

**DMR™**



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**MECHANICAL SEALS**



For over 30 years Daemar® Inc. has remained focused on partnering with our customers to deliver fluid sealing solutions that meet their business challenges. Whether the application is a new design or a maintenance requirement, Daemar's global partnerships offer you one of the most complete sources of supply for Mechanical Seals. To ensure that Daemar® consistently meets or exceeds customer requirements, Daemar® is ISO-9001:2000 registered and most suppliers have either TS16949-2000, QS-9000 or ISO-9001:2000 quality registrations.

Daemar® has developed all of the capabilities required to support your lean manufacturing initiatives

– providing JIT delivery, vendor managed inventories and computer systems integration. Supported by the Daemar® regional warehousing network you experience fast, courteous service throughout the world. All of Daemar's locations are fully stocked and staffed with experienced and knowledgeable sales and service professionals.

We trust that you will find this catalogue a valuable resource for selecting the appropriate Mechanical Seals for your sealing applications. For further selection assistance, pricing and product availability please contact the Daemar® location nearest you.



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## ISO-9001: 2000 Registered

To consistently meet and exceed our customers' expectations, Daemar<sup>®</sup> Inc. is ISO-9001: 2000 registered and most of our suppliers are QS-9000 and/or ISO-9000 quality registered.



**DMR**<sup>TM</sup>  
**ISO 9001:2000**  
Registered QMS

## Selecting a Replacement Seal

The best way to interchange a mechanical seal is by using the OEM part number and the Daemar "Pump Manufacturers Cross- Reference" guide. Of course this information is not always available so in the section Selecting a Replacement Seal are 9 steps to help identify the seal.

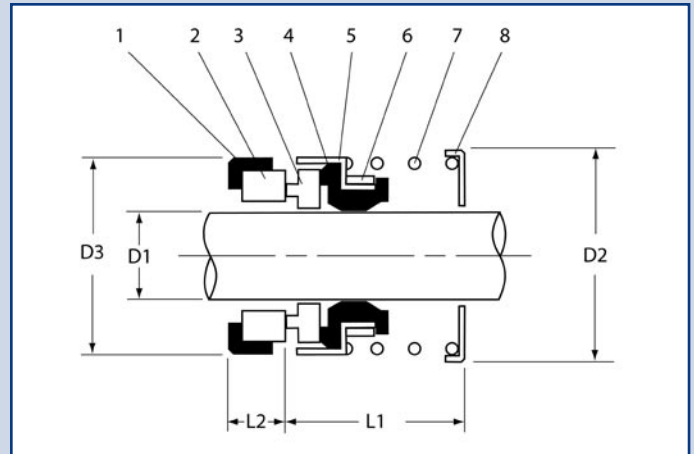
The identification of single spring "Pusher" Mechanical Seals using this DMR Mechanical Seals catalogue starts from the left hand column and moves to the right as follows:

- D1 - Shaft Diameter
- T2 - Seal Head Type
- D3 - Seal Head O.D.
- L1 - Seal Head Operation Height (OP. HT.)
- T1 - Seat Type
- D2 - Seat O.D.
- L2 - Seat Thickness
- Material Code

### 1. Shaft Size

Most single spring mechanical seals come in two parts: The "Head" & the "Seat". The Head is part of the spring assembly and it usually mounts on the shaft. The Seat is not part of the spring assembly and usually mounts in the bore.

The best way to find the shaft size is by measuring the actual shaft the seal mounts on but if you only have a sample then measure the inside diameter of the head to find the shaft diameter. You can add approximately 0.010" to 0.020" for rubber squeeze.



And that leads you to the far right column - The DMR Part Number!



## 2. Seal Head Type

The best way to identify the Seal Head Type is by cross-referencing as follows

DMR	John Crane	Sealol	Pac-Seal
Type A	Type 6	Type A	Type 16
Type B	Type 6A	Type B	Type 68
Type C	Type 21	Type 43	Type 21
Type D		Type 2	
Type E	Type 1	Type 43	Type 51

If you are unable to obtain this number then the best way to identify the Seal Head Type is by visually matching the sample to a drawing or picture.

In this tutorial refer to pages 6 & 7 for a list of pictures depicting the various Seal Head Types. These detailed pictures and drawings are also included in the DMR Shaft Seals Catalogue.

## 3. Seal Head O.D.

This is easy; just measure the outside diameter of the Seal Head assembly. These numbers do not have to match up exactly because the purpose is to ensure there is enough clearance for the replacement seal. **Make sure the DMR replacement Seal Head does NOT have a larger O.D. than the sample** (or the chamber it is fitting into if you have access to the actual equipment being sealed).

## 4. Seal Head OP. HT.

The Seal Head OP. HT. (Operation Height) is the height or length of the entire spring assembly and head compressed and installed in the equipment it is sealing. It is also a measure of how much spring force is applied to the two mating faces. If the force is too low then it may leak and if it is too high then it will wear out quicker.

The best way to measure this dimension is while the mechanical seal is installed in the equipment. Another option is to reuse the old spring if the heads interchange exactly and if the old spring isn't corroded. If neither of these two options are feasible then you can use the formula below as a general guideline however this applies to DMR mechanical seals and may not apply to other manufacturers.

OP. HT. = total spring assembly unsprung - 1/2 the unsprung height of just the spring

In other words, the springs are general compressed to approximately half the length for installation.

## 5. Seal Seat Type

Refer to page 5 of this guide for a list of pictures depicting the various seal Seat Types. The best way to identify the seal Seat Type is by visually matching the sample to drawing or pictures.

NOTE: Seat Type 1 (cup mount) and Seat Type 3 (o-ring mount) are interchangeable.

## 6. Seal Seat O.D.

**Measure the O.D. of the seal Seat** and you can subtract 0.010" to 0.020" for rubber squeeze. You can skip this step and just call it a "M.O.S" or mount-on-shaft if you have already identified the Seat as a Type 8, 9 or 11.

## 7. Seal Seat Thickness

**Measure the Seat Thickness**

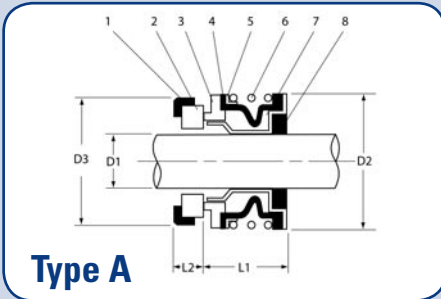
## 8. Material Code

The best way to select proper materials is by asking what liquid is being pumped and at what temperature. **The Daemar "seal material recommendation chart" can be used to select a suitable group of materials** and in some cases it may even work better than the original seal. The list starts with the most affordable seal on the left column and you should also confirm that the working temperature is compatible with the elastomer limits at the bottom of the chart.

If you are unable to find out the working environment of the seal then the only option is to visually identify the material and match it to the information on page 7 of this guide.

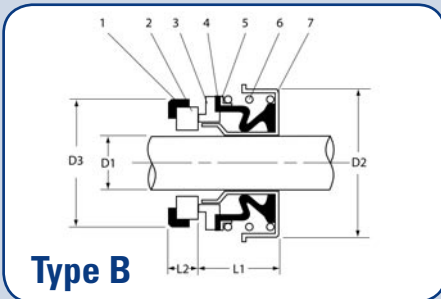
## 9. DMR Part Number

Working from left to right, starting with the shaft diameter, you should now be able to identify the DMR part number. There can be more than one option based on fluid compatibility or the interchangeability of Seat Type 1 and 3 so you should write down each of these numbers so you have as many options as possible for price and availability.



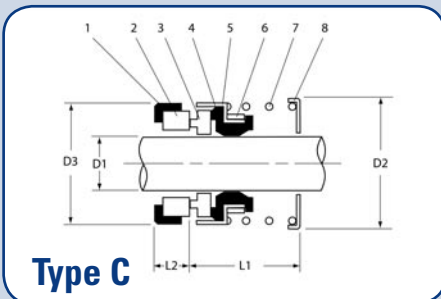
**Type A**

1. Cup Gasket
2. Stationary Face
3. Rotary Face
4. Bellows
5. Spring Retainer
6. Spring
7. Drive Shell
8. Drive Ring



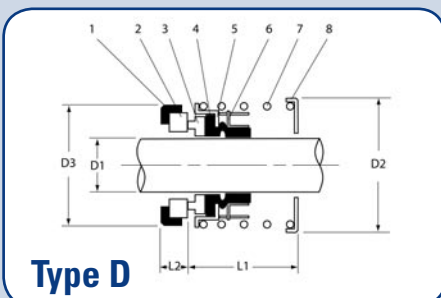
**Type B**

1. Cup Gasket
2. Stationary Face
3. Rotary Face
4. Bellows
5. Spring Retainer
6. Spring
7. Retainer



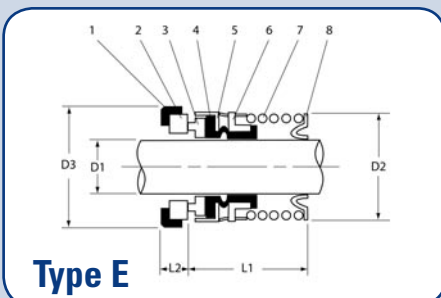
**Type C**

1. Cup Gasket
2. Stationary Face
3. Rotary Face
4. Bellows
5. Retainer
6. Drive Ring
7. Spring
8. Spring Retainer



**Type D**

1. Cup Gasket
2. Stationary Face
3. Rotary Face
4. Bellows
5. Retainer
6. Drive Ring
7. Spring
8. Spring Retainer



**Type E**

1. Cup Gasket
2. Stationary Face
3. Rotary Face
4. Bellows
5. Retainer
6. Drive Ring
7. Spring
8. Spring Retainer

**Cup Gasket** - Provides secondary sealing around the seat and maintains the position of the seat so that it properly mates with the seal

**Stationary Face** - The mating ring against which the seal face runs. Must be finished in the same manner as the rotary face.

**Rotary Face** - The rotary face is finished to a specified degree of flatness and smoothness and provides a leak-proof running joint.

**Bellows** -  
Type A & B - provides a seal at the shaft.  
Type C, D & E - provides a seal at the shaft surface and a friction-drive connection between the shaft and seal assembly.

**Spring Retainer** - Positions and centres the spring, aiding the concentricity between the spring and shaft.

**Spring** - Provides positive pressure for the sealing between the sealing faces.

**Drive Ring** - Controls fit of the bellows to the shaft for proper friction drive. Type A Drive Ring mates against the shaft for friction drive.

**Retainer** - Maintains contact with the bellows and provides positive drive to the Rotary Face.

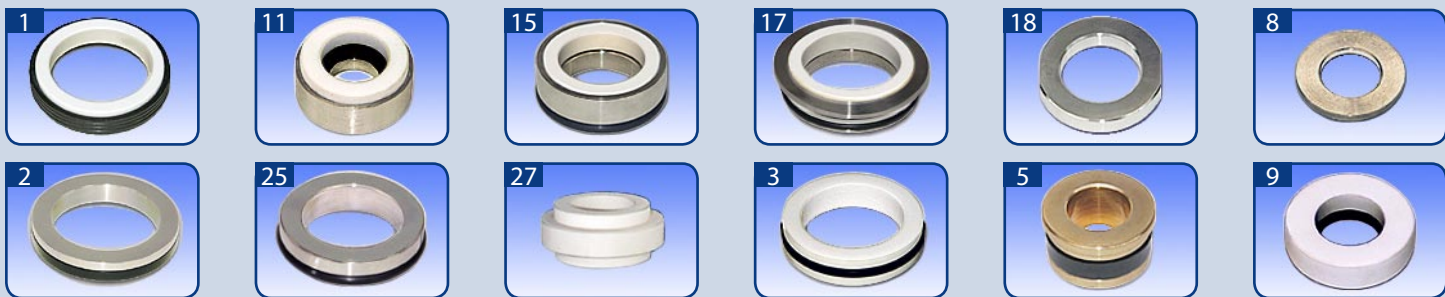
## Drawing Codes

<b>D1</b>	<b>Shaft Size</b>
<b>D2</b>	<b>Seal Head O.D.</b>
<b>D3</b>	<b>Counterbore or Seat O.D.</b>
<b>L1</b>	<b>Seal Head Operation Height (OP. HT.)</b>
<b>L2</b>	<b>Seat Thickness</b>

## DMR Head Types



## DMR Seat Types



## Mechanical Seal Material Codes

### Elastomers

B. Buna  
E. EPR  
N. Neoprene  
V. Viton®

### Washers

A. Bronze  
C. Carbon  
M. Phenolic  
S. Tool Steel  
X. Silicon Carbide  
Z. Tungsten Carbide

### Metal Parts

D. Brass  
E. Monel  
F. Stainless Steel  
P. Plated Steel  
R. 316 Stainless Steel

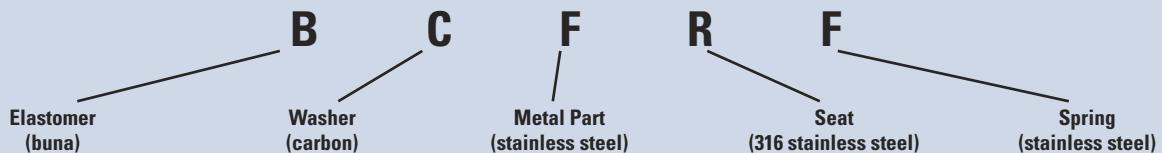
### Seats

A. Bronze  
G. Cast Iron  
J. Ceramic  
R. 316 Stainless Steel  
S. Tool Steel  
X. Silicon Carbide  
Z. Tungsten Carbide

### Springs

E. Monel  
F. Stainless Steel  
P. Plated Steel  
R. 316 Stainless Steel

Viton® is a registered trade name of DuPont



### Elastomer Temperature Limits

Buna 225°F

EPR 300°F

Neoprene 175°F

Viton 400°F

### Pressure Limitations

Type A & B Seals

75 P.S.I.

Type C, D & E Seals

200 P.S.I.

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
<b>.375 Shaft (3/8")</b>								
A	0.875	0.625	-	0.875	-	BMF-F		377
A	0.875	0.625	1	1.000	0.218	BMFJF		511
A	0.875	0.656	1	0.875	0.312	BMFJF		1614
A	0.875	0.625	3	0.875	0.312	BMFRF		3102
B	1.125	0.375	1	0.875	0.312	BMFJF		1071
B	1.125	0.375	1	1.000	0.203	BMFJF		1615
B	1.125	0.375	1	0.875	0.240	BMFJF		671
B	1.125	0.375	8	M.O.S	0.240	BMFRF	A	718
B	1.125	0.375	9	M.O.S	0.190	BMFJF	A	1616
B	1.125	0.375	-	-	-	BMF-F		3103
C	0.812	0.588	1	1.000	0.192	BCFJF		1025
C	0.812	0.812	1	0.875	0.312	BCFJF		1065
C	0.812	0.812	3	0.875	0.312	BCFRF		3201
C	0.812	0.812	-	-	-	BMF-F		3202
F	0.906	0.438	1	1.000	0.375	BMDJ		160
<b>.437 Shaft (7/16")</b>								
C	0.875	1.250	1	1.000	0.312	NCFJF		117
C	0.875	0.718	1	1.175	0.240	BCFJF		174
C	0.875	0.750	1	1.000	0.312	BCFJF		244
C	0.875	0.750	1	1.181	0.285	NCFJF		1133
C	0.875	0.750	-	-	-	BCF-F		3203
C	0.875	0.750	-	-	-	NCF-F		3204
<b>.500 Shaft (1/2")</b>								
A	1.062	0.656	1	1.000	0.312	BMFJF		162
A	1.062	0.656	-	-	-	BMF-F		298
A	1.062	0.656	1	1.000	0.290	BMFRF		506
B	1.125	0.537	1	1.000	0.218	BMFJF		142
B	1.125	0.537	8	M.O.S	0.062	BMFRF	A	149
B	1.125	0.537	-	-	-	BMF-F		150
B	1.125	0.537	1	1.000	0.312	BMFJF		163
B	1.125	0.537	9	M.O.S	0.312	BMFRF	A	164
B	1.125	0.537	1	1.000	0.290	BMFRF		788
B	1.125	0.537	1	0.875	0.165	BMFRF		1098
C	0.906	0.812	1	1.000	0.290	BMFRF		106
C	0.906	0.831	1	1.000	0.312	BCFJF		168
C	0.906	0.718	2	1.375	0.187	BMFRF		221
C	0.906	0.718	18	0.875	0.125	BCFJF		392
C	0.906	0.718	-	-	-	BCF-F		400
-	-	-	18	0.875	0.125	B--J-		400A
C	0.906	0.831	1	1.000	0.290	BCFRF		666

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
C	0.906	0.831	-	-	-	BCF-F		930
C	0.906	0.812	1	0.938	0.250	BCFRF		984
C	0.906	0.718	1	1.125	0.230	BCFJF		985
C	0.906	0.812	1	1.000	0.312	BCFJF		1002
C	0.906	0.812	1	0.938	0.225	BCFJF		1012
C	0.906	0.718	1	1.000	0.218	BCFJF		1043
C	0.906	0.812	-	-	-	BCF-F		1050
C	0.906	0.718	1	1.062	0.312	BCFJF		1120
D	1.125	0.812	3	1.500	0.296	BMFRF		190
D	1.125	0.812	-	-	-	BMF-F		401
D	1.125	0.812	18	0.875	0.125	BMFJF		401A
D	1.125	0.812	1	1.000	0.312	BMFJF		631
D	1.125	0.812	1	1.000	0.290	BMFRF		632
K	0.906	1.125	1	1.000	0.312	BCFJF		3501
K	0.906	1.125	1	1.000	0.290	BCFRF		3502
K	0.906	1.438	1	1.000	0.312	BCFJF		3503
K	0.906	1.438	1	1.000	0.290	BCFRF		3504
K	0.906	1.125	-	-	-	BCF-F		3505
K	0.906	1.438	-	-	-	BCF-F		3506
<b>.562 Shaft (9/16")</b>								
C	1.062	0.812	2	1.031	0.312	NCFAF		500
C	1.062	0.812	1	1.000	0.290	NCFRF		558
C	1.062	0.812	-	-	-	NCF-F		928
K	1.062	1.187	-	-	-	NCF-F		1607
<b>.590 Shaft (19/32" or 15mm)</b>								
C	1.062	0.875	1	1.250	0.406	BCFJF	*	129
C	1.062	1.156	5	1.093	0.406	BCFRF	*	138
C	1.062	0.875	1	1.250	0.406	BCFRF	*	1675
C	1.062	0.875	-	-	-	BCF-F		3205
<b>.625 Shaft (5/8")</b>								
A	1.218	0.718	1	1.187	0.343	BMFJF		100
A	1.218	0.812	1	1.250	0.406	BMFRF		153
A	1.218	0.812	1	1.187	0.343	BMFJF	A	166
A	1.218	0.718	8	M.O.S	0.125	BMFRF		198
A	1.218	0.718	1	1.250	0.406	BMFJF		200
A	1.218	0.718	-	-	-	BCF-F		218
A	1.218	0.718	3	1.207	0.250	BCFRF		232
A	1.218	0.718	P.I.	0.815	0.312	BMFRF	D	293
A	1.218	0.718	-	-	-	BMF-F		299
A	1.218	0.718	1	1.250	0.406	BMFJF		300
A	1.218	0.718	1	1.250	0.250	BMFJF		372

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
A	1.218	0.812	1	1.250	0.406	BMFJF		425
A	1.218	0.718	1	1.312	0.250	BMFJF		442
A	1.218	0.812	1	1.250	0.406	BMFJF		501
A	1.218	0.718	1	1.250	0.406	BMFRF		507
A	1.218	0.718	1	1.250	0.406	BCFJF		516
A	1.218	0.718	1	1.187	0.288	BCFRF		518
A	1.218	0.718	1	1.250	0.406	BCFRF		524
A	1.218	0.718	1	1.375	0.562	BMFJF		528
A	1.218	0.718	3	1.250	0.406	BMFRF		628
A	1.218	0.718	3	1.250	0.406	BMFJF		637
A	1.218	0.718	1	1.187	0.288	BCFJF		680
A	1.218	0.718	1	1.187	0.288	BMFRF		701
A	1.218	0.718	1	1.187	0.288	BMFJF		702
A	1.218	0.718	3	1.187	0.343	BMFJF		711
A	1.218	0.718	1	1.187	0.343	BMFJF		896
A	1.218	0.812	1	1.250	0.406	BMFJF		909
A	1.218	0.718	1	1.141	0.312	BMFRF		920
A	1.218	0.812	1	1.250	0.406	BCFJF		952
A	1.218	0.812	1	1.187	0.343	BCFJF		953
A	1.218	0.812	1	1.250	0.375	BCFRF		954
A	1.218	0.812	1	1.187	0.281	BCFRF		955
A	1.218	0.718	1	1.187	0.343	BCFJF		957
A	1.218	0.718	1	1.187	0.343	BMFRF		1150
A	1.218	0.718	1	1.250	0.406	BMFJ/MF	C	2131
A	1.218	0.718	1	1.312	0.343	BMFJF		4705
B	1.437	0.615	1	1.093	0.218	BMFRF		113
B	1.437	0.615	1	1.375	0.288	BMFRF		151
B	1.437	0.615	1	1.250	0.283	BMFJF		200A
B	1.437	0.615	11	M.O.S	0.375	BMFJ/FF	A	202
B	1.437	0.615	1	1.312	0.250	BMFJF		233
B	1.437	0.615	11	M.O.S	0.375	BMFJ/FF	A	260
B	1.437	0.615	9	M.O.S	0.187	BMFRF	A	409
B	1.437	0.615	11	M.O.S	0.485	BMFJ/FF	A	411
B	1.437	0.615	11	M.O.S	0.485	B/VMFJ/FF	A	411P
B	1.437	0.615	11	M.O.S	0.485	VCFJ/FF	A	411V
B	1.437	0.615	11	M.O.S	0.328	BMFRF	A	414
B	1.437	0.615	9	M.O.S	0.215	BCFJF	A	447
B	1.437	0.615	9	M.O.S	0.215	VCFJF	A	447V
B	1.437	0.615	9	M.O.S	0.320	BMFRF	A	451
B	1.437	0.615	9	M.O.S	0.312	BMFJF	A	452
B	1.437	0.615	9	M.O.S	0.215	BCFRF	A	453

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
B	1.437	0.615	1	1.187	0.288	BCFRF		522
B	1.437	0.615	1	1.187	0.343	BMFJF		600
B	1.437	0.615	1	1.187	0.288	BMFRF		616
B	1.437	0.615	-	-	-	BMF-F		642
B	1.437	0.615	1	1.187	0.288	BMFJF		700
B	1.437	0.615	3	1.250	0.406	BMFRF		712
B	1.437	0.615	3	1.250	0.406	BMFJF		715
B	1.437	0.615	3	1.187	0.288	BMFJF		716
B	1.437	0.615	3	1.187	0.343	BMFJF		717
B	1.437	0.615	-	-	-	BCF-F		882
B	1.437	0.615	1	1.250	0.406	BCFJF		961
B	1.437	0.615	1	1.187	0.343	BCFJF		963
B	1.437	0.615	1	1.250	0.406	BCFRF		964
B	1.437	0.615	1	1.250	0.406	BMFJF		1000
B	1.437	0.615	1	1.375	0.406	BMFRF		1005A
B	1.437	0.615	11	M.O.S	0.375	VCFJF	A	1013
B	1.437	0.615	9	M.O.S	0.215	BMFJF	A	1021
B	1.437	0.615	1	1.093	0.406	V/BCFJF		1089
B	1.437	0.615	1	1.187	0.343	BMFRF		1129
B	1.437	0.615	3	1.250	0.343	BMFRF		1151
B	1.437	0.615	1	1.250	0.406	BMFRF		1152
B	1.437	0.615	1	1.375	0.406	BMFJF		2161
C	1.062	0.875	3	1.000	0.470	BCFAF		104
C	1.062	0.812	1	1.187	0.343	BCFJF		118
C	1.062	0.718	1	1.250	0.406	BMFJF		132
C	1.062	0.875	3	1.125	0.500	BCFRF		222
C	1.062	0.875	1	1.250	0.406	BCFJF		290
C	1.062	0.875	1	1.250	0.406	BCFJF		359
C	1.062	0.875	1	1.187	0.288	BCFRF		493
C	1.062	0.875	3	1.187	0.343	BCFJF		536
C	1.062	0.875	3	1.250	0.406	BCFJF		552
C	1.187	0.875	1	1.375	0.406	VCFJF		626
C	1.062	0.875	1	1.250	0.406	BCFRF		633
C	1.062	0.875	3	1.250	0.406	BCFRF		732
C	1.062	0.875	1	1.187	0.288	BCFJF		733
C	1.062	0.812	1	1.156	0.312	BCFJF		800
C	1.062	0.765	1	1.250	0.406	NCF-JF	*	810
C	1.062	0.812	1	1.250	0.406	BCFJF		850
C	1.062	0.812	1	1.187	0.312	BCFRF		900
C	1.062	0.750	1	1.250	0.406	BCFJF		924
C	1.062	0.875	-	-	-	BCF-F		933

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
C	1.062	0.875	3	1.375	0.406	VCFRF		951
C	1.062	0.875	1	1.250	0.406	BCFJF		980
C	1.062	0.765	1	1.187	0.288	NCFJF	*	989
C	1.062	0.765	3	1.312	0.375	NCFRF	*	990
C	1.062	0.765	1	1.187	0.343	BCFJF	*	1016
C	1.062	0.906	1	1.141	0.312	BCFRF		1027
C	1.062	0.718	3	1.250	0.406	VCFJF		1045
C	1.062	0.875	3	1.250	0.406	BCFJF		1066
C	1.062	0.875	1	1.250	0.406	NCFJF		1079
C	1.062	0.875	1	1.250	0.406	NCFRF		1080
C	1.062	0.937	1	1.250	0.406	V/BCFJF	*	1085
C	1.062	0.937	1	1.250	0.406	VCFJF	*	1085V
C	1.062	0.718	1	1.187	0.343	VCFJF		1091
C	1.062	0.968	1	1.250	0.406	BCFJF		1119
C	1.062	0.847	1	1.187	0.343	VCFZF		1121
C	1.062	0.875	1	1.187	0.343	BCFRF		1154
C	1.062	0.875	1	1.187	0.288	BCFJF		1155
C	1.062	0.875	1	1.250	0.406	BCFRF		1156
C	1.062	0.875	1	1.312	0.250	BCFJF		1505
C	1.062	0.937	1	1.250	0.406	BCFJF	*	1618
C	1.062	0.609	3	1.250	0.406	BCFRF		1625
C	1.062	0.609	3	1.250	0.406	VCFRF		1626
C	1.062	0.937	3	1.250	0.406	BCFRF	*	2149
C	1.062	0.718	1	1.250	0.406	BCFJF		2160
D	1.312	0.875	1	1.250	0.406	BCFRF		102
D	1.312	0.875	-	-	-	BCF-F		109
D	1.312	0.875	1	1.187	0.288	BCFRF		226
D	1.312	0.875	1	1.187	0.343	BCFRF		263
D	1.312	0.875	1	1.250	0.406	BCFJF		508
D	1.312	0.875	1	1.187	0.288	BCFJF		531
D	1.312	0.875	3	1.250	0.406	BCFRF		734
D	1.312	0.875	3	1.250	0.406	BCFJF		735
D	1.312	0.875	3	1.187	0.288	BCFJF		736
D	1.312	0.875	3	1.187	0.343	BCFJF		737
D	1.312	0.875	1	1.141	0.312	BCFRF		922
D	1.312	0.875	2	1.250	0.343	BCFRF		1157
D	1.312	0.875	1	1.250	0.406	BCFJF		2000
D	1.312	0.875	1	1.250	0.406	BCFRF		2001
D	1.312	0.875	3	1.250	0.406	BCFJF		2002
D	1.312	0.875	3	1.250	0.406	BCFRF		2003
D	1.312	0.875	1	1.187	0.343	BCFJF		2004

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
D	1.312	0.875	1	1.187	0.343	BCFRF		2005
D	1.312	0.875	3	1.187	0.343	BCFJF		2006
D	1.312	0.875	1	1.187	0.288	BCFRF		2007
D	1.312	0.875	1	1.187	0.343	BCFJF		2119
E	1.093	1.312	1	1.250	0.406	BCFJF		274
E	1.093	1.312	1	1.187	0.343	BCFJF		485
E	1.093	1.312	1	1.187	0.288	BCFRF		486
E	1.093	1.312	1	1.250	0.406	BCFRF		487
E	1.093	1.312	3	1.250	0.406	BCFRF		738
E	1.093	1.312	3	1.250	0.406	BCFJF		739
E	1.093	1.312	3	1.187	0.288	BCFJF		740
E	1.093	1.312	3	1.187	0.343	BCFJF		748
E	1.093	0.968	1	1.250	0.406	BCFJF		1096
E	1.093	1.312	2	1.250	0.343	BCFRF		1158
E	1.093	1.312	1	1.187	0.343	BCFRF		1689
E	1.093	1.312	1	1.250	0.406	BCRJR		2016
E	1.093	1.312	1	1.250	0.406	BCRRR		2017
E	1.093	1.312	3	1.250	0.406	BCRJR		2018
E	1.093	1.312	3	1.250	0.406	BCRRR		2019
E	1.093	1.312	1	1.187	0.343	BCRJR		2020
E	1.093	1.312	1	1.187	0.343	BCRRR		2021
E	1.093	1.312	3	1.187	0.343	BCRJR		2022
E	1.093	1.312	3	1.187	0.288	BCRRR		2023
K	1.062	1.187	-	-	-	BCF-F		678
K	1.062	1.187	-	-	-	NCF-F		863
K	1.062	1.187	1	1.250	0.406	BCFJF		3510
K	1.062	1.187	1	1.250	0.406	BCFRF		3511
K	1.062	1.187	3	1.250	0.406	BCFJF		3512
K	1.062	1.187	3	1.250	0.406	BCFRF		3513
K	1.062	1.625	1	1.250	0.406	BCFJF		3520
S	1.312	1.395	8	1.187	0.125	NAPSP		795
T	1.093	1.625	1	1.250	0.406	BCRJR		3701
T	1.093	1.625	1	1.250	0.406	BCRRR		3702
T	1.093	1.625	3	1.250	0.406	BCRJR		3703
T	1.093	1.625	3	1.250	0.406	BCRRR		3704
T	1.093	1.625	3	1.187	0.406	BCRJR		3705
.750 SHAFT (3/4")								
A	1.343	0.718	1	1.437	0.406	BMFJF		101
A	1.343	0.718	8	M.O.S.	0.125	BMFRF		199
A	1.343	0.718	1	1.375	0.406	BMFJF		201
A	1.343	0.718	1	1.312	0.375	BMFRF		231

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
A	1.343	0.978	1	1.375	0.281	BMFJF		301
A	1.343	0.718	1	1.312	0.250	BMFJF		315
A	1.343	0.718	3	1.375	0.375	BCFRF		412
A	1.343	0.718	15	1.375	0.375	BCFJ/FF		415
A	1.343	0.718	15	1.375	0.375	BMFJ/FF		419
A	1.343	0.812	1	1.375	0.375	BCFRF		494
A	1.343	0.718	1	1.375	0.375	BMFRF		512
A	1.343	0.812	3	1.375	0.406	BMFRF		596
A	1.343	0.718	3	1.250	0.343	BMFRF		689
A	1.343	0.718	1	1.437	0.406	BMFJF		699
A	1.343	0.718	3	1.375	0.406	BMFJF		760
A	1.343	0.718	3	1.375	0.406	BMFRF		762
A	1.343	0.812	1	1.375	0.281	BCFJF		764
A	1.343	0.718	1	1.375	0.406	BCFJF		851
A	1.343	0.658	1	1.375	0.406	BMFJF		908
A	1.343	0.718	1	1.375	0.406	BMFRF		921
A	1.343	0.718	1	1.437	0.406	BCFJF		968
A	1.343	0.718	1	1.375	0.406	BCFRF		973
A	1.343	0.718	-	-	-	BCF-F		974
A	1.343	0.718	-	-	-	BMF-F		1522
A	1.343	0.718	1	1.500	0.250	BMFJF		1525
A	1.343	0.718	1	1.437	0.406	BMFRF		2118
B	1.575	0.615	3	1.207	0.250	BMFRF		369
B	1.575	0.615	11	M.O.S.	0.437	BMFJF		440
B	1.575	0.615	9	M.O.S.	0.375	BMFRF		441
B	1.575	0.615	1	1.375	0.406	BMFJF		601
B	1.575	0.615	1	1.375	0.406	BMFRF		606
B	1.575	0.615	-	-	-	BMF-F		647
B	1.575	0.615	3	1.375	0.406	BMFJF		765
B	1.575	0.615	3	1.375	0.406	BMFRF		766
B	1.575	0.615	9	M.O.S.	0.281	BMFRF		902
B	1.575	0.615	-	-	-	BCF-F		1024
C	1.187	0.875	1	1.375	0.406	BCFRF		112
C	1.187	0.875	3	1.312	0.375	BCFRF		116
C	1.187	0.875	3	1.250	0.343	BCFRF		121
C	1.187	0.843	1	1.375	0.406	BCFJF	*	128
C	1.187	0.875	-	-	-	BCF-F		157
C	1.187	1.312	1	1.375	0.406	BCFJF		275
C	1.187	0.875	1	1.375	0.406	BCFJF		358
C	1.187	0.875	2	1.375	0.406	BCFRF		362
C	1.187	1.312	1	1.375	0.406	BCFRF		373

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
C	1.187	0.875	2	1.312	0.406	BCFAF		502
C	1.187	1.312	-	-	-	BCF-F		564
C	1.187	1.312	2	1.375	0.406	BCFRF		565
C	1.187	0.875	3	1.312	0.406	BCFRF		649
C	1.187	0.875	1	1.500	0.250	BCFJF		683
C	1.187	0.875	3	1.375	0.406	BCFJF		767
C	1.187	0.875	3	1.375	0.406	BCFRF		768
C	1.187	1.312	3	1.375	0.406	BCFJF		771
C	1.187	1.312	3	1.375	0.406	BCFRF		773
C	1.187	0.844	1	1.375	0.406	BCFJF		812
C	1.187	0.875	1	1.625	0.437	NCFRF		820
C	1.187	0.812	1	1.375	0.406	BCFJF		877
C	1.187	0.718	1	1.375	0.281	BCFJF		944
C	1.187	0.718	1	1.375	0.406	VCFRF		1092
C	1.187	0.718	1	1.375	0.406	VCFJF		1093
C	1.187	0.718	1	1.375	0.406	BCFRF		1113
C	1.187	0.718	1	1.375	0.406	BCFJF		1125
C	1.187	0.875	1	1.375	0.406	BCFRF		1160
C	1.187	0.875	1	1.375	0.281	BCFJF		1510
C	1.187	0.875	1	1.312	0.406	BCFJF		1514
C	1.187	1.312	1	1.375	0.406	BCFJF		3430
D	1.437	0.875	2	1.375	0.406	BCFRF		103
D	1.437	0.875	3	1.312	0.375	BCFRF		207
D	1.437	0.875	3	1.375	0.406	BCFRF		265
D	1.437	0.875	-	-	-	BCF-F		399
D	1.437	0.875	1	1.275	0.290	BCFJF		437
D	1.437	0.875	1	1.275	0.290	BCFRF		443
D	1.437	0.875	1	1.437	0.406	BCFRF		444
D	1.437	0.875	1	1.375	0.406	BCFJF		750
D	1.437	0.875	1	1.375	0.406	BCFRF		752
D	1.437	0.875	3	1.375	0.406	BCFJF		769
D	1.437	0.875	17	1.375	0.375	BCFRF		905
D	1.437	1.000	1	1.437	0.406	BCFRF		1026
D	1.437	0.906	1	1.375	0.406	NCFJF	B	1130
D	1.437	0.875	1	1.437	0.406	BCFJF		1161
D	1.437	0.875	1	1.375	0.281	BCFJF		1162
D	1.437	0.875	1	1.375	0.406	BCFJF		2008
D	1.437	0.875	1	1.375	0.406	BCFRF		2009
D	1.437	0.875	3	1.375	0.406	BCFJF		2010
D	1.437	0.875	3	1.375	0.406	BCFRF		2011
E	1.218	1.312	1	1.375	0.406	BCRJR		2012

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
E	1.218	1.312	1	1.375	0.406	BCRRR		2013
E	1.218	1.312	3	1.375	0.406	BCRJR		2014
E	1.218	1.312	3	1.375	0.406	BCRRR		2015
K	1.187	1.625	-	-	-	BCF-F		145
K	1.187	1.156	1	1.375	0.406	BCFJF		175
K	1.187	1.700	1	1.375	0.406	BCFJF		1604
K	1.187	1.187	-	-	-	BCF-F		3599
R	1.437	1.625	1	1.375	0.406	BCFRF		651
S	1.625	1.953	8	1.500	0.250	NAPSP		792
<b>.787 SHAFT (20MM)</b>								
C	1.307	0.937	1	1.500	0.406	BMFJF		135
C	1.307	1.218	17	1.296	0.468	BMFRF		139
C	1.307	0.937	1	1.500	0.406	BMFRF		614
C	1.307	0.937	-	-	-	BMF-F		5201
C	1.307	1.218	-	-	-	BMF-F		5202
<b>.875 SHAFT (7/8")</b>								
C	1.281	0.937	3	1.625	0.406	BCFRF		144
C	1.281	0.937	-	-	-	BCF-F		208
C	1.281	0.844	1	1.500	0.406	BCFJF		287
C	1.281	0.937	1	1.562	0.406	BCFRF		294
C	1.281	0.937	1	1.500	0.406	BCFJF		309
C	1.281	0.937	3	1.500	0.406	BCFRF		617
C	1.281	0.937	1	1.500	0.406	BCFRF		687
C	1.281	0.937	3	1.500	0.406	BCFJF		774
C	1.281	1.375	3	1.625	0.406	BCFJF		997
C	1.281	1.375	3	1.625	0.406	BCFRF		998
C	1.281	0.812	3	1.875	0.390	BCFJF		1116
C	1.281	0.937	1	1.562	0.406	BCFJF		1163
C	1.281	0.937	1	1.437	0.265	BCFJF		2166
C	1.281	0.812	1	1.437	0.265	BCFJF		2167
C	1.281	0.937	3	1.437	0.265	BCFRF		2168
C	1.281	0.812	3	1.437	0.265	BCFRF		2169
D	1.562	0.937	3	1.500	0.406	BCFRF		250
D	1.562	0.937	1	1.500	0.406	BCFRF		303
D	1.562	0.937	-	-	-	BCF-F		578
D	1.562	0.937	1	1.562	0.406	BCFJF		602
D	1.562	0.937	1	1.562	0.406	BCFRF		603
D	1.562	0.937	1	1.500	0.406	BCFJF		703
D	1.562	0.937	3	1.500	0.406	BCFJF		775
D	1.562	0.921	1	1.437	0.265	BCFJF		790
D	1.562	0.875	3	1.490	0.406	NCFRF		1127

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
D	1.562	0.937	3	1.437	0.265	BCFRF		1681
D	1.562	0.937	1	1.500	0.406	BCFJF		2024
D	1.562	0.937	1	1.500	0.406	BCFRF		2025
D	1.562	0.937	3	1.500	0.406	BCFJF		2026
D	1.562	0.937	3	1.500	0.406	BCFRF		2027
E	1.343	1.375	1	1.500	0.406	BCRJR		188
E	1.343	1.375	3	1.500	0.406	BCRRR		229
E	1.343	1.375	3	1.500	0.406	BCRJR		776
E	1.343	1.375	1	1.500	0.406	BCRRR		935
E	1.343	1.375	-	-	-	BCR-R		936
E	1.343	1.375	1	1.500	0.406	BCRJR		2028
E	1.343	1.375	1	1.500	0.406	BCRRR		2029
E	1.343	1.375	3	1.500	0.406	BCRJR		2030
E	1.343	1.375	3	1.500	0.406	BCRRR		2031
K	1.281	1.250	-	-	-	BCF-F		197
K	1.281	1.250	1	1.500	0.406	BCFRF		878
K	1.281	1.250	1	1.500	0.406	BCFJF		892
K	1.281	1.250	1	1.500	0.406	VCFJF		892V
K	1.281	1.250	3	1.500	0.406	BCFRF		3521
K	1.281	1.250	3	1.500	0.406	BCFJF		3522
R	1.562	1.625	-	-	-	BCF-F		140
R	1.562	1.625	1	1.500	0.406	BCFJF		428
R	1.562	1.625	1	1.500	0.406	BCFRF		685
R	1.562	1.625	3	1.500	0.406	BCF-F		3601
R	1.562	1.625	3	1.500	0.406	BCFRF		3602
R	1.562	1.625	1	1.500	0.406	VZFFZ		3603
<b>.937 SHAFT (15/16")</b>								
U	1.437	1.656	1	1.562	0.406	BCRRR		560
U	1.437	1.656	3	1.562	0.406	VCRRR		560V
U	1.437	1.656	3	1.562	0.406	BCRJR		824
U	1.437	1.656	3	1.562	0.406	BCRRR		845
<b>.984 SHAFT (25MM)</b>								
C	1.553	0.867	1	1.720	0.335	BCFJF		20052
C	1.553	0.867	1	1.732	0.335	BCFJF		5205
C	1.553	0.867	1	1.732	0.335	VCFJF		5206
C	1.553	1.000	1	1.625	0.437	BCFJF		5207
C	1.553	0.867	3	1.625	0.437	BCFJF		5208
C	1.553	0.867	-	-	-	BCF-F		5209
K	1.553	1.875	1	1.720	0.335	BCFJF		5501
<b>1.000 SHAFT (1")</b>								
A	1.688	0.812	1	1.625	0.437	BMFJF		360

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
A	1.688	0.812	1	1.625	0.437	BMFRF		370
A	1.688	0.812	15	1.625	0.625	BMFJF		405
A	1.688	0.812	3	1.625	0.437	BMFJF		777
A	1.688	0.812	3	1.625	0.437	BMFRF		778
A	1.688	0.812	-	-	-	BMF-F		975
A	1.688	0.812	3	1.625	0.437	VCFJF		1014
A	1.688	0.812	3	2.000	0.406	BCFJF		1086
A	1.688	0.812	1	1.625	0.437	BCFJF		1115
A	1.688	0.812	1	1.625	0.437	BCFRF		1164
C	1.688	1.000	1	1.625	0.437	BCFJF		235
C	1.688	1.000	1	1.625	0.437	BCFJF	*	245
C	1.688	1.000	1	1.625	0.437	BCFRF	*	248
C	1.688	1.000	18	1.700	0.370	BCFRF	*	311
C	1.688	1.000	1	1.625	0.437	BCFRF		357
C	1.688	1.000	-	-	-	BCF-F	*	397
C	1.688	1.000	15	1.625	0.625	BCFJF		413
C	1.688	1.000	3	1.625	0.437	BCFRF		499
C	1.688	1.625	1	1.625	0.437	BCFJF		539
C	1.688	1.000	3	1.625	0.437	BCFJF		548
C	1.688	1.625	1	1.625	0.437	BCFRF		779
C	1.688	0.938	1	1.625	0.437	BCFJF		813
C	1.688	1.562	1	1.625	0.437	BCFRF		982
C	1.688	1.056	1	1.625	0.437	BCFJF		1023
C	1.688	0.750	1	1.625	0.437	BCFJF	B	1048
C	1.688	0.750	3	1.625	0.437	BCFJF		1049
C	1.688	1.000	3	1.812	0.687	BCFRF		1072
C	1.688	0.812	1	1.625	0.437	VCFJF		1094
C	1.688	0.812	-	-	-	BCF-F		1095
C	1.688	0.812	3	2.380	0.406	BCFJF		1117
C	1.688	0.843	1	1.625	0.406	BCFRF		1123
C	1.688	1.000	3	1.437	0.437	BCFJF		2145
C	1.687	1.000	1	1.750	0.437	BCFRF		2163
C	1.687	1.000	1	1.750	0.437	BCFJF		3440
D	1.750	1.000	3	1.625	0.437	NCFRF		159
D	1.750	1.062	1	1.750	0.437	BCFRF	B	227
D	1.750	1.062	3	1.625	0.437	BCFRF	B	252
D	1.750	1.062	1	1.625	0.437	BCFJF	B	380
D	1.750	1.062	-	-	-	BCF-F	B	398
D	1.750	1.062	18	1.700	0.370	BCFJF		438
D	1.750	1.062	1	1.625	0.437	BCFRF	B	460
D	1.750	1.062	3	1.625	0.437	BCFJF	B	789

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
D	1.750	1.062	3	1.875	0.375	BCFJF	B	987
D	1.750	1.062	1	1.625	0.437	BCFJF	B	1046
D	1.750	1.000	3	1.625	0.437	BCFJF		1138
D	1.750	1.000	3	1.625	0.312	BCFRF		1630
D	1.750	1.062	1	1.625	0.437	BCFRF		2032
D	1.750	1.062	3	1.625	0.437	BCFJF		2033
D	1.750	1.062	3	1.625	0.437	BCFRF		2034
D	1.750	1.062	1	1.750	0.437	BCFJF		2164
E	1.500	1.562	1	1.625	0.437	BCFRF		236
E	1.500	1.187	3	1.625	0.437	BCFRF		251
E	1.500	1.562	3	1.625	0.437	BCFJF		557
E	1.500	1.562	3	1.625	0.405	NCFRF		695
E	1.500	1.562	1	1.625	0.437	BCFJF		754
E	1.500	1.562	3	1.625	0.437	BCFRF		791
E	1.500	1.562	1	1.500	0.375	BCRJR		912
E	1.500	1.562	-	-	-	BCF-F		937
E	1.500	1.562	3	1.625	0.437	VCRRR		1030
E	1.500	1.562	3	1.625	0.437	BCRJR		1165
E	1.500	1.562	3	1.625	0.437	BCRRR		1166
E	1.500	1.562	1	1.625	0.437	BCRJR		2035
E	1.500	1.562	1	1.625	0.437	BCRRR		2036
K	1.688	1.625	1	1.625	0.437	BCFJF		879
K	1.688	1.625	1	1.625	0.437	BCFRF		891
K	1.688	1.625	-	-	-	BCF-F		3524
K	1.688	1.500	-	-	-	BCF-F		3525
K	1.688	2.312	-	-	-	BCF-F		3526
R	1.750	1.875	-	-	-	BCF-F		141
R	1.750	1.875	1	1.625	0.437	BCFJF		429
R	1.750	1.875	1	1.625	0.437	BCFRF		430
R	1.750	1.875	3	1.625	0.437	BCFJF		1022
S	1.904	1.906	8	1.750	0.250	NAPSP		793
T	1.500	2.312	1	1.625	0.437	BCRJR		276
T	1.500	2.312	1	1.625	0.437	BCRRR		277
T	1.500	2.312	3	1.625	0.437	BCRJR		688
T	1.500	2.312	3	1.625	0.312	NCFRF		1631
T	1.500	2.312	3	1.625	0.437	BCRRR		3707
T	1.500	2.312	-	-	-	BCR-R		3708
1.062 SHAFT (1-1/16")								
C	1.812	1.062	3	1.750	0.437	BCFRF		2155
C	1.812	1.062	3	1.750	0.437	BCFJF		3210
C	1.812	1.062	-	-	-	BCF-F		3211

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
D	1.875	1.062	1	1.750	0.437	BCFRF		127
D	1.875	1.062	3	1.750	0.437	BCFRF		796
D	1.875	1.062	3	1.750	0.437	BCFJF		797
D	1.875	1.062	-	-	-	BCF-F		3301
E	1.625	1.593	1	1.750	0.437	BCRRR		498
E	1.625	1.593	1	1.750	0.437	BCRJR		710
E	1.625	1.593	3	1.750	0.437	BCRJR		798
E	1.625	1.593	3	1.750	0.437	BCRRR		799
E	1.625	1.593	-	-	-	BCR-R		3402
1.125 SHAFT (1-1/8")								
C	1.812	1.062	-	-	-	BCF-F		348
C	1.812	1.062	1	1.750	0.437	BCFRF		355
C	1.812	1.062	1	1.750	0.437	BCFJF		356
C	1.812	1.062	3	1.750	0.437	BCFRF		529
C	1.812	1.062	25	1.750	0.427	BCFRF		549
C	1.812	1.062	3	1.750	0.437	BCFRF	*	588
C	1.812	1.406	1	1.750	0.437	BCFJF	*	627
C	1.812	1.062	3	1.750	0.437	BCFJF		801
C	1.812	1.000	1	1.750	0.437	BCFJF		814
C	1.812	1.562	1	1.750	0.437	BCFRF		983
C	1.812	1.062	1	1.750	0.437	BCFJF	B	1052
C	1.812	1.500	1	1.937	0.437	BCFJF		1122
C	1.812	1.062	1	1.750	0.437	BCFRF	*	1167
C	1.812	1.062	1	1.750	0.437	BCFJF	*	1682
C	1.812	1.062	3	1.750	0.437	BCFZF		3148
C	1.812	1.625	3	2.000	0.437	BCFJF		3461
D	1.875	1.062	3	1.750	0.437	BCFRF		254
D	1.875	1.062	1	1.875	0.475	BCFRF		521
D	1.875	1.062	1	1.750	0.437	BCFJF		604
D	1.875	1.062	1	1.750	0.437	BCFRF		605
D	1.875	1.062	3	1.750	0.437	BCFJF		802
D	1.875	1.062	1	1.750	0.437	NCFJF		1131
E	1.625	1.625	1	1.750	0.437	BCFJF		204
E	1.625	1.187	3	1.750	0.437	BCFRF		253
E	1.625	1.625	1	1.750	0.437	BCFRF		384
E	1.625	1.625	3	1.750	0.437	BCFJF		584
E	1.625	1.625	1	1.687	0.437	BCFJF		607
E	1.625	1.625	1	1.687	0.437	BCFRF		608
E	1.625	2.000	3	1.812	0.437	BCFJF	F	619
E	1.625	2.000	3	1.812	0.437	BCFRF	F	636
E	1.625	1.625	3	1.750	0.437	BCRJR	E	866

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
E	1.625	1.625	3	1.750	0.437	BCRRR	E	867
E	1.625	1.625	1	1.750	0.437	BCRRR		885
E	1.625	2.000	3	1.812	0.437	BCRJR	F	945
E	1.625	2.000	3	1.812	0.437	BCRRR	F	948
E	1.625	1.625	1	1.875	0.475	BCRRR		1067
E	1.625	1.625	1	1.750	0.437	BCRRR		1168
E	1.625	1.625	1	1.750	0.437	BCRJR		1169
E	1.625	1.625	1	1.687	0.437	BCRJR		1170
E	1.625	1.625	1	1.687	0.437	BCRRR		1171
E	1.625	1.625	3	1.812	0.437	BDRJR		1172
E	1.625	1.625	3	1.812	0.437	BCRRR		1173
E	1.625	1.625	1	1.750	0.437	BCRJR		1174
E	1.625	1.625	1	1.750	0.437	BCRRR		1175
E	1.625	1.625	3	1.812	0.437	B/VCFJF		1636
E	1.625	1.625	3	1.812	0.437	B/VCFRF		1637
E	1.625	1.625	3	1.812	0.437	B/VCRJR		1638
E	1.625	1.625	3	1.812	0.437	B/VCR		1639
E	1.625	1.625	-	-	-	BCR-R		2103
K	1.812	1.625	-	-	-	BCF-F		215
K	1.812	1.625	1	1.750	0.437	BCFJF		1176
K	1.812	1.625	1	1.750	0.437	BCFRF		1177
K	1.812	1.625	3	1.750	0.437	BCFJF		3530
K	1.812	1.625	3	1.750	0.437	BCFRF		3531
R	1.875	1.875	1	1.750	0.437	BCFRF		654
R	1.875	1.875	1	1.750	0.437	BCFJF		676
R	1.875	1.875	-	-	-	BCF-F		3605
R	1.875	1.875	3	1.750	0.437	BCFRF		3606
R	1.875	1.875	3	1.750	0.437	BCFJF		3607
T	1.625	2.375	-	-	-	BCR-R		3711
T	1.625	2.375	3	1.750	0.437	BCRJR		886
T	1.625	2.375	3	1.750	0.437	BCRRR		918
T	1.625	2.375	3	1.812	0.437	BCRJR		1178
T/U	1.625	1.812	1	1.750	0.437	BCRJR		545
U	1.625	1.687	3	1.750	0.437	BCRRR		282
U	1.625	1.687	-	-	-	BCR-R		3712
V	1.625	1.500	25	1.765	0.375	BCFRF		1103
1.181 SHAFT (30MM)								
C	1.937	1.062	-	-	-	BCF-F		5211
C	1.937	1.062	1	1.875	0.437	BCFJF		5212
C	1.937	1.062	1	1.875	0.437	BCFRF		5213
D	2.000	1.062	-	-	-	BCF-F		5301

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
D	2.000	1.062	1	1.875	0.437	BCFJF	B	136
D	2.000	1.062	1	1.875	0.437	BCFRF	B	1179
1.187 SHAFT (1-1/16")								
C	1.937	1.000	-	-	-	BCF-F		3218
C	1.937	1.000	1	1.875	0.437	NCFJF		297
C	1.937	1.000	3	1.875	0.437	NCFRF		589
C	1.937	1.062	1	1.875	0.437	BCFRF		2162
D	2.000	1.000	1	1.875	0.437	BCFJF		3353
D	2.000	1.000	1	1.875	0.437	BCFRF		3354
D	2.000	1.000	3	1.875	0.437	BCFJF		3355
D	2.000	1.000	3	1.875	0.437	BCFRF		3356
D	2.000	1.000	-	-	-	BCF-F		3357
E	1.812	1.187	-	-	-	BCR-R		3411
E	1.812	1.187	3	1.875	0.437	BCFRF		255
E	1.812	1.187	1	1.875	0.437	BCFJF		306
E	1.812	1.625	1	1.875	0.437	BCRJR		310
E	1.812	1.625	1	1.875	0.437	BCRRR		343
E	1.812	1.625	3	1.875	0.437	BCRJR		345
E	1.812	1.187	1	1.875	0.437	BCFRF		1180
K	1.937	1.625	-	-	-	BCF-F		3535
K	1.937	1.625	1	1.875	0.437	BCFJF		3536
K	1.937	1.625	1	1.875	0.437	BCFRF		3537
K	1.937	1.625	3	1.875	0.437	BCFJF		3538
K	1.937	1.625	3	1.875	0.437	BCFRF		3539
T	1.812	2.375	1	1.875	0.437	BCRJR		723
T	1.812	2.375	1	1.875	0.437	BCRRR		724
T	1.812	2.375	-	-	-	BCR-R		3715
T	1.812	2.375	3	1.875	0.437	BCRJR		3716
T	1.812	2.375	3	1.875	0.437	BCRRR		3717
1.250 SHAFT (1-1/4")								
C	1.937	1.062		-	-	BCF-F		154
C	1.937	1.062	1	1.875	0.437	BCFJF		185
C	1.937	1.062	1	1.875	0.437	BCFJF	*	246
C	1.937	1.062	1	1.875	0.437	BCFRF	*	249
C	1.937	1.062	1	1.768	0.367	BCFJF	*	368
C	1.937	1.062	1	2.000	0.437	BCFJF		466
C	1.937	1.062	3	1.875	0.437	BCFRF	*	525
C	1.937	1.062	1	1.768	0.367	BCFRF	*	597
C	1.937	1.062	3	1.875	0.437	BCFRF		598
C	1.937	1.062	3	1.875	0.437	BCFJF		618
C	1.937	1.062	1	1.875	0.437	BCFRF		756

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
C	1.937	1.062	1	2.000	0.437	BCFJF		815
C	1.937	1.250	15	2.250	0.625	BCFJF	*	923
C	1.937	1.062	1	1.768	0.367	BCFJF	*	978
C	1.937	1.062	1	1.750	0.367	BCFRF	*	979
C	1.937	1.062	3	2.000	0.437	BCFRF		1018
C	1.937	1.062	3	1.875	0.437	B/VCFRF		1053
C	1.937	1.062	1	1.875	0.437	NCFJF		1081
C	1.937	1.062	1	1.875	0.437	NCFRF		1082
C	1.937	1.625	1	1.875	0.437	NCFJF		1083
C	1.937	1.625	1	1.875	0.437	NCFRF		1084
C	1.937	1.625	3	1.875	0.437	BCFRF		1109
C	1.937	1.625	1	1.875	0.437	BCFJF		2122
C	1.937	1.625	1	1.875	0.437	BCFRF		2123
C	1.937	1.625	3	1.875	0.437	BCFJF		3221
C	1.937	1.625	-	-	-	BCF-F		3222
D	2.000	1.000	3	1.937	0.437	BCFRF		326
D	2.000	1.062	1	1.875	0.437	BCFJF	B	381
D	2.000	1.062	1	1.875	0.437	BCFRF	B	383
D	2.000	1.062	1	1.768	0.367	BCFJF	B	402
D	2.000	1.062	-	-	-	BCF-F	B	416
D	2.000	1.062	15	2.250	0.625	BCFJF	B	416A
D	2.000	1.062	18	1.687	0.367	BCFRF		439
D	2.000	1.062	1	1.875	0.437	BCFJF		472
D	2.000	1.062	1	2.000	0.437	BCFJF		510
D	2.000	1.062	2	1.875	0.437	BCFRF	B	517
D	2.000	1.062	1	1.875	0.437	BCFJF	B	786
D	2.000	1.062	3	1.875	0.437	BCFJF	B	804
D	2.000	1.062	1	1.768	0.367	BCFJF	B	976
D	2.000	1.062	1	1.768	0.367	BCFRF	B	977
D	2.000	1.062	3	1.875	0.437	BCFRF	B	981
D	2.000	1.031	3	2.125	0.375	BMFJF	B	995
D	2.000	1.062	3	1.875	0.437	VCFRF	B	1047
D	2.000	1.031	1	1.875	0.437	BCFJF		1090
D	2.000	1.031	3	1.875	0.437	NCFRF	B	1128
D	2.000	1.062	1	1.875	0.437	BCFRF	B	1136
D	2.000	1.000	3	1.875	0.375	NCFRF	B	1632
D	2.000	1.062	1	1.875	0.437	BCFJF		2041
D	2.000	1.062	1	1.875	0.437	BCFRF		2042
D	2.000	1.062	3	1.875	0.437	BCFJF		2043
D	2.000	1.062	3	1.875	0.437	BCFRF		2044
D	2.000	1.062	1	1.875	0.437	BZFRF		3351

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
E	1.812	1.542	1	1.875	0.437	NCFRF		108
E	1.812	1.625	1	1.875	0.437	BCFRF		137
E	1.812	1.187	3	1.875	0.437	BCFRF		256
E	1.812	1.625	3	1.875	0.437	BCRRR		264
E	1.812	1.625	1	1.875	0.437	BCRJR		361
E	1.812	1.625	3	1.875	0.437	BCRJR		546
E	1.812	1.625	-	-	-	BCR-R		1015
E	1.812	1.625	1	1.875	0.437	BCRRR		1181
E	1.812	1.625	1	1.875	0.437	BCRJR		1182
E	1.812	1.625	3	1.875	0.437	BCRRR		1183
E	1.812	1.625	3	1.875	0.437	BCRJR		1184
E	1.812	1.542	1	1.875	0.437	NCFJF		1185
E	1.812	1.625	1	2.000	0.437	BCFRF		1186
E	1.812	2.281	3	1.875	0.437	BCRJR		2128
E	1.812	1.625	3	1.875	0.437	BCRRR		2129
E	1.812	1.625	3	2.000	0.437	BCRJR		3415
K	1.937	1.625	-	-	-	BCF-F		169
K	1.937	1.625	3	1.875	0.437	BCFRF		228
K	1.937	1.625	1	1.875	0.437	BCFJF		883
K	1.937	1.625	1	1.875	0.437	BCFRF		890
K	1.937	2.000	3	2.125	0.375	BCFRF		1623
K	1.937	1.625	3	2.000	0.375	BCFRF		3541
K	1.937	1.625	3	1.875	0.437	BCFJF		3542
R	2.000	1.875	1	1.875	0.437	BCFJF		426
S	2.296	2.218	8	2.125	0.281	NAPSP		794
T	1.812	2.375	-	-	-	BCR-R		3721
T	1.812	2.375	3	1.875	0.437	NCFRF		308
T	1.812	2.375	1	1.875	0.437	BCRJR		1187
U	1.812	1.625	3	1.875	0.437	BCRRR		394
U	1.812	2.406	1	1.875	0.437	BCRJR		681
1.375 SHAFT (1-3/8")								
C	2.062	1.125	-	-	-	BCF-F		172
C	2.062	1.125	1	2.000	0.437	BCFJF		177
C	2.062	1.125	1	2.000	0.437	BCFRF		210
C	2.062	1.187	3	2.125	0.375	BCFJF		291
C	2.062	1.125	2	2.125	0.437	BCFRF		467
C	2.062	1.125	3	2.000	0.437	BCFRF		547
C	2.062	1.125	3	2.000	0.437	BCFJF		805
C	2.062	1.125	1	2.000	0.437	BCFRF	*	919
C	2.062	0.900	17	2.000	0.500	BCFJ/FF		929
C	2.062	1.156	3	2.125	0.406	VCFRF		1062

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
C	2.062	1.687	1	2.000	0.437	BCFRF		1667
C	2.062	1.687	1	2.000	0.437	BCFJF		2134
C	2.062	1.125	3	2.000	0.437	BCFZF		3146
D	2.187	1.125	1	2.000	0.437	BCFRF		186
D	2.187	1.125	-	-	-	BCF-F		376
D	2.187	1.093	17	2.000	0.500	BCFJ/FF		404
D	2.187	1.125	1	2.000	0.437	BCFJF		491
D	2.187	1.125	3	2.000	0.437	BCFJF		806
D	2.187	1.125	3	2.000	0.437	BCFRF		807
D	2.187	1.093	1	2.000	0.437	NCFJF		1132
D	2.187	1.125	1	2.000	0.437	BCFJF		2045
D	2.187	1.125	1	2.000	0.437	BCFRF		2046
D	2.187	1.125	3	2.000	0.437	BCFJF		2047
D	2.187	1.125	3	2.000	0.437	BCFRF		2048
E	1.875	1.187	3	2.000	0.437	BCFRF		257
E	1.875	1.687	1	2.000	0.437	BCFJF		354
E	1.875	1.687	1	2.000	0.437	BCFRF		677
E	1.875	1.687	3	2.000	0.437	BCFJF		808
E	1.875	1.687	3	2.000	0.437	BCFRF		809
E	1.875	2.000	3	2.000	0.437	BCRJR	E	864
E	1.875	2.000	3	2.000	0.437	BCRRR	E	865
E	1.875	1.687	1	2.000	0.437	BCRJR		2049
E	1.875	1.687	1	2.000	0.437	BCRRR		2050
E	1.875	1.687	-	-	-	BCR-R		2104
K	1.625	1.625	-	-	-	BCF-F		209
K	1.625	1.625	1	2.000	0.437	BCFJF		495
K	1.625	1.625	1	2.000	0.437	BCFRF		540
R	2.187	2.187	1	2.000	0.437	BCFJF		178
T	1.875	2.437	1	2.000	0.437	BCRJR		690
T	1.875	2.437	1	2.000	0.437	BCRJR		725
T	1.875	2.437	1	2.000	0.437	BCRRR		726
T/U	1.875	2.687	1	2.000	0.437	BCRJR		396
U	1.875	2.125	3	2.000	0.500	BCRRR		561
V	1.937	1.937	25	2.140	0.437	BCFRF		1104
1.437 SHAFT (1-7/16")								
C	2.125	1.125	3	2.250	0.625	BCFRF		2156
C	2.125	1.125	-	-	-	BCF-F		3231
C	2.125	1.125	1	2.125	0.437	BCFJF		3232
C	2.125	1.516	3	2.312	0.360	BCFRF		3233
C	2.125	1.125	3	2.125	0.437	BCFRF		3234
C	2.125	1.125	3	2.125	0.437	BCFJF		3235

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
C	2.125	1.125	1	2.250	0.437	BCFRF		3236
E	1.937	1.625	2	2.062	0.437	BCRRR		334
E	1.937	1.688	3	2.062	0.437	BCRJR		705
E	1.937	1.516	3	2.312	0.360	NCRRR		943
E	1.937	1.250	3	2.250	0.375	BCRRR		1634
E	1.937	1.250	3	2.250	0.375	BCRJR		1635
K	2.125	1.738	-	-	-			862
T	1.937	2.125	3	2.187	0.375	NCFRF		1633
T	1.937	2.125	3	2.250	0.375	BCRRR		3723
1.500 SHAFT (1-1/2")								
C	2.187	1.437	3	2.125	0.437	NCFRF		192
C	2.187	1.125	1	2.156	0.437	BCFRF	*	247
C	2.187	1.187	1	2.250	0.437	BCFJF		292
C	2.187	1.125	1	2.250	0.437	BCFJF		320
C	2.187	1.125	1	2.125	0.437	BCFJF	*	347
C	2.187	1.125	1	2.125	0.437	BCFRF	*	378
C	2.187	1.125	3	2.125	0.437	BCFRF	B	553
C	2.187	1.125	1	2.125	0.437	BCFRF	B	659
C	2.187	1.125	1	2.156	0.437	BCFJF	*	682
C	2.187	1.125	1	2.125	0.437	BCFJF	B	758
C	2.187	1.125	3	2.125	0.437	BCFJF		816
C	2.187	1.125	3	2.312	0.437	BCFJF	B	926
C	2.187	1.687	3	2.125	0.437	BCFRF	B	1110
C	2.187	1.125	1	2.250	0.437	BCFJF		1189
C	2.187	1.125	-	-	-	BCF-F		2105
C	2.187	1.687	3	2.125	0.437	BCFZF	B	3144
C	2.187	1.688	3	-	-	BCF-F		3240
D	2.312	1.125	1	2.156	0.437	BCFJF		283
D	2.312	1.125	1	2.125	0.437	BCFRF	B	371
D	2.312	1.125	1	2.125	0.437	BCFJF	B	382
D	2.312	1.125	3	2.125	0.437	BCFRF	B	534
D	2.312	1.125	3	2.187	0.437	NCFRF		599
D	2.312	1.125	3	2.125	0.437	BCFJF	B	817
D	2.312	1.125	-	-	-	BCF-F	B	939
D	2.312	1.125	1	2.125	0.437	BCFJF		2051
D	2.312	1.125	1	2.125	0.437	BCFRF		2052
D	2.312	1.125	3	2.125	0.437	BCFJF		2053
D	2.312	1.125	3	2.125	0.437	BCFRF		2054
D	2.312	1.125	3	2.125	0.437	VCFRF	B	2127
D	2.312	1.125	15	2.375	0.437	VZFZF		3143
E	2.000	1.688	3	2.125	0.437	NCFRF		224

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
E	2.000	1.688	3	2.125	0.437	BCRRR		258
E	2.000	1.187	3	2.125	0.437	BCRRR		259
E	2.000	1.688	1	2.125	0.437	BCRJR		305
E	2.000	1.688	3	2.000	0.437	BCRJR		314
E	2.000	1.688	3	2.000	0.437	BCRRR		316
E	2.000	1.688	1	2.125	0.437	BCRRR	B	374
E	2.000	1.688	3	2.125	0.437	BCRJR		395
E	2.000	1.688	3	2.250	0.437	BCRJR		515
E	2.000	2.062	3	2.312	0.437	BCRJR	F	620
E	2.000	2.062	3	2.312	0.437	BCRRR	F	629
E	2.000	1.562	3	2.125	0.437	BCRJR		899
E	2.000	1.688	1	2.125	0.437	BCRJR		1190
E	2.000	1.688	1	2.125	0.437	BCRRR		1191
E	2.000	1.688	3	2.125	0.437	BCRRR		1192
E	2.000	1.688	3	2.125	0.437	VCRJR		1644
E	2.000	1.688	3	2.125	0.437	VCRRR		1645
E	2.000	1.688	3	2.312	0.437	B/VCRJR		1647
E	2.000	1.688	3	2.312	0.437	B/VCRRR		1648
E	2.000	1.688	3	2.312	0.437	VCRJR		1651
E	2.000	1.688	3	2.312	0.437	VCRRR		1652
E	2.000	2.062	3	2.312	0.437	VCRJR		1690
E	2.000	2.062	3	2.312	0.437	VCRRR		1691
E	2.000	2.062	3	2.312	0.437	VCRZR		1692
E	2.000	1.688	-	-	-	BCR-R		2106
E	2.000	1.688	1	2.250	0.437	BCRJR		2117
E	2.000	1.688	1	2.156	0.437	BCRRR		2137
E	2.000	1.688	3	2.125	0.437	BCRZR		3151
K	2.187	1.625	-	-	-	BCF-F		216
K	2.187	1.625	1	2.125	0.437	BCFJF		541
K	2.187	1.625	1	2.125	0.437	BCFRF		884
K	2.187	1.625	3	2.125	0.437	BCFJF		3547
K	2.187	1.625	3	2.125	0.437	BCFRF		3548
R	2.312	1.875	1	2.125	0.437	BCFJF		431
R	2.312	1.875	1	2.125	0.437	BCFRF		432
R	2.312	1.875	-	-	-	BCF-F		3611
R	2.312	1.875	3	2.125	0.437	BCFJF		3612
R	2.312	1.875	3	2.125	0.437	BCFRF		3613
S	2.460	2.062	8	2.378	0.280	NAPSP		1500
T	2.000	2.437	1	2.125	0.437	BCRJR		868
T	2.000	2.437	-	-	-	BCR-R		3731
T	2.000	2.437	1	2.125	0.437	BCRRR		3732

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
T	2.000	2.437	3	2.125	0.437	BCRJR		3733
T	2.000	2.437	3	2.125	0.437	BCRRR		3734
U	2.000	2.062	3	2.000	0.437	BCRJR		915
1.562 SHAFT (1-9/16")								
E	2.250	1.688	3	2.375	0.500	BCRJR		664
E	2.250	1.688	3	2.375	0.500	BCRRR		1193
E	2.250	1.688	1	2.375	0.500	BCRRR		1194
E	2.250	1.688	1	2.375	0.500	BCRJR		3421
E	2.250	1.688	-	-	-	BCR-R		3422
1.625 SHAFT (1-5/8")								
C	2.300	1.375	1	2.375	0.500	BCFJF		238
C	2.300	1.375	1	2.375	0.500	BCFRF		239
C	2.300	1.375	3	2.437	0.500	NCFRF		331
C	2.300	1.375	3	2.375	0.500	BCFRF		544
C	2.300	1.375	3	2.375	0.500	BCFJF		818
C	2.300	1.375	3	2.625	0.500	BCFRF		1019
C	2.300	1.375	15	2.500	0.500	BCFRF		1595
C	2.300	1.375	-	-	-	BCF-F		2107
D	2.718	1.375	1	2.375	0.500	BCFRF		461
D	2.718	1.375	1	2.375	0.500	BCFJF		514
D	2.718	1.375	3	2.375	0.500	BCFRF		819
D	2.718	1.375	3	2.375	0.500	BCFJF		821
D	2.718	1.375	3	2.375	0.500	BCFRF		1697
D	2.718	1.375	3	2.375	0.500	BCFJF		1698
D	2.718	1.375	1	2.375	0.500	BCFJF		2055
D	2.718	1.375	1	2.375	0.500	BCFRF		2056
E	2.250	2.000	1	2.312	0.500	BCRJR		346
E	2.250	2.000	1	2.312	0.500	BCRRR		484
E	2.250	2.000	3	2.375	0.500	BCRJR		595
E	2.250	2.000	1	2.312	0.500	BCRJR		609
E	2.250	2.000	1	2.312	0.500	BCRRR		610
E	2.250	2.000	1	2.375	0.500	BCRRR		744
E	2.250	2.000	1	2.375	0.500	BCRJR		745
E	2.250	2.000	1	2.375	0.500	BCRRR		746
E	2.250	2.000	1	2.375	0.500	BCRJR		747
E	2.250	2.000	3	2.375	0.500	BCRRR		822
E	2.250	2.000	3	2.375	0.500	BCRJR		1683
E	2.250	2.000	3	2.375	0.500	BCRRR		1699
E	2.250	2.000	1	2.375	0.500	BCRJR		2057
E	2.250	2.000	1	2.375	0.500	BCRRR		2058
K	2.300	2.125	1	2.375	0.500	BCFJF		1195

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
K	2.300	2.125	-	-	-	BCF-F		3551
K	2.300	2.875	-	-	-	BCF-F		3552
R	2.718	2.125	-	-	-	BCF-F		3617
R	2.718	2.125	3	2.375	0.500	BCFRF		281
T	2.250	2.875	1	2.375	0.500	BCRJR		692
T	2.250	2.875	-	-	-	BCR-R		3737
U	2.250	2.093	3	2.375	0.500	BCRRR		458
1.750 SHAFT (1-3/4")								
C	2.625	1.375	3	2.500	0.750	BCFJF		387
C	2.625	1.046	17	2.500	0.500	BCFJ/FF		434
C	2.625	1.375	3	2.500	0.500	BCFRF		436
C	2.625	1.375	1	2.500	0.500	BCFJF		446
C	2.625	1.375	1	2.500	0.500	BCFRF		448
C	2.625	1.375	3	2.500	0.500	BCFJF		550
C	2.625	1.125	-	-	-	BCF-F		1055
C	2.625	1.125	3	2.500	0.500	B/VCFRF		1056
C	2.625	1.125	1	2.500	0.500	BCFRF		1068
C	2.625	2.000	1	2.500	0.500	BCFRF		1674
C	2.625	1.375	-	-	-	BCF-F		2108
C	2.625	2.000	1	2.500	0.500	BCFJF		2135
C	2.625	2.000	1	2.500	0.500	BCFRF		2142
C	2.625	2.000	3	2.500	0.500	BCFJF		2150
C	2.625	2.000	3	2.500	0.500	BCFRF		2151
C	2.625	1.375	3	2.500	0.500	BCFZF		3152
C	2.625	2.000	-	-	-	BCF-F		3249
D	2.750	1.375	-	-	-	BCF-F		147
D	2.750	1.375	1	2.500	0.500	BCFJF		237
D	2.750	1.375	1	2.500	0.500	BCFRF		288
D	2.750	1.375	3	2.500	0.500	BCFRF		825
D	2.750	1.375	3	2.500	0.500	BCFJF		826
D	2.750	1.375	1	2.500	0.500	BCFJF		2059
D	2.750	1.375	1	2.500	0.500	BCFRF		2060
D	2.750	1.375	3	2.500	0.500	BCFJF		2061
D	2.750	1.375	3	2.500	0.500	BCFRF		2062
E	2.375	2.000	1	2.500	0.500	BCFJF		205
E	2.375	2.000	3	2.500	0.500	BCFRF		262
E	2.375	2.000	1	2.500	0.500	BCFJF		317
E	2.375	2.000	1	2.500	0.500	BCFRF		366
E	2.375	2.000	3	2.500	0.500	BCFJF		535
E	2.375	2.000	3	2.500	0.500	BCRJR	E	858
E	2.375	2.000	3	2.500	0.500	BCRRR	E	859

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
E	2.375	2.000	3	2.500	0.500	VCRRR		1031
E	2.375	2.000	1	2.500	0.500	BCRRR		1032
E	2.375	2.000	3	2.500	0.500	BCRRR		1033
E	2.375	2.000	27	3.000	1.000	BCRJR		1078
E	2.375	2.000	1	2.500	0.500	BCRJR		1196
E	2.375	2.000	3	2.312	0.500	BCRJR		1684
E	2.375	2.000	-	-	-	BCR-R		2109
E	2.375	2.000	3	2.625	0.500	BCRJR		2130
E	2.375	2.000	3	2.312	0.500	BCRRR		3427
E	2.375	2.000	3	2.625	0.500	BCRRR		3428
K	2.625	2.125	1	2.500	0.500	BCFJF		449
K	2.625	2.125	1	2.500	0.500	BJFRF		1197
K	2.625	2.125	3	2.625	0.500	BCFJF		3532
K	2.625	2.125	-	-	-	BCF-F		3556
K	2.625	2.125	3	2.500	0.500	BCFJF		3557
K	2.625	2.125	3	2.500	0.500	BCFRF		3558
R	2.750	2.125	-	-	-	BCF-F		213
R	2.750	2.125	1	2.500	0.500	BCFRF		217
R	2.750	2.125	1	2.500	0.500	BCFJF		3621
R	2.750	2.125	3	2.500	0.500	BCFRF		3622
R	2.750	2.125	3	2.500	0.500	BCFJF		3623
T	2.375	2.875	1	2.500	0.500	BCRJR		674
T	2.375	2.875	1	2.500	0.500	BCRRR		675
T	2.375	2.875	3	2.500	0.500	BCRJR		2144
T	2.375	2.875	3	2.500	0.500	BCRRR		3741
T	2.375	2.875	-	-	-	BCR-R		3742
T/U	2.375	3.125	1	2.500	0.500	BCRJR		455
T/U	2.375	3.125	1	2.500	0.500	BCRRR		3743
T/U	2.375	3.125	3	2.500	0.500	BCRRR		3744
T/U	2.375	3.125	3	2.500	0.500	BCRJR		3745
U	2.375	2.500	3	2.500	0.500	BCRJR		519
U	2.375	2.500	3	2.500	0.500	BCRRR		555
U	2.375	2.500	3	2.500	0.500	BCRJR		917
U	2.375	2.500	1	2.500	0.500	BCRJR		1042
U	2.375	2.500	3	2.375	0.500	BCRJR		1070
U	2.375	2.500	3	2.500	0.500	BCRRR		1199
U	2.375	2.500	3	2.500	0.500	BCRRR		2157
U	2.375	2.500	3	2.500	0.500	BCRJR		2170
U	2.375	2.500	-	-	-	BCR-R		3746
1.771 Shaft (45mm)								
E	2.500	2.125	-	-	-	BCR-R		3429

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
E	2.500	2.125	1	2.625	0.500	BCRRR		719
E	2.500	2.125	1	2.625	0.500	BCRJR		722
T	2.500	3.000	1	2.625	0.500	BCRJR		727
T	2.500	3.000	1	2.625	0.500	BCRRR		728
1.875 Shaft (1-7/8")								
C	2.750	1.500	3	2.625	0.500	BCFRF		312
C	2.750	1.500	1	2.625	0.500	BCFJF		340
C	2.750	1.500	3	2.625	0.500	BCFRF		827
C	2.750	1.500	1	2.625	0.500	BCFRF		1608
C	2.750	1.500	3	2.625	0.500	BCFJF		2114
C	2.750	1.500	3	2.625	0.500	BCFZF		3153
C	2.750	1.500	-	-	-	BCF-F		3251
D	2.875	1.500	-	-	-	BCF-F		223
D	2.875	1.500	3	2.625	0.500	BCFRF		593
D	2.875	1.500	1	2.625	0.500	BCFJF		828
D	2.875	1.500	1	2.625	0.500	BCFRF		1097
D	2.875	1.500	3	2.625	0.500	BCFJF		1620
D	2.875	1.500	3	2.625	0.500	VZFFZ		3145
E	2.500	2.125	1	2.625	0.500	BCFRF		513
E	2.500	2.125	1	2.625	0.500	BCFJF		523
E	2.500	2.125	3	2.625	0.500	BCFRF		586
E	2.500	2.437	3	2.687	0.500	BCFJF	F	829
E	2.500	2.437	3	2.687	0.500	BCFRF	F	831
E	2.500	2.437	3	2.687	0.500	BCRJR	F	946
E	2.500	2.437	3	2.687	0.500	BCRRR	F	949
E	2.500	2.125	3	2.625	0.500	BCFJF		1654
E	2.500	2.125	3	2.625	0.500	BCRJR		1656
E	2.500	2.125	3	2.625	0.500	BCRRR		1657
E	2.500	2.125	3	2.625	0.500	VCRJR		1659
E	2.500	2.125	3	2.625	0.500	VCRRR		1660
E	2.500	2.125	3	2.687	0.500	B/VCFJF		1662
E	2.500	2.125	3	2.687	0.500	B/VCFRF		1663
E	2.500	2.125	3	2.687	0.500	B/VCRJR		1664
E	2.500	2.125	3	2.687	0.500	B/VCRRR		1665
E	2.500	2.125	1	2.625	0.500	BCRJR		2069
E	2.500	2.125	1	2.625	0.500	BCRRR		2070
E	2.500	2.125	3	2.625	0.500	BCRJR		2071
E	2.500	2.125	3	2.625	0.500	BCRRR		2072
E	2.500	2.125	-	-	-	BCR-R		2110
K	2.750	3.000	1	2.625	0.500	BCFJF		318
K	2.750	3.000	1	2.625	0.500	BCFRF		1693

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
K	2.750	3.000	-	-	-	BCF-F		3561
K	2.750	3.000	3	2.625	0.500	BCFJF		3562
K	2.750	3.000	3	2.625	0.500	BCFRF		3563
R	2.875	3.000	-	-	-	BCF-F		3625
T	2.500	3.000	-	-	-	BCR-R		3749
T	2.500	3.000	1	2.625	0.500	BCRJR		742
T	2.500	3.000	1	2.625	0.500	BCRRR		743
T	2.500	3.000	3	2.687	0.500	VCRJR		1653
T	2.500	3.000	3	2.625	0.500	BCRJR		3750
T	2.500	3.000	3	2.625	0.500	BCRRR		3751
U	2.500	2.437	1	2.625	0.500	BCRJR		538
U	2.500	2.437	3	2.500	0.500	BCRRR		554
U	2.500	2.437	3	2.500	0.500	BCRJR		898
U	2.500	2.437	-	-	-	BCR-R		3752
V	2.500	2.000	25	2.640	0.406	BCFRF		1105
V	2.500	2.000	1	2.625	0.500	BCFRF		1108
V	2.500	2.000	3	2.625	0.437	BCFJF		2146
2.000 Shaft (2")								
C	2.875	1.500	1	2.750	0.500	BCFJF		267
C	2.875	1.500	3	2.750	0.500	BCFRF		332
C	2.875	1.218	17	2.750	0.750	BCFRF		435
C	2.875	1.500	3	2.750	0.500	BCFJF		532
C	2.875	1.231	2	3.060	0.250	NCFRF		576
C	2.875	1.062	3	3.000	0.500	BCFRF		582
C	2.875	1.500	1	2.750	0.500	BCFRF		842
C	2.875	2.125	1	2.750	0.500	BCFRF		1017
C	2.875	1.500	3	3.000	0.500	BCFRF		1020
C	2.875	1.250	1	2.750	0.500	BCFRF		1028
C	2.875	1.500	3	2.750	0.500	VCFRF		1145
C	2.875	1.500	-	-	-	BCF-F		2111
C	2.875	2.125	1	2.750	0.500	BCFJF		2133
C	2.875	1.250	1	2.750	0.500	BCFJF		2139
C	2.875	2.125	3	2.625	0.500	BCFJF		3213
C	2.875	2.125	3	2.625	0.500	BCFRF		3214
C	2.875	2.125	3	2.812	0.500	BCFJF		3215
C	2.875	2.125	3	2.812	0.500	BCFRF		3216
D	3.000	1.500	3	2.750	0.500	NCFRF		193
D	3.000	1.500	-	-	-	BCF-F		196
D	3.000	1.125	3	2.812	0.500	NCFRF		333
D	3.000	1.500	1	2.750	0.500	BCFJF		445
D	3.000	1.500	1	2.750	0.500	BCFRF		462

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
D	3.000	1.500	3	2.750	0.500	BCFRF		832
D	3.000	1.500	3	2.750	0.500	BCFJF		833
D	3.000	1.500	1	2.625	0.500	BCFRF		876
D	3.000	1.500	1	2.750	0.500	BCFJF		2073
D	3.000	1.500	1	2.750	0.500	BCFRF		2074
D	3.000	1.500	3	2.750	0.500	BCFJF		2075
D	3.000	1.500	3	2.750	0.500	BCFRF		2076
E	2.625	2.125	1	2.687	0.500	BCRJR		319
E	2.625	2.125	3	2.750	0.500	NCFRF		342
E	2.625	2.125	3	2.750	0.500	BCRRR		477
E	2.625	2.125	1	2.687	0.500	BCRRR		478
E	2.625	2.125	1	2.750	0.500	BCRJR		479
E	2.625	2.125	3	2.750	0.500	BCRJR		530
E	2.625	2.125	1	2.750	0.500	BCRRR		843
E	2.625	2.125	1	2.625	0.500	BCRRR		1609
E	2.625	2.125	3	2.750	0.500	BCRJR		1685
E	2.625	2.125	1	2.750	0.500	BCRJR		2077
E	2.625	2.125	1	2.750	0.500	BCRRR		2078
E	2.625	2.125	3	2.750	0.500	BCRRR	E	2079
E	2.625	2.125	-	-	-	BCR-R		2112
K	2.875	2.125	3	2.750	0.500	BCFRF		1040
K	2.875	2.125	1	2.750	0.500	BCFJF		2143
K	2.875	2.125	-	-	-	BCF-F		3565
K	2.875	2.125	3	2.750	0.500	BCFJF		3566
K	2.875	2.125	1	2.750	0.500	BCFRF		3567
R	3.000	2.125	1	2.750	0.500	BCFRF		658
R	3.000	2.125	1	2.750	0.500	BCFJF		1610
R	3.000	2.125	-	-	-	BCF-F		3631
R	3.000	2.125	3	2.750	0.500	BCFJF		3632
R	3.000	2.125	3	2.750	0.500	BCFRF		3633
U	2.625	2.500	3	2.750	0.500	BCRRR		385A
U	2.625	2.500	3	2.812	0.500	BCRRR		386
U	2.625	2.218	3	2.750	0.500	BCRRR		456
U	2.625	2.437	3	2.750	0.500	BCRJR		888
2.062 Shaft (2-1/16")								
E	2.812	2.375	3	2.875	0.562	BCRRR		707
E	2.812	2.375	3	2.875	0.562	BCRJR		1611
E	2.812	2.375	-	-	-	BCR-R		3461
2.125 Shaft (2-1/8")								
C	3.000	1.688	2	3.000	0.562	BCFRF		336
C	3.000	1.688	3	3.000	0.562	BCFJF		338

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
C	3.000	1.688	1	3.000	0.562	BCFRF		543
C	3.000	2.693	3	2.840	0.468	NCFRF		570
C	3.000	1.688	1	3.000	0.562	BCFJF		844
C	3.000	1.688	3	2.875	0.562	BCFJF		854
C	3.000	1.688	3	2.875	0.562	BCFRF		855
C	3.000	1.688	3	3.000	0.562	B/VCFRF		1057
C	3.000	1.688	-	-	-	BCF-F		3261
D	3.250	1.688	-	-	-	BCF-F		3321
D	3.250	1.688	1	3.000	0.562	BCFJF		1686
D	3.250	1.688	1	3.000	0.562	BCFRF		1687
D	3.250	1.688	3	3.000	0.562	BCFJF		2093
D	3.250	1.688	3	3.000	0.562	BCFRF		2102
D	3.250	1.688	2	3.000	0.562	BCFRF		2125
E	2.812	2.375	3	3.000	0.562	BCRJR		327
E	2.812	2.375	2	3.000	0.562	BCRRR		353
E	2.812	2.375	1	3.000	0.562	BCRJR		537
E	2.812	2.375	3	2.812	0.437	BCRJR		611
E	2.812	2.375	3	2.875	0.562	BCRJR		856
E	2.812	2.375	3	2.875	0.562	BCRRR		857
E	2.812	2.250	3	2.812	0.437	BCRRR		1612
E	2.812	2.375	3	3.000	0.562	BCRJR		1617
E	2.812	2.375	3	3.000	0.562	BCRRR		1666
E	2.812	2.375	1	3.000	0.562	BCRJR		2084
E	2.812	2.375	1	3.000	0.562	BCRRR		2085
E	2.812	2.375	3	3.000	0.562	BCRRR		2086
E	2.812	2.375	1	3.000	0.562	BCRRR		2159
E	2.812	2.375	-	-	-	BCR-R		3431
K	3.000	2.125	1	3.000	0.562	BCFJF		887
K	3.000	2.125	-	-	-	BCF-F		3569
K	3.000	2.125	1	3.000	0.562	BCFRF		3570
K	3.000	2.125	3	3.000	0.562	BCFJF		3571
K	3.000	2.125	3	3.000	0.562	BCFRF		3572
R	3.250	2.125	-	-	-	BCF-F		3637
T	2.812	3.375	3	3.000	0.562	BCRJR		2126
T	2.812	3.375	-	-	-	BCR-R		3755
T	2.812	3.375	3	3.000	0.562	BCRRR		3756
T/U	2.812	3.656	1	3.000	0.562	BCRJR		457
U	2.812	2.812	2	3.000	0.562	BCRRR		556
V	2.750	2.562	25	3.140	0.562	BCFRF		1102
V	2.750	1.625	25	3.187	0.875	BCFRF		1107

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
2.250 Shaft (2-1/4")								
C	3.125	1.437	1	3.125	0.562	BCFJF		1087
C	3.125	1.688	3	3.125	0.562	BCFRF		1676
C	3.125	1.688	3	3.125	0.562	BCFJF		1678
C	3.125	1.688	1	3.125	0.562	BCFJF		1679
C	3.125	1.688	1	3.125	0.562	BCFRF		1680
C	3.125	1.688	-	-	-	BCF-F		3264
D	3.375	1.688	3	3.125	0.562	BCFJF		846
D	3.375	1.688	3	3.125	0.562	BCFRF		847
D	3.375	1.688	1	3.125	0.562	BCFJF		874
D	3.375	1.688	1	3.125	0.562	BCFRF		941
D	3.375	1.688	-	-	-	BCF-J		942
D	3.375	1.688	1	3.125	0.562	BCFJF		2087
D	3.375	1.688	1	3.125	0.562	BCFRF		2088
D	3.375	1.688	3	3.125	0.562	BCFJF		2089
D	3.375	1.688	3	3.125	0.562	BCFRF		2090
E	2.938	2.375	1	3.125	0.562	BCFJF		323
E	2.938	2.375	1	3.125	0.562	BCFRF		351
E	2.938	2.375	3	3.125	0.562	BJFJF		848
E	2.938	2.375	3	3.125	0.562	BCFRF		849
E	2.938	2.375	3	3.125	0.562	BCRJR		1688
E	2.938	2.375	1	3.125	0.562	BCRJR		2091
E	2.938	2.375	1	3.125	0.562	BCRRR		2092
E	2.938	2.375	3	3.125	0.562	BCRRR		2094
E	2.938	2.375	-	-	-	BCR-R		2113
K	3.125	2.375	3	3.125	0.562	BCRJR		3581
K	3.125	2.375	1	3.125	0.562	BCRJR		3582
K	3.125	2.375	1	3.125	0.562	BCRRR		3583
K	3.125	2.375	3	3.125	0.562	BCRRR		3584
K	3.125	2.375	-	-	-	BCF-F		3585
R	3.125	2.375	-	-	-	BCF-F		3641
R	3.375	2.375	3	3.125	0.562	NCFRF		1073
T	3.375	2.375	-	-	-	BCR-R		3761
T	2.938	3.375	3	3.125	0.562	BCRJR		2132
2.375 Shaft (2-3/8")								
C	3.219	1.813	3	3.250	0.562	BCFJF		268
C	3.219	1.813	3	3.250	0.562	BCFRF		492
C	3.219	1.813	1	3.250	0.562	BCFJF		3271
C	3.219	1.813	1	3.250	0.562	BCFRF		3272
C	3.219	1.813	-	-	-	BCF-F		3273
D	3.500	1.813	3	3.250	0.562	BCFRF		594

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
D	3.500	1.813	3	3.250	0.562	BCFJF		834
D	3.500	1.813	-	-	-	BCF-F		3331
E	3.062	2.500	3	3.250	0.562	BCRJR		278
E	3.062	2.500	3	3.250	0.562	BCRRR		350
E	3.062	2.500	3	3.250	0.562	BCRJR		2097
E	3.062	2.500	3	3.250	0.562	BCRRR		2098
E	3.062	2.500	-	-	-	BCR-R		3441
K	3.219	2.125	-	-	-	BCF-F		3586
K	3.219	2.125	3	3.250	0.562	BCFRF		1041
K	3.219	2.125	3	3.250	0.562	BCFJF		1694
R	3.500	2.125	-	-	-	BCF-F		3645
T	3.062	2.625	-	-	-	BCR-R		3762
2.500 Shaft (2-1/2")								
C	3.344	1.813	3	3.375	0.562	BCFJF		269
C	3.344	1.250	3	3.375	0.562	NCFRF	E	335
C	3.344	1.813	3	3.375	0.562	BCFRF		853
C	3.344	1.813	3	3.375	0.562	B/VCFRF		1058
C	3.344	1.813	1	3.375	0.562	BCFJF		2120
C	3.344	1.813	-	-	-	BCF-F		3275
D	3.625	1.813	3	3.375	0.562	BCFRF		463
D	3.625	1.813	3	3.250	0.437	BCFJF		468
D	3.625	1.813	3	3.250	0.437	BCFRF		469
D	3.625	1.813	3	3.375	0.562	BCFJF		835
D	3.625	1.813	1	3.250	0.437	BCFRF		3335
D	3.625	1.813	1	3.375	0.562	BCFJF		3336
D	3.625	1.813	-	-	-	BCF-F		3337
E	3.187	2.500	3	3.375	0.562	BCRJR		279
E	3.187	2.500	3	3.375	0.562	BCRRR		349
E	3.187	2.500	3	3.375	0.562	BCRJR		916
E	3.187	2.500	3	3.375	0.562	BCRRR		2101
E	3.187	2.500	3	3.375	0.562	BZRZR		3414
E	3.187	2.500	-	-	-	BCR-R		3444
K	3.344	2.125	3	3.375	0.562	BCFJF		1613
K	3.344	2.125	3	3.375	0.562	BCFRF		1695
K	3.344	2.125	1	3.375	0.562	BCFJF		2158
K	3.344	2.125	-	-	-	BCF-F		3587
K	3.344	2.375	3	3.500	0.562	BCFJF		3527
R	3.625	2.187	3	3.375	0.531	NCFRF		889
R	3.625	2.187	-	-	-	BCF-F		3646
2.625 Shaft (2-5/8")								
C	3.250	2.732	3	3.336	0.531	NCFRF		571

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
C	3.250	1.937	-	-	-	BCF-F		3280
C	3.250	2.750	-	-	-	BCF-F		3281
C	3.250	1.937	3	3.375	0.625	BCFRF		3282
C	3.250	1.937	3	3.375	0.625	BCFJF		3283
C	3.250	1.937	1	3.375	0.625	BCFJF		3284
C	3.250	1.937	1	3.375	0.625	BCFRF		3285
C	3.250	2.750	3	3.375	0.625	BCFRF		3286
C	3.250	2.750	3	3.375	0.625	BCFJF		3287
C	3.250	2.750	1	3.375	0.625	BCFRF		3288
C	3.250	2.750	1	3.375	0.625	BCFJF		3289
E	3.375	2.750	3	3.375	0.625	BCRJR		328
E	3.375	2.750	3	3.375	0.625	BCRRR	E	542
E	3.375	2.750	1	3.375	0.625	BCRRR	E	3447
E	3.375	2.750	-	-	-	BCR-R		3448
K	3.250	2.500	-	-	-	BCF-F		3588
K	3.250	3.375	-	-	-	BCF-F		3589
K	3.250	2.500	3	3.375	0.625	BCFRF		3590
K	3.250	2.500	3	3.375	0.625	BCFJF		3591
K	3.250	2.500	1	3.375	0.625	BCFRF		3592
K	3.250	2.500	1	3.375	0.625	BCFJF		3593
K	3.250	3.375	3	3.375	0.625	BCFRF		3594
K	3.250	3.375	3	3.375	0.625	BCFJF		3595
K	3.250	3.375	1	3.375	0.625	BCFRF		3596
K	3.250	3.375	1	3.375	0.625	BCFJF		3597
T	3.375	3.375	1	3.375	0.625	BCRJR		3767
T	3.375	3.375	3	3.375	0.625	BCRJR		3768
T	3.375	3.375	3	3.375	0.625	BCRRR		3781
V	3.375	2.562	25	3.643	0.562	BCFRF		1106
2.750 Shaft (2-3/4")								
C	3.750	1.937	3	3.500	0.625	BCFRF		483
C	3.750	1.937	3	3.500	0.625	BCFJF		836
C	3.750	1.937	3	3.500	0.625	NCFRF		2124
C	3.750	1.937	3	3.500	0.625	BCFRF	E	2152
C	3.750	1.125	3	3.500	0.625	BCFJF		2154
C	3.750	1.937	-	-	-	BCF-F		3290
C	3.750	1.937	1	3.500	0.625	BCFJF		3291
C	3.750	2.750	3	3.500	0.625	BCRRR		3276
C	3.750	2.750	3	3.500	0.625	BCRJR		3277
D	4.000	1.937	-	-	-	BCF-F		3341
D	4.000	1.937	3	3.500	0.625	BCFRF		464
D	4.000	1.937	3	3.500	0.625	BCFJF		837

### Notes Symbols

'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
E	3.500	2.750	3	3.500	0.625	BCRRR		321
E	3.500	2.750	3	3.500	0.625	BCRJR		838
E	3.500	2.750	1	3.500	0.625	NBCRJR		3450
E	3.500	2.750	3	3.750	0.625	BCRJR		3449
K	3.750	3.750	3	3.500	0.625	BCFRF		322
K	3.750	1.875	3	3.500	0.625	BCFJF		2148
K	3.750	2.500	3	3.500	0.625	BCFJF		3598
2.875 Shaft (2-7/8")								
C	3.718	2.062	3	3.750	0.625	BCFJF		270
C	3.718	2.062	3	3.750	0.625	BCFRF		839
C	3.718	1.312	3	3.750	0.625	NCFRF		1074
C	3.718	2.062	-	-	-	BCF-F		3292
C	3.718	2.062	1	3.750	0.625	BCFJF		3293
C	3.718	2.875	3	3.750	0.625	BCFJF		3294
C	3.718	2.875	3	3.750	0.625	BCFRF		3295
C	3.718	2.875	1	3.750	0.625	BCFJF		3296
E	3.625	2.875	3	3.750	0.625	BCRJR		329
E	3.625	2.875	3	3.750	0.625	BCRRR		841
E	3.625	2.875	1	3.750	0.625	BCRJR		3451
E	3.625	2.875	-	-	-	BCR-R		3452
K	3.718	2.750	3	3.750	0.625	BCFJF		3514
K	3.718	2.750	3	3.750	0.625	BCFRF		3515
K	3.718	2.750	1	3.750	0.625	BCFJF		3516
K	3.718	2.750	-	-	-	BCF-F		3517
K	3.718	3.875	-	-	-	BCF-F		3518
T	3.625	3.875	-	-	-	BCR-R		3769
T	3.625	3.875	3	3.750	0.625	BCFJF		3770
T	3.625	3.875	3	3.750	0.625	BCFRF		3771
T	3.625	3.875	1	3.750	0.625	BCFJF		3772
3.000 Shaft (3")								
C	4.000	2.750	3	3.875	0.625	B/VCFRF		1059
C	4.000	1.312	3	3.875	0.625	BCFJF		1088
C	4.000	2.062	3	3.875	0.625	BCFJF		1696
C	4.000	2.062	3	3.875	0.625	BCFRF		2115
C	4.000	2.062	3	3.875	0.625	BCFJF		2116
C	4.000	1.125	3	3.875	0.625	BCFJF		2153
C	4.000	2.062	1	3.875	0.625	BCFJF		3298
C	4.000	2.750	-	-	-	BCF-F		3299
D	4.250	2.062	-	-	-	BCF-F		3345
D	4.250	2.062	3	3.875	0.625	BCFRF		465
D	4.250	2.062	3	3.875	0.625	BCFJF		761

SEAL HEAD			SEAT			Material Code	Notes	DMR Part #
Type	O.D.	OP. HT.	Type	O.D.	Thick			
D	4.250	2.062	1	3.875	0.625	BCFJF		3346
E	3.750	2.813	3	3.875	0.625	BCRJR		324
E	3.750	2.813	3	3.875	0.625	BCRRR		475
E	3.750	2.813	3	3.875	0.625	B/VCFRRR		1060
E	3.750	2.813	1	3.875	0.625	BCRJR		3455
E	3.750	2.813	-	-	-	BCR-R		3456
K	4.000	2.500	3	3.875	0.625	BCFRF		2141
K	4.000	2.750	-	-	-	BCF-F		3507
K	4.000	2.750	3	3.875	0.625	BCFRF		3508
K	4.000	2.750	3	3.875	0.625	BCFJF		3509
K	4.000	2.750	1	3.875	0.625	BCFJF		3519
R	4.250	2.750	3	3.875	0.625	BCFRF		284
R	4.250	2.750	3	3.875	0.625	BCFJF		3651
R	4.250	2.750	1	3.875	0.625	BCFJF		3652
R	4.250	2.750	-	-	-	BCF-F		3653
T	3.750	2.750	3	3.875	0.625	BCRRR		3775
T	3.750	2.750	3	3.875	0.625	BCRJR		3776
T	3.750	2.750	1	3.875	0.625	BCRJR		3777
T	3.750	2.750	-	-	-	BCR-R		3778
U	3.750	3.375	3	3.875	0.625	BCRJR		897
V	3.750	2.750	25	4.250	0.625	BCFRF		893
3.250 Shaft (3-1/4")								
E	4.125	3.125	3	4.125	0.781	BCRJR	E	330
E	4.125	3.125	3	4.125	0.781	BCRRR		3459
U	4.125	3.125	3	4.125	0.781	BCRRR		325

### Notes Symbols

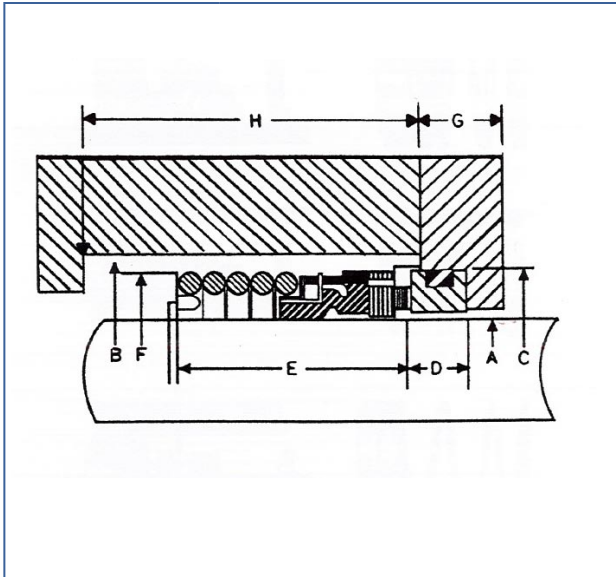
'A' – Mounts on shaft  
'B' – Spring loaded included

'C' – Mounts in plastic  
'D' – Press in seat

'E' – Lock collar included  
'F' – Long nose carbon

\*\* – Tapered spring

<b>Company:</b>	<b>Contact:</b>
<b>Address:</b>	
<b>Phone:</b>	<b>Fax:</b>
<b>Email:</b>	<b>Web Site:</b>



### Your Seal

<b>A. Shaft/Sleeve O.D.:</b>
<b>B. Counterbore of Stuffing Box:</b>
<b>C. Bore of Gland for Stationary Seat:</b>
<b>D. Stationary Thickness:</b>
<b>E. Operating Height of Seal:</b>
<b>F. Seal O.D.:</b>

### To Convert from Packing to Seal

<b>G. Width of Gland:</b>
<b>H. Stuffing Box Depth:</b>

### Equipment Data

<b>1. Pump Mfg. Name:</b>
<b>2. Model Number:</b>
<b>3. Seal Part No.:</b>

### Seal Design

<b>1. Head Type:</b>
<b>2. Seat Type:</b>
<b>3. Manufacturer:</b>
<b>4. Mfg. Part No.:</b>

### Service

<b>1. Product :</b>
<b>2. Explain if Abrasive:</b>
<b>3. Percentage of Concentration:</b>
<b>4. Temperature:</b>
<b>5. Stuffing Box Pressure:</b>
<b>6. Shaft Speed:</b>



## PRECISION COMPONENTS

### Retaining Rings

Rotor Clip® • Spirolox® (Spiral Rings) • Rotor Clamps • Assembly Tools



### Caplugs®

Caps • Plugs • Vinyl • Plastic • Sleeve Web • Edge Guard • Masking

### Bushings

Dry sliding • Fiber Wound • Ceramic Linear Motion • Powdered Metal  
• Solid Metal • Plastic



### Keystock

Metric & Inch • Plated • Unplated • Stainless • Hi-Carbon • Stepkey  
• Woodruff Key • Gib Head Key • Shop Kits

### Shims

Slotted Shim Kits & Insert Packs

Shim Sheets Brass • Steel • Stainless • Plastic Shim-in-a-Can

## FLUID SEALING PRODUCTS

### O-Rings

Metric & Inch Sizes • Kalrez (Hostile Environments)

Buna-N • Viton • EPDM • Silicone • PTFE • Polyacrylate

### Shaft Seals

Metric & Inch Sizes • JM Clipper® • Bearing Isolators • Labyrinth • Split Seals

• V-Rings • Hub Seals • Shaft Repair Sleeves • End Caps

### Braided Packing

Square Braid • Braid over Braid • Braid over Core • Interbraid

PTFE • Graphite • FDA • GFO • Fibreglass





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