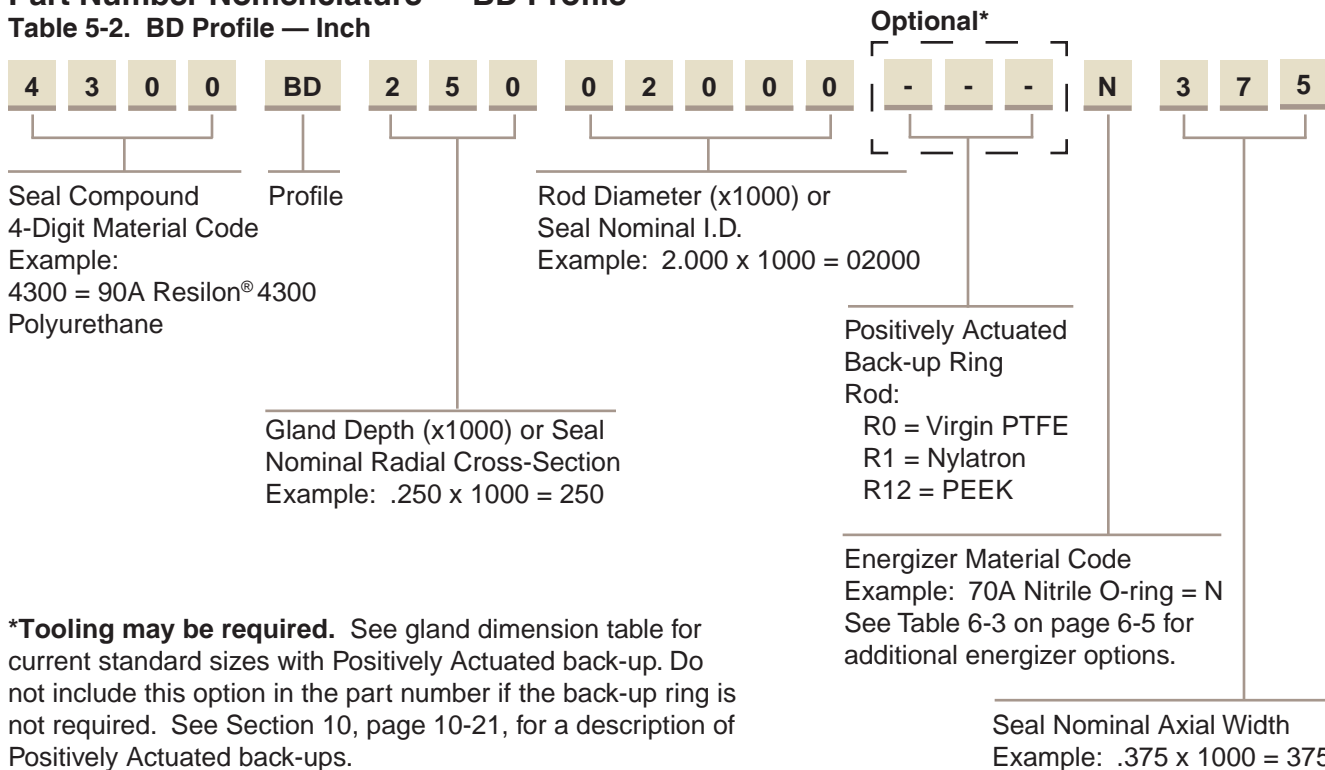
BD Installed in Rod Gland

09/01/07

## BD Profile

### Part Number Nomenclature — BD Profile

Table 5-2. BD Profile — Inch

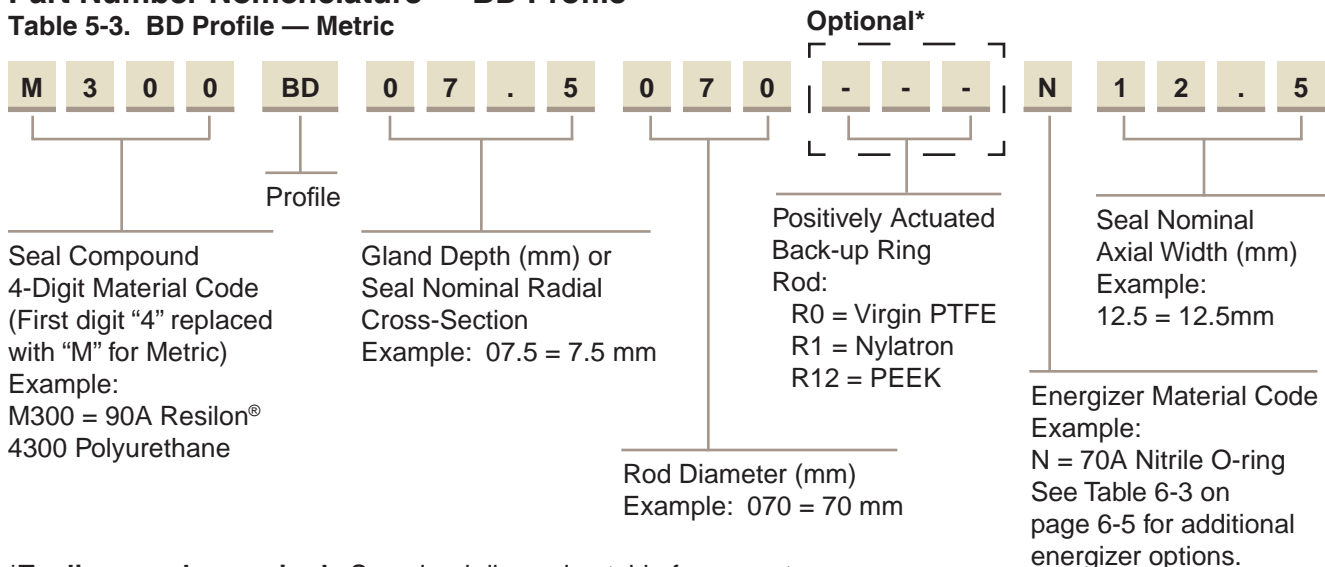


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**\*Tooling may be required.** See gland dimension table for current standard sizes with Positively Actuated back-up. Do not include this option in the part number if the back-up ring is not required. See Section 10, page 10-21, for a description of Positively Actuated back-ups.

### Part Number Nomenclature — BD Profile

Table 5-3. BD Profile — Metric



**\*Tooling may be required.** See gland dimension table for current standard sizes with Positively Actuated back-up. Do not include this option in the part number if the back-up ring is not required. See Section 10, page 10-21, for a description of Positively Actuated back-ups.

### Gland Dimensions — BD Profile

BD gland dimensions are provided in Tables 5-12 and 5-13 on pages 5-15 and 5-19, respectively.

02/15/08



# Rod Seal BT Profile

Catalog EPS 5370/USA



## BT Profile, Premium U-cup Rod Seal with Secondary Stabilizing Lip

The BT profile is a non-symmetrical design for use in hydraulic rod sealing applications. Using Finite Element Analysis, the BT profile was designed to provide improved sealing performance and stability in the gland. A knife trimming process is used to form the beveled lip which is best for removing fluid from the rod. By design, the BT profile has a more robust primary sealing lip than the BS profile and the secondary lip is located at the base of the heel. The standard compound for the BT profile is Parker's proprietary Resilon® polyurethane compound. The BT profile provides long life, extrusion resistance, low compression set, shock load resistance and increased sealing performance at zero pressure. The BT profile is designed for use as a stand alone rod seal or for use with the BR or OD profile buffer seals for more critical sealing applications.

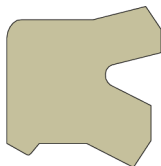
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### Technical Data

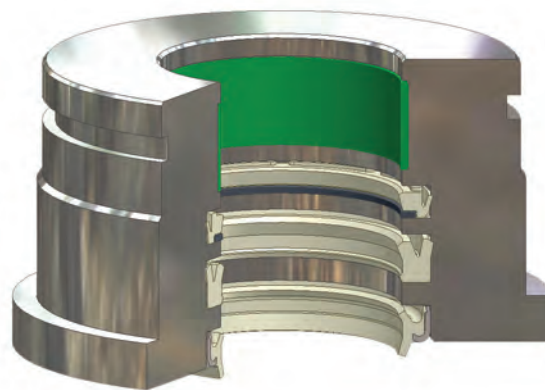
Standard Materials*	Temperature Range	Pressure Range†	Surface Speed
P4300A90	-65°F to 275°F (-54°C to 135°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
P4301A90	-65°F to 275°F (-54°C to 135°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)

**\*Alternate Materials:** For applications that may require an alternate material, please contact your local Parker Seal representative.

**†Pressure Range** without wear rings (see Table 2-4, page 2-5).



*BT Cross-Section*



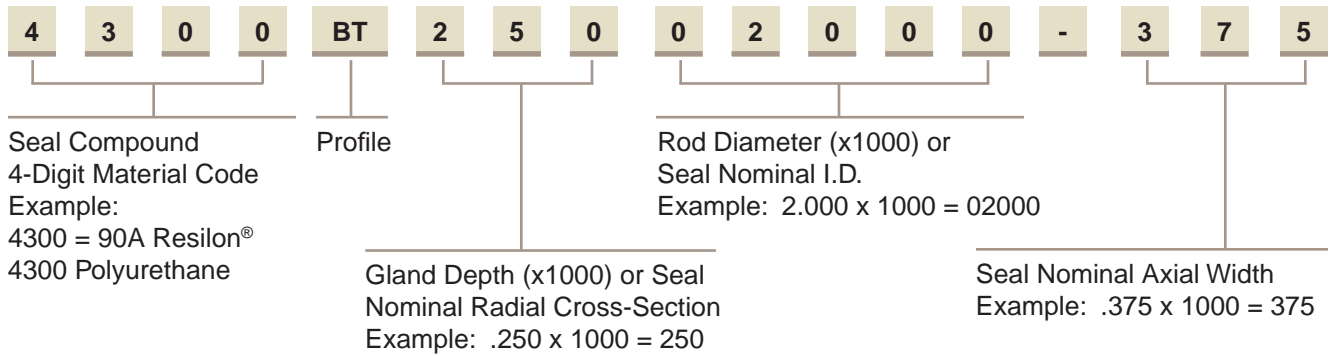
*BT Installed in Rod Gland*

09/01/07

**BT Profile**

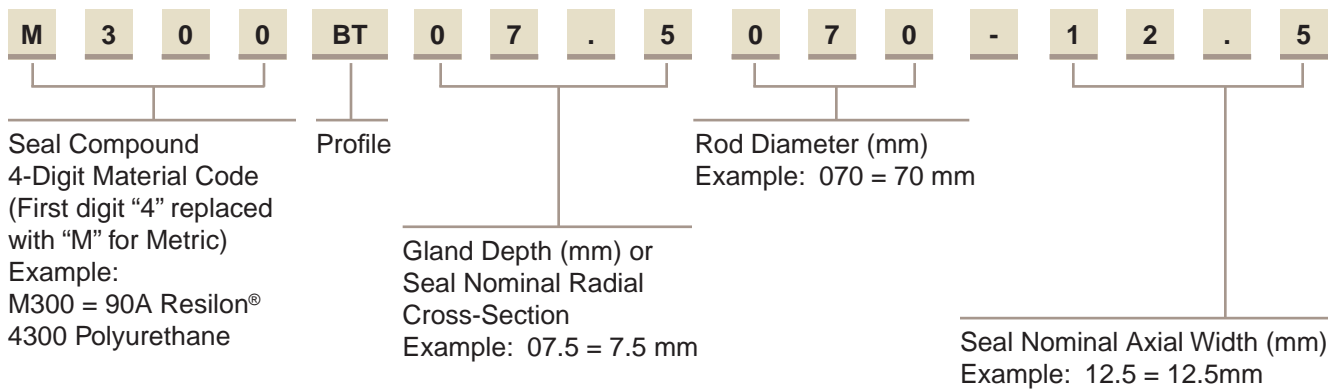
**Part Number Nomenclature — BT Profile**

**Table 5-4. BT Profile — Inch**



**Part Number Nomenclature — BT Profile**

**Table 5-5. BT Profile — Metric**



**Gland Dimensions — BT Profile**

BT gland dimensions are provided in Tables 5-12 and 5-13 on pages 5-15 and 5-19, respectively.

# Rod Seal BS Profile

Catalog EPS 5370/USA



## BS Profile, U-cup Rod Seal with Secondary Stabilizing Lip

The BS profile is a non-symmetrical profile designed for use in hydraulic rod sealing applications. A knife trimmed beveled sealing lip does an excellent job wiping fluid from the rod. In addition, a secondary sealing lip is located just above the base of the seal to provide enhanced sealing performance and ensure a tight, stable fit in the gland. Available in Parker proprietary urethanes, the BS profile provides long life, extrusion resistance, low compression set, shock load resistance and increased sealing performance at zero pressure. The BS profile is designed to be used as a stand alone rod seal or for use with the BR or OD profile buffer seals for more critical sealing applications.



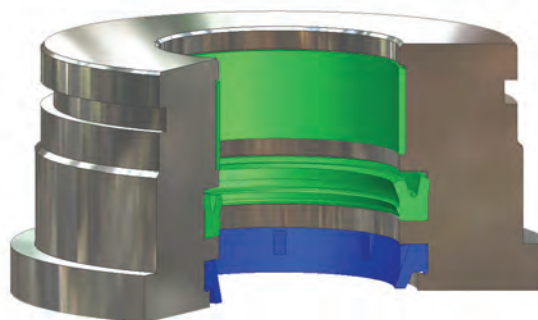
*BS Cross-Section*

### Technical Data

Standard Materials*	Temperature Range	Pressure Range†	Surface Speed
P4300A90	-65°F to 275°F (-54°C to 135°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
P4615A90	-65°F to 200°F (-54°C to 93°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
P4700A90	-65°F to 200°F (-54°C to 93°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
P5065A88	-70°F to 200°F (-57°C to 93°C)	3500 psi (241 bar)	< 1.6 ft/s (0.5 m/s)

\***Alternate Materials:** For applications that may require an alternate material, please contact your local Parker Seal representative.

†**Pressure Range** without wear rings (see Table 2-4, page 2-5).



*BS Installed in Rod Gland*

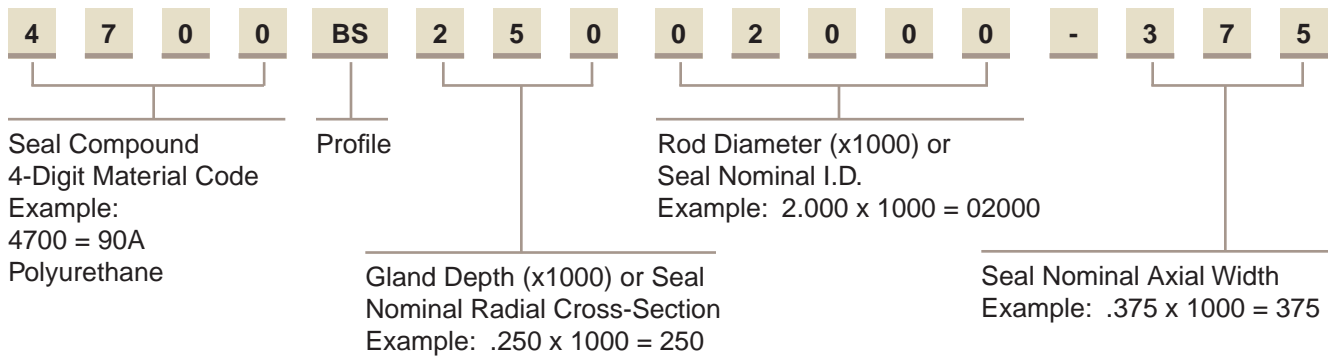
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**BS Profile**

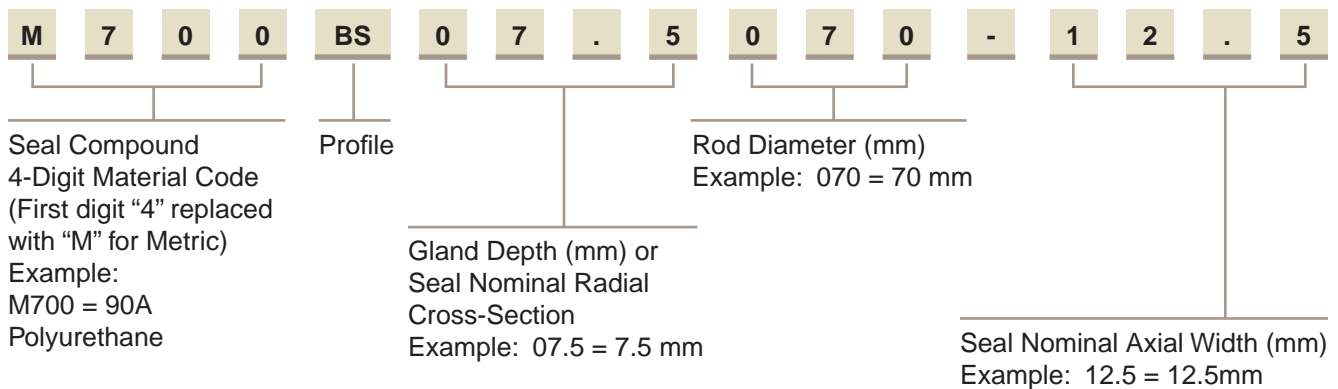
**Part Number Nomenclature — BS Profile**

**Table 5-6. BS Profile — Inch**



**Part Number Nomenclature —BS Profile**

**Table 5-7. BS Profile — Metric**



**Gland Dimensions — BS Profile**

BS gland dimensions are provided in Tables 5-12 and 5-13 on pages 5-15 and 5-19, respectively.

# Rod Seal B3 Profile

Catalog EPS 5370/USA



*B3 Cross-Section*

## B3 Profile, U-cup Rod Seal

The B3 profile is a non-symmetrical design for use in hydraulic rod sealing applications. The diameter of the B3 profile is designed to ensure a tight static side seal when installed. The knife trimmed, beveled lip does an excellent job wiping fluid film. The B3 profile is available in Parker proprietary compounds offering extrusion resistance, long wear, and low compression set. The B3 profile is designed for use as a stand alone rod seal and can be used with Parker's BR or OD profile buffer seals for more critical sealing applications. The B3 profile does not utilize a secondary sealing lip and can be used with a double lip wiper seal, such as the AY profile, to provide a multiple lip, rod sealing system without trapping pressure.

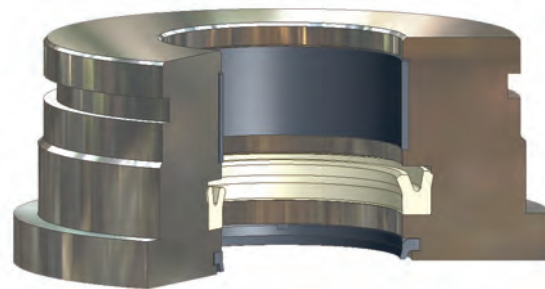
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## Technical Data

Standard Materials*	Temperature Range	Pressure Range†	Surface Speed
P4300A90	-65°F to 275°F (-54°C to 135°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
P4301A90	-65°F to 275°F (-54°C to 135°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
P4700A90	-65°F to 200°F (-54°C to 93°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
P5065A88	-70°F to 200°F (-57°C to 93°C)	3500 psi (241 bar)	< 1.6 ft/s (0.5 m/s)

**\*Alternate Materials:** For applications that may require an alternate material, please contact your local Parker Seal representative.

**†Pressure Range** without wear rings (see Table 2-4, page 2-5).



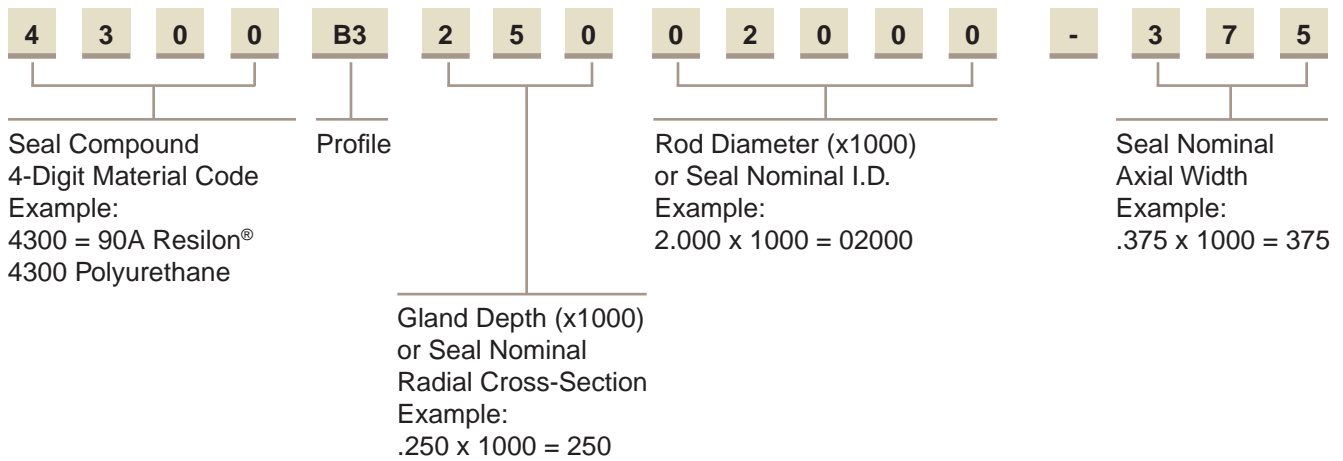
*B3 Installed in Rod Gland*

09/01/07

## B3 Profile

### Part Number Nomenclature — B3 Profile

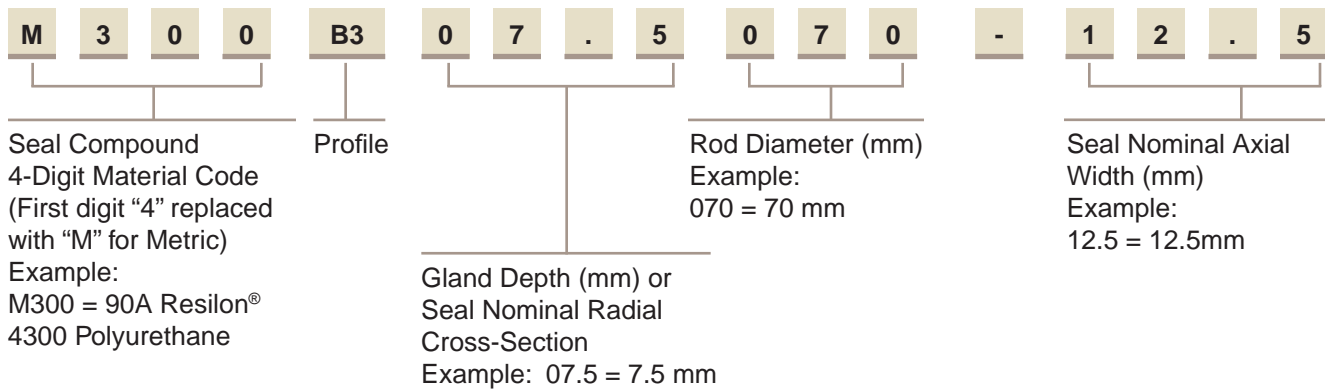
Table 5-8. B3 Profile — Inch



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### Part Number Nomenclature — B3 Profile

Table 5-9. B3 Profile — Metric



### Gland Dimensions — B3 Profile

B3 gland dimensions are provided in Tables 5-12 and 5-13 on pages 5-15 and 5-19, respectively.



# Rod Seal UR Profile

Catalog EPS 5370/USA



## UR Profile, Industrial U-cup Rod Seal

The UR profile is a non-symmetrical, hydraulic cylinder rod seal. The knife trimmed, beveled lip faces the rod to provide enhanced low to high pressure sealing and wiping action. The UR profile is an economical choice, available in Parker's wear and extrusion resistant Molythane compound.

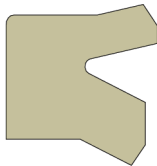
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### Technical Data

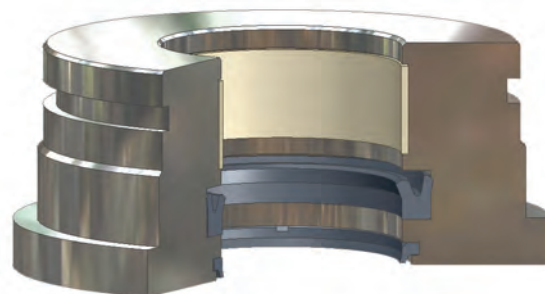
Standard Materials*	Temperature Range	Pressure Range†	Surface Speed
P4615A90	-65°F to 200°F (-54°C to 93°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)

\***Alternate Materials:** For applications that may require an alternate material, please contact your local Parker Seal representative.

†**Pressure Range** without wear rings (see Table 2-4, page 2-5).



*UR Cross-Section*



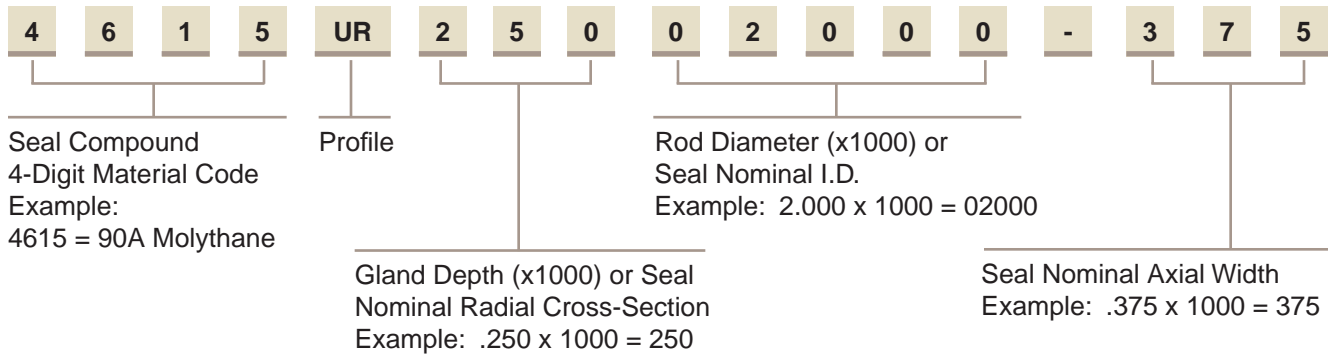
*UR Installed in Rod Gland*

09/01/07

**UR Profile**

**Part Number Nomenclature — UR Profile**

**Table 5-10. UR Profile — Inch**



**Gland Dimensions — UR Profile**

UR gland dimensions are provided in Tables 5-12 and 5-13 on pages 5-15 and 5-19, respectively.

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# Rod Seal

## BD, BT, BS, B3 and UR

### Gland Dimensions

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#### Gland Dimensions — BD, BT, BS, B3 and UR Profiles — Inch

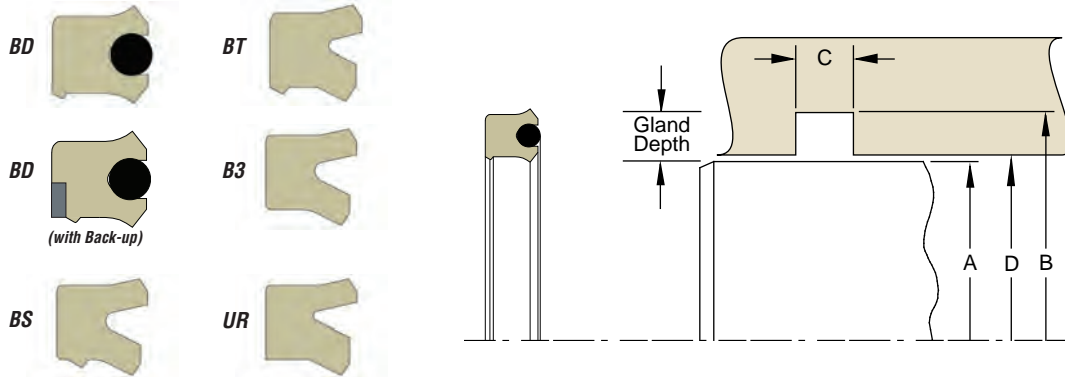


Table 5-11. Gland Dimension Tolerances

Nominal Gland Depth	A Rod Diameter	B Groove Diameter	C Groove Width	D Throat Diameter
1/8	+0.000/-0.001	+0.002/-0.000	+0.015/-0.000	+0.002/-0.000
3/16	+0.000/-0.002	+0.002/-0.000		+0.002/-0.000
1/4	+0.000/-0.002	+0.003/-0.000		+0.003/-0.000
5/16	+0.000/-0.002	+0.004/-0.000		+0.003/-0.000
3/8	+0.000/-0.002	+0.005/-0.000		+0.004/-0.000
7/16	+0.000/-0.003	+0.006/-0.000		+0.004/-0.000
1/2	+0.000/-0.003	+0.007/-0.000		+0.005/-0.000
5/8	+0.000/-0.003	+0.009/-0.000		+0.006/-0.000
3/4	+0.000/-0.004	+0.011/-0.000		+0.007/-0.000
1	+0.000/-0.005	+0.015/-0.000		+0.009/-0.000

Please refer to Engineering Section 2, Page 2-8 for surface finish and additional hardware considerations.

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Table 5-12. BD, BT, BS, B3 and UR Gland Dimensions — Inch

A Rod Diameter	B Groove Diameter	C Groove Width	D Throat Diameter*	Compounds (X = Standard Offering)											Part Number					
				BD				BT		BS			B3		UR	Compound Code	Profile Code	Ener-gizer Code (BD)		
				4300	4700	5065	With Back-up	4300	4300	4700	4615	5065	4300	5065	4615					
0.219	0.469	0.248	0.220					X								XXXX	xx	12500219	-	225
0.250	0.500	0.206	0.251	X		X		X							X	XXXX	xx	12500250	-	187
0.312	0.562	0.206	0.313	X		X		X								XXXX	xx	12500312	-	187
0.375	0.625	0.206	0.376					X								XXXX	xx	12500375	-	187
0.437	0.687	0.138	0.438												X	XXXX	xx	12500437	-	125
0.437	0.687	0.206	0.438					X								XXXX	xx	12500437	-	187
0.500	0.687	0.172	0.501								X					XXXX	xx	09300500	-	156
0.500	0.750	0.206	0.501	X		X	X	X	X			X				XXXX	xx	12500500	-	187
0.500	0.750	0.275	0.501					X	X			X				XXXX	xx	12500500	-	250
0.500	1.000	0.413	0.501							X		X				XXXX	xx	25000500	-	375
0.562	0.812	0.275	0.563						X			X				XXXX	xx	12500562	-	250
0.625	0.875	0.275	0.626					X	X		X	X			X	XXXX	xx	12500625	-	250
0.625	1.000	0.303	0.626					X								XXXX	xx	18700625	-	275
0.625	1.000	0.343	0.626	X		X		X								XXXX	xx	18700625	-	312

\*If used with wear rings, refer to wear ring throat diameter, see Section 9. For custom groove calculations, see Appendix C.

09/01/07



**Table 5-12. BD, BT, BS, B3 and UR Gland Dimensions — Inch (Continued)**

A Rod Dia- meter	B Groove Dia- meter	C Groove Width	D Throat Dia- meter*	Compounds (X = Standard Offering)											Part Number							
				BD				BT	BS			B3		UR	Com- pound Code	Profile Code	Ener- gizer Code (BD)					
				4300	4700	5065	With Back-up	4300	4300	4700	4615	5065	4300	5065					4615			
0.687	1.062	0.206	0.626													X	XXXX	xx	18700687	-	187	
0.750	1.000	0.275	0.751	X		X			X	X		X	X				X	XXXX	xx	12500750	-	250
0.750	1.125	0.275	0.751					X									XXXX	xx	18700750	-	250	
0.750	1.125	0.343	0.751													X	XXXX	xx	18700750	-	312	
0.812	1.187	0.206	0.813													X	XXXX	xx	18700812	-	187	
0.812	1.187	0.275	0.813					X									XXXX	xx	18700812	-	250	
0.875	1.125	0.275	0.876					X		X		X				X	XXXX	xx	12500875	-	250	
0.875	1.250	0.275	0.876							X	X	X					XXXX	xx	18700875	-	250	
0.937	1.312	0.343	0.938							X		X					XXXX	xx	18700937	-	312	
1.000	1.250	0.206	1.001					X	X	X	X	X					XXXX	xx	12501000	-	187	
1.000	1.250	0.275	1.001	X	X	X	X	X	X	X	X	X				X	XXXX	xx	12501000	-	250	
1.000	1.312	0.241	1.001					X									XXXX	xx	15601000	-	219	
1.000	1.312	0.275	1.001							X	X	X					XXXX	xx	15601000	-	250	
1.000	1.375	0.275	1.001							X	X	X				X	XXXX	xx	18701000	-	250	
1.000	1.375	0.343	1.001	X		X	X	X	X	X	X	X				X	XXXX	xx	18701000	-	312	
1.000	1.500	0.275	1.001													X	XXXX	xx	25001000	-	250	
1.000	1.500	0.413	1.001					X			X					X	XXXX	xx	25001000	-	375	
1.125	1.375	0.138	1.126											X	X		XXXX	xx	12501125	-	125	
1.125	1.375	0.275	1.126						X			X					XXXX	xx	12501125	-	250	
1.125	1.500	0.275	1.126					X								X	XXXX	xx	18701125	-	250	
1.125	1.500	0.343	1.126	X		X	X	X		X	X	X				X	XXXX	xx	18701125	-	312	
1.125	1.500	0.413	1.126	X		X											XXXX	xx	18701125	-	375	
1.125	1.625	0.413	1.126					X									XXXX	xx	25001125	-	375	
1.187	1.562	0.343	1.188													X	XXXX	xx	18701187	-	312	
1.250	1.500	0.275	1.251					X	X			X				X	XXXX	xx	12501250	-	250	
1.250	1.562	0.240	1.251					X									XXXX	xx	15601250	-	218	
1.250	1.625	0.275	1.251													X	XXXX	xx	18701250	-	250	
1.250	1.625	0.343	1.251	X	X	X	X	X	X	X	X	X				X	XXXX	xx	18701250	-	312	
1.250	1.625	0.413	1.251							X		X					XXXX	xx	18701250	-	375	
1.250	1.750	0.413	1.251					X		X		X				X	XXXX	xx	25001250	-	375	
1.375	1.625	0.206	1.376							X	X	X					XXXX	xx	12501375	-	187	
1.375	1.625	0.275	1.376							X		X	X			X	XXXX	xx	12501375	-	250	
1.375	1.687	0.241	1.376					X									XXXX	xx	15601375	-	219	
1.375	1.687	0.275	1.376							X	X	X					XXXX	xx	15601375	-	250	
1.375	1.687	0.343	1.376				X	X									XXXX	xx	15601375	-	312	
1.375	1.750	0.275	1.376					X								X	XXXX	xx	18701375	-	250	
1.375	1.750	0.343	1.376	X	X	X		X		X	X	X				X	XXXX	xx	18701375	-	312	
1.375	1.875	0.413	1.376					X	X			X				X	XXXX	xx	25001375	-	375	
1.500	1.750	0.206	1.501	X		X			X	X	X	X					XXXX	xx	12501500	-	187	
1.500	1.750	0.275	1.501					X									XXXX	xx	12501500	-	250	
1.500	1.875	0.275	1.501					X								X	XXXX	xx	18701500	-	250	
1.500	1.875	0.309	1.501							X		X					XXXX	xx	18701500	-	281	
1.500	1.875	0.343	1.501								X					X	XXXX	xx	18701500	-	312	
1.500	1.875	0.413	1.501	X	X	X	X	X		X		X				X	XXXX	xx	18701500	-	375	
1.500	2.000	0.343	1.501													X	XXXX	xx	25001500	-	312	
1.500	2.000	0.413	1.501	X		X	X	X	X	X	X	X				X	XXXX	xx	25001500	-	375	
1.562	1.937	0.343	1.563						X			X					XXXX	xx	18701562	-	312	
1.625	2.000	0.309	1.626								X						XXXX	xx	18701625	-	281	

\*If used with wear rings, refer to wear ring throat diameter, see Section 9.  
For custom groove calculations, see Appendix C.



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**Table 5-12. BD, BT, BS, B3 and UR Gland Dimensions — Inch (Continued)**

A Rod Diameter	B Groove Diameter	C Groove Width	D Throat Diameter*	Compounds (X = Standard Offering)												Part Number					
				BD				BT	BS				B3		UR	Compound Code	Profile Code		Ener-gizer Code (BD)		
				4300	4700	5065	With Back-up	4300	4300	4700	4615	5065	4300	5065	4615						
1.625	2.000	0.413	1.626	X		X	X	X	X	X						X	XXXX	xx	18701625	-	375
1.625	2.125	0.413	1.626						X							X	XXXX	xx	25001625	-	375
1.750	2.125	0.275	1.751					X									XXXX	xx	18701750	-	250
1.750	2.125	0.343	1.751					X			X						XXXX	xx	18701750	-	312
1.750	2.125	0.413	1.751	X	X	X	X	X	X	X	X	X				X	XXXX	xx	18701750	-	375
1.750	2.250	0.413	1.751	X	X	X	X	X	X	X	X	X				X	XXXX	xx	25001750	-	375
1.750	2.375	0.550	1.752					X									XXXX	xx	31201750	-	500
1.875	2.250	0.343	1.876						X								XXXX	xx	18701875	-	312
1.875	2.250	0.413	1.876	X		X	X	X	X		X	X					XXXX	xx	18701875	-	375
2.000	2.250	0.206	2.001								X	X	X				XXXX	xx	12502000	-	187
2.000	2.375	0.275	2.001					X									XXXX	xx	18702000	-	250
2.000	2.375	0.309	2.001								X		X				XXXX	xx	18702000	-	281
2.000	2.375	0.343	2.001					X			X		X	X	X		XXXX	xx	18702000	-	312
2.000	2.375	0.413	2.001	X	X	X	X	X	X	X	X	X				X	XXXX	xx	18702000	-	375
2.000	2.500	0.413	2.001	X	X	X	X	X	X	X	X	X				X	XXXX	xx	25002000	-	375
2.000	2.625	0.550	2.002						X								XXXX	xx	31202000	-	500
2.125	2.500	0.413	2.126								X						XXXX	xx	18702125	-	375
2.125	2.625	0.413	2.126					X		X							XXXX	xx	25002125	-	375
2.250	2.625	0.206	2.251										X	X			XXXX	xx	18702250	-	187
2.250	2.625	0.309	2.251													X	XXXX	xx	18702250	-	281
2.250	2.625	0.343	2.251					X									XXXX	xx	18702250	-	312
2.250	2.625	0.413	2.251	X		X	X		X	X	X	X					XXXX	xx	18702250	-	375
2.250	2.750	0.413	2.251	X	X	X	X	X	X	X	X	X				X	XXXX	xx	25002250	-	375
2.250	2.875	0.413	2.252							X		X					XXXX	xx	31202250	-	375
2.250	2.875	0.550	2.252							X		X	X	X	X		XXXX	xx	31202250	-	500
2.250	2.875	0.877	2.252					X									XXXX	xx	31202250	-	797
2.375	2.875	0.413	2.376					X									XXXX	xx	25002375	-	375
2.500	2.875	0.413	2.501	X	X	X	X	X	X		X					X	XXXX	xx	18702500	-	375
2.500	2.937	0.309	2.501					X									XXXX	xx	21802500	-	281
2.500	2.937	0.343	2.501					X									XXXX	xx	21802500	-	312
2.500	2.937	0.413	2.501					X									XXXX	xx	21802500	-	375
2.500	3.000	0.413	2.501	X	X	X	X	X	X	X	X					X	XXXX	xx	25002500	-	375
2.500	3.125	0.550	2.502						X	X	X	X	X	X	X		XXXX	xx	31202500	-	500
2.625	3.000	0.413	2.626						X								XXXX	xx	18702625	-	375
2.625	3.125	0.413	2.626	X		X		X	X		X	X					XXXX	xx	25002625	-	375
2.750	3.125	0.309	2.751							X		X	X	X			XXXX	xx	18702750	-	281
2.750	3.250	0.413	2.751	X	X	X	X	X		X	X	X				X	XXXX	xx	25002750	-	375
2.750	3.375	0.550	2.752						X	X	X	X	X	X			XXXX	xx	31202750	-	500
2.750	3.500	0.688	2.752						X	X	X	X					XXXX	xx	37502750	-	625
2.875	3.250	0.206	2.876									X	X				XXXX	xx	18702875	-	187
2.875	3.250	0.413	2.876					X									XXXX	xx	18702875	-	375
2.875	3.375	0.413	2.876	X		X											XXXX	xx	25002875	-	375
3.000	3.375	0.309	3.001							X		X					XXXX	xx	18703000	-	281
3.000	3.375	0.413	3.001					X									XXXX	xx	18703000	-	375
3.000	3.437	0.309	3.001					X									XXXX	xx	21803000	-	281
3.000	3.500	0.413	3.001	X	X	X	X	X	X	X	X					X	XXXX	xx	25003000	-	375
3.000	3.625	0.550	3.002						X							X	XXXX	xx	31203000	-	500
3.000	3.750	0.550	3.002						X								XXXX	xx	37503000	-	500

\*If used with wear rings, refer to wear ring throat diameter, see Section 9.  
 For custom groove calculations, see Appendix C.



**Table 5-12. BD, BT, BS, B3 and UR Gland Dimensions — Inch (Continued)**

A Rod Dia- meter	B Groove Dia- meter	C Groove Width	D Throat Dia- meter*	Compounds (X = Standard Offering)											Part Number					
				BD				BT	BS			B3		UR	Com- pound Code	Profile Code		Ener- gizer Code (BD)		
				4300	4700	5065	With Back-up	4300	4300	4700	4615	5065	4300	5065					4615	
3.000	3.750	0.688	3.002								X	X				XXXX	xx	37503000	-	625
3.250	3.625	0.413	3.251								X	X				XXXX	xx	18703250	-	375
3.250	3.750	0.413	3.251		X			X	X	X	X				X	XXXX	xx	25003250	-	375
3.500	3.875	0.309	3.501							X	X					XXXX	xx	18703500	-	281
3.500	3.875	0.413	3.501					X								XXXX	xx	18703500	-	375
3.500	4.000	0.343	3.501					X								XXXX	xx	25003500	-	312
3.500	4.000	0.413	3.501					X	X	X				X		XXXX	xx	25003500	-	375
3.500	4.125	0.550	3.502						X		X					XXXX	xx	31203500	-	500
3.500	4.250	0.550	3.502											X		XXXX	xx	37503500	-	500
3.500	4.250	0.688	3.502							X	X			X		XXXX	xx	37503500	-	625
3.750	4.250	0.413	3.751					X								XXXX	xx	25003750	-	375
3.750	4.375	0.550	3.752					X								XXXX	xx	31203750	-	500
3.875	4.250	0.343	3.876					X								XXXX	xx	18703785	-	312
3.875	4.750	0.825	3.877								X					XXXX	xx	43703875	-	750
4.000	4.375	0.413	4.001					X								XXXX	xx	18704000	-	375
4.000	4.500	0.343	4.001					X								XXXX	xx	25004000	-	312
4.000	4.500	0.413	4.001	X	X	X	X	X	X	X	X	X	X	X	X	XXXX	xx	25004000	-	375
4.000	4.500	0.618	4.001					X	X	X	X			X		XXXX	xx	25004000	-	562
4.000	4.625	0.413	4.002					X								XXXX	xx	31204000	-	375
4.000	4.750	0.688	4.002					X	X	X	X			X		XXXX	xx	37504000	-	625
4.250	4.625	0.309	4.251							X	X					XXXX	xx	18704250	-	281
4.250	4.750	0.413	4.251	X		X				X	X					XXXX	xx	25004250	-	375
4.250	4.750	0.618	4.251						X	X	X					XXXX	xx	25004250	-	562
4.250	5.000	0.688	4.252					X								XXXX	xx	37504250	-	625
4.250	5.000	0.784	4.252					X								XXXX	xx	37504250	-	713
4.500	5.000	0.343	4.501					X								XXXX	xx	25004500	-	312
4.500	5.000	0.413	4.501							X	X					XXXX	xx	25004500	-	375
4.500	5.125	0.413	4.502					X								XXXX	xx	31204500	-	375
4.500	5.125	0.550	4.502											X		XXXX	xx	31204500	-	500
4.500	5.250	0.688	4.502					X	X		X					XXXX	xx	37504500	-	625
4.625	5.250	0.688	4.627							X	X					XXXX	xx	31204625	-	625
4.750	5.375	0.550	4.752					X								XXXX	xx	31204750	-	500
4.750	5.625	0.825	4.752								X					XXXX	xx	43704750	-	750
5.000	5.375	0.309	5.001							X	X					XXXX	xx	18705000	-	281
5.000	5.375	0.413	5.001					X								XXXX	xx	18705000	-	375
5.000	5.500	0.413	5.001					X	X	X	X					XXXX	xx	25005000	-	375
5.000	5.500	0.618	5.001					X								XXXX	xx	25005000	-	562
5.000	5.500	0.792	5.001							X	X					XXXX	xx	25005000	-	720
5.000	5.562	0.378	5.001					X								XXXX	xx	28105000	-	344
5.000	5.562	0.550	5.001											X		XXXX	xx	28105000	-	500
5.000	5.750	0.550	5.002								X					XXXX	xx	37505000	-	500
5.000	5.750	0.688	5.002					X						X		XXXX	xx	37505000	-	625
5.250	6.000	0.688	5.252					X	X		X					XXXX	xx	37505250	-	625
5.500	6.125	0.413	5.502					X								XXXX	xx	31205500	-	375
5.500	6.250	0.688	5.502					X								XXXX	xx	37505500	-	625
5.750	6.250	0.413	5.751							X	X					XXXX	xx	25005750	-	375
6.000	6.500	0.618	6.001					X	X	X	X					XXXX	xx	25006000	-	562
6.000	6.500	0.792	6.001							X	X					XXXX	xx	25006000	-	720

\*If used with wear rings, refer to wear ring throat diameter, see Section 9.  
For custom groove calculations, see Appendix C.



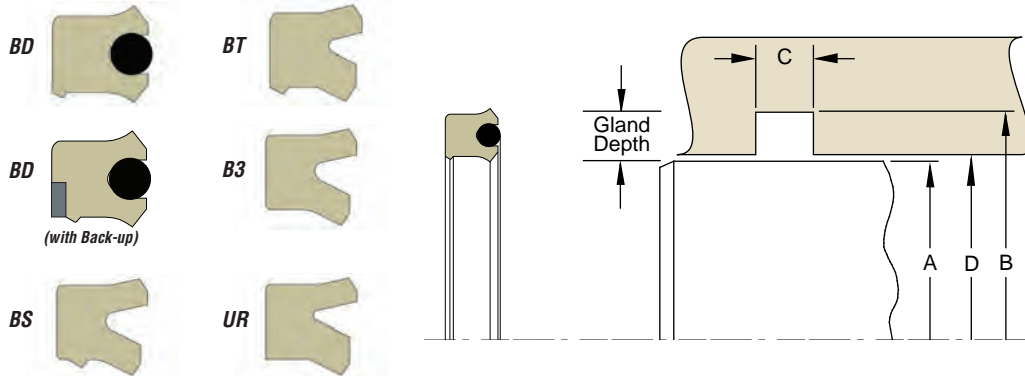
**Table 5-12. BD, BT, BS, B3 and UR Gland Dimensions — Inch (Continued)**

A Rod Diameter	B Groove Diameter	C Groove Width	D Throat Diameter*	Compounds (X = Standard Offering)												Part Number				
				BD				BT	BS				B3		UR	Compound Code	Profile Code	Energizer Code (BD)		
				4300	4700	5065	With Back-up	4300	4300	4700	4615	5065	4300	5065	4615					
6.000	6.750	0.688	6.002						X				X			XXXX	xx	37506000	-	625
6.500	7.000	0.413	6.501								X					XXXX	xx	25006500	-	375
6.500	7.500	0.688	6.502						X				X			XXXX	xx	50006500	-	625
6.750	7.375	0.550	6.752						X							XXXX	xx	31206750	-	500
6.750	7.500	0.688	6.752						X							XXXX	xx	37506750	-	625
7.000	7.500	0.618	7.001							X			X			XXXX	xx	25007000	-	562
7.000	8.000	0.825	7.002						X				X			XXXX	xx	50007000	-	750
7.500	8.250	0.688	7.502									X				XXXX	xx	37507500	-	625
7.500	8.500	0.688	7.502								X		X			XXXX	xx	50007500	-	625
8.000	8.750	0.688	8.002						X							XXXX	xx	37508000	-	625
8.500	9.000	0.413	8.501		X	X										XXXX	xx	25008500	-	375
8.500	9.250	0.688	8.502						X							XXXX	xx	37508500	-	625
8.500	9.500	0.688	8.502							X			X			XXXX	xx	50008500	-	625
9.000	9.500	0.413	9.001		X	X										XXXX	xx	25009000	-	375
9.000	10.000	0.825	9.002						X							XXXX	xx	50009000	-	750
9.500	10.250	0.688	9.502						X							XXXX	xx	37509500	-	625

\*If used with wear rings, refer to wear ring throat diameter, see Section 9.  
 For custom groove calculations, see Appendix C.

NOTE: For sizes larger than those shown in the table, please contact your local Parker Seal representative.

**Gland Dimensions — BD, BT, BS, B3 and UR Profiles — Metric**



**Table 5-13. BD, BT, BS, B3 and UR Gland Dimensions — Metric**

A Rod Diameter	B Groove Diameter	C Groove Width	D Throat Diameter*	Compounds (X = Standard Offering)												Part Number					
				BD				BT	BS				B3		UR	Compound Code	Profile Code	Energizer Code (BD)			
				M300	M700	M065	With Back-up	M300	M300	M700	M615	M065	M300	M065	M615						
f7	H9	+0.25/-0.00	H8																		
For ISO tolerances refer to Appendix F.																					
12.0	19.0	5.6	12.0						X								XXXX	xx	03.5012	-	5
12.0	20.0	7.0	12.0						X								XXXX	xx	04.0012	-	6
22.0	30.0	6.3	22.0											X	X		XXXX	xx	04.0022	-	5.7
25.0	31.0	5.6	25.0											X	X		XXXX	xx	03.0025	-	5
25.0	35.0	8.0	25.0						X								XXXX	xx	05.0025	-	7.3
28.0	38.0	8.0	28.0						X								XXXX	xx	05.0028	-	7.3

\*If used with wear rings, refer to wear ring throat diameter, see Section 9.  
 For custom groove calculations, see Appendix C.

