



MECHANICAL SEAL



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SEAL MFG. HEAD TYPES



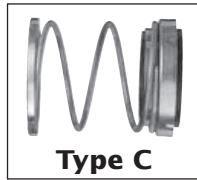
Type A

Equal to:
John Crane
Type 6



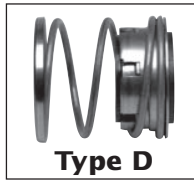
Type B

Equal to:
John Crane
Type 6A



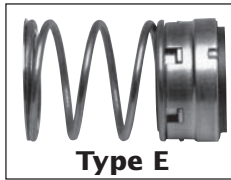
Type C

Equal to:
John Crane
Type 21



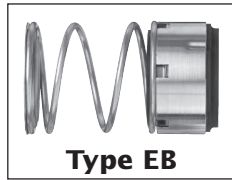
Type D

Equal to:
John Crane
Type 2



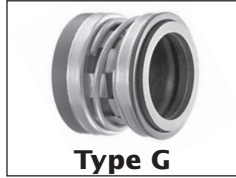
Type E

Equal to:
John Crane
Type 1



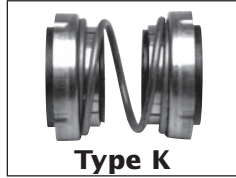
Type EB

Equal to:
John Crane Type 1
Balanced



Type G

Equal to:
John Crane Types
2100 & 2106



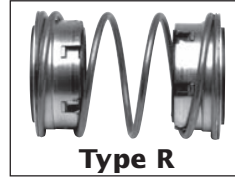
Type K

Equal to:
John Crane
Type 21 Double



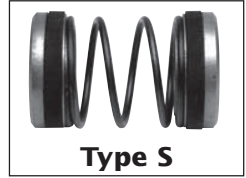
Type Q

Equal to:
John Crane
Type 11A



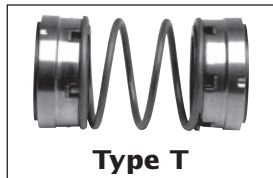
Type R

Equal to:
John Crane
Type 2 Double



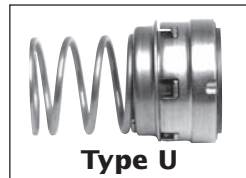
Type S

Equal to:
John Crane
Type 8 Special



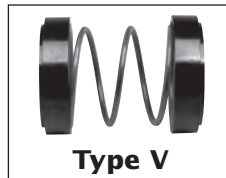
Type T

Equal to:
John Crane
Type 1 Double



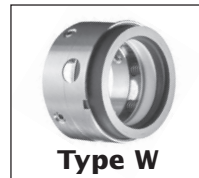
Type U

Equal to:
John Crane
Type 1 w/ Spring Adapter



Type V

Equal to:
John Crane
Type 8D



Type W

Equal to:
John Crane
Types 9 & 9T



Type X

Equal to:
John Crane
Types 8-1 & 8-1T



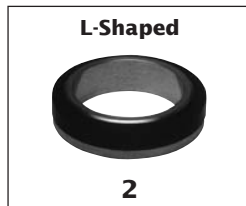
SEAL MFG. MATING RING DESIGNS

(Available in a wide variety of materials)



Cup Mounted

1



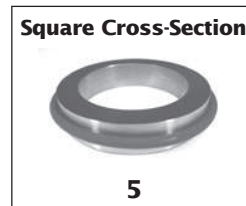
L-Shaped

2



O-Ring

3



Square Cross-Section

5



Shaft Mounted

8



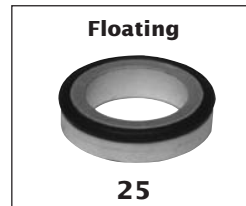
Shaft Mounted

9



Shaft Mounted

11



Floating

25



**Clamped-In
(Full)**

27



IMO Style

28



**Cup Mounted
w/ Adapter**

31



**Cup Mounted
w/ Adapter**

32

SEAL MFG

QUALITY MECHANICAL SEALS

Our seals are designed to give long life, provide automatic self-adjustment and reduce maintenance costs. Additionally, mechanical seals offer these important advantages.



ABSOLUTE SEALING

Proper selection and installation of our seals results in less pumpage loss, cleaner facilities, less fire hazard, no danger from fumes and no contamination of the fluid being pumped.



NO RUBBING FRICTION BETWEEN SHAFT AND SEAL PARTS

Replace packing with a mechanical seal and avoid expensive shaft or sleeve replacements.



FLEXIBLE SEALS MEANS LONGER SERVICE LIFE

Compared to packing, mechanical seals are more flexible, and are able to compensate for shaft deflection, axial and radial end play, vibration and seal face wear.



LESS FRICTION MEANS VALUABLE POWER SAVINGS

Mechanical seals use less friction than packing. Therefore, they require less horsepower consumption.



PRECISION LAPPED SEALING SURFACES

Positively control leakage and eliminate "break in" runs.



HIGHER SPEEDS AND PRESSURES

Our seals are designed for higher speeds and pressures.



FLAT SURFACES OF MATING FACES

Sealing surfaces are precision lapped to a flatness of one to three light bands, which maintains the necessary face film lubrication, resulting in positive leakage control.

BROAD SELECTION OF MATERIALS OF CONSTRUCTION

Our seals come in a wide variety of materials. Choose the correct combination of elastomer, metallurgy and sealing faces for your application. See pages 106-110 for the Material Recommendation Chart.

MECHANICAL SEALS CAN BE FOUND IN ...

- Centrifugal Pumps
- Compressors
- Gear Boxes
- Gear Pumps
- Jet Pumps
- Petrochemical Pumps
- Pool and Spa Pumps
- Progressive Cavity Pumps
- Rotary Lobe Pumps
- Slurry Pumps
- Submersible Pumps
- Turbine Pumps

FEATURES OF SEAL TYPES A, B, C, D, E, G, Q, W, X

TYPE A (Seal Sizes .312-1.000)

FEATURES: Compact, unitized, single spring, elastomer bellows seal. The factory-assembled, one piece design permits fast, easy installation and the full-convolution elastomer bellows provides maximum flexibility in compensating for shaft movement and wear.

SERVICES: Centrifugal water pumps, deep and shallow well jet pumps, swimming pool and wastewater pumps. Pressures to 75 PSI. Temperature: -40°F to +400°F.



TYPE B (Seal Sizes .375-1.000)

FEATURES: A full-convolution elastomer bellows provide maximum flexibility in compensating for shaft movement while torsional stress on the bellows is controlled by a dent and groove positive drive arrangement.

SERVICES: Centrifugal water pumps, sump pumps, submersible and swimming pool pumps. Pressures to 75 PSI. Temperature: -40°F to +400°F.



TYPE C (Seal Sizes .312-5.500)

FEATURES: Elastomer bellows seal, non-clogging, single coil spring, The drive band's notch design eliminates overstressing of the bellows.

SERVICES: Rotary and turbine pumps, compressors, mixers, blenders and chillers. Pressures to 150 PSI. Temperature: -40°F to +400°F.



TYPE D, E (Seal Sizes .500-5.625)

FEATURES: Self adjusting elastomer bellows compensate for abnormal shaft end play and primary face sealing wear. Effects of radial and axial shaft end play are minimized by uniform spring pressure.

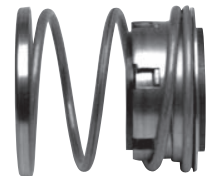
Positive drive is transmitted through the drive band and drive notches, which absorb breakout and running torque. Damaging stresses on the elastomer bellows are prevented. Slippage is eliminated, thus protecting shaft and sleeve against wear and scoring. The result is long seal life.

The seal's large single-coil spring is much sturdier than a multiple spring construction design. The spring is non-clogging, self-cleaning and will not foul up due to fluid contact. Corrosion and clogging problems are eliminated.

SERVICES: All types of rotary shaft equipment such as pumps, mixers, blenders, and compressors. Wide range of services from water and steam to chemicals and corrosives.

Pressures to 350 PSI. Temperature: -40°F to +425°F

Balanced Seals - Pressures to 1200 PSI. Temperature: -40°F to +450°F



TYPE D



TYPE E

TYPE G (Seal Sizes .437-3.500)

FEATURES: A compact unitized single spring elastomeric bellows shaft seal. Innovative full convolution bellows and interlocking drive band design allows for positive drive and greater tolerance to misalignment. Interference fit of primary ring insures positive drive while avoiding high face distortions associated with crimped designs.

SERVICES: Small centrifugal pumps used in Pool & Spa, Well Water, & HVAC applications. Pressures to 150 PSI. Temperature -30°F to +300°F.



TYPE Q (Seal Sizes .500-2.250)

FEATURES: Press fitted, rubber diaphragm protects metal components, spring loaded

SERVICES: Icemaker and appliance applications, general purpose food service.

Pressures to 30 PSI. Temperature -40°F to +400°F.



TYPE W (Seal Sizes .500-6.000)

FEATURES: Multi Spring, PTFE wedge design for use in extreme temperatures / chemical applications. Unitized construction. Also available in a balanced design

SERVICES: Corrosive fluid applications, extreme temperatures. Pressures to 350 PSI. Temperature -75°F to +500°F.



TYPE X (Seal Sizes .250-6.000)

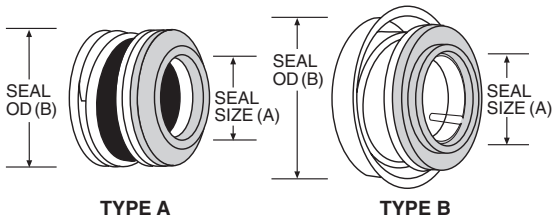
FEATURES: Multi Spring, O-ring design, unitized construction, flexible design compensates for shaft misalignment for high performance and longer seal life. Also available in a balanced design.

SERVICES: Wide usage in chemicals and corrosives. Pressures to 350 PSI. Temperature -20°F to +400°F.



SEAL SIZING GUIDE

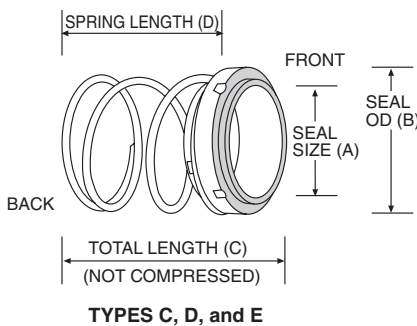
1. Remove seal to be replaced from shaft and/or sleeve.
2. Make note of materials used for the old seal parts using Seal Mfg. Material Code found in the front of this catalog.
3. Identify Head type (see front cover fold-out.) Use caliper to measure inside diameter (ID) and outside diameter (OD).



SEAL HEADS – TYPES A and B

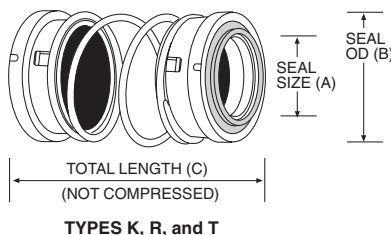
- Identify seal head type - Determine Seal Size:
- Measure the inside diameter (ID) (dimension A)
- Measure the outside diameter (OD) (dimension B)

The operating height is generally the same for all A and B seals of the same shaft size. More positive identification will result from calculating the mating ring dimensions below. If unable to positively identify the seal, consult U.S. Seal Mfg.



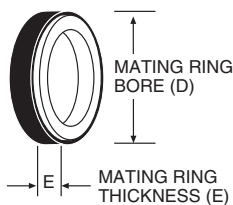
SEAL HEADS – TYPES C, D and E

- Identify seal head type - Determine Seal Size:
- Measure ID of the bellows (dimension A) as installed in the seal head. Add approximately .016" additional for rubber squeeze.
- Measure the head OD (dimension B)
 - Step 1. Measure the total free length (dimension C) of the rotating portion of the assembled seal. (Do not include the mating ring).
 - Step 2. Disassemble seal and measure the free length of the spring (dimension D).
 - Step 3. Take half of the measurement obtained in step 2.
 - Step 4. Subtract the figure obtained in step 3 from the measurement (dimension C) in step 1. The result is the approximate operating height of the seal.



SEAL HEADS – TYPES K, R and T

- Identify seal head type - Determine Seal Size:
- Measure the inside diameter of the bellows (dimension A).
- Add approximately .016" additional for rubber squeeze.
- Measure the head OD (dimension B)
- Calculate the operating height of the seal as follows:
 - Step 1. Measure the total length of the rotating seal (dimension C). (Not compressed).
 - Step 2. Multiply the total length (dimension C) by .73. The result is the approximate operating height of the seal.



MATING RING and GASKET

- Identify the mating ring design from those shown on inside of front cover.
- Measure OD of the gasket while assembled on mating ring and subtract approximately .016" additional for rubber squeeze to obtain bore dimension (dimension D).
- Measure the combined insert and gasket width (dimension E).
- Use the Dimensional Cross Reference guide (pages 112-161) to find the part number of the seal you need. Start with Seal Size and find the line in the tables that matches the dimensions and material code.

Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.
.500 SHAFT							.500 SHAFT						
ROTARY				SEAT			ROTARY				SEAT		
162	A	1.062	.656	1C	1.000	.312	106	C	.937	.812	1SS	1.000	.290
280	A	1.062	.687	2B	1.125	.593	190	C	.937	.812	3SS	1.500	.26
298	A	1.062	.656	----	----	----	221	C	.937	.781	2SS	1.375	.187
506	A	1.062	.656	1SS	1.000	.290	392	C	.937	.781	1C	.938	.225
670	A	1.062	.656	3SS	.875	.218	392V	C	.937	.781	1C	.938	.225
1040A	A	1.062	.656	1SS	1.000	.312	393	C	.937	.718	1SS	.938	.225
2800A	A	1.062	.656	1C	1.125	.593	400	C	.937	.718	----	----	----
2800AV	A	1.062	.656	1C	1.125	.593	400A	----	----	----	1C	.938	.225
5120A	A	1.062	.656	3SS	1.000	.312	400V	C	.937	.718	----	----	----
8700A	A	1.062	.656	11CS	1.000	.312	401	C	.937	.812	----	----	----
0502X	A	1.062	.656	----	----	----	401A	C	.937	.812	1C	.938	.225
0504X	A	1.062	.656	1C	1.000	.312	420	C	.906	.718	2B	1.062	.290
0523X	A	1.062	.656	3C	1.000	.312	504	C	.937	.718	2B	1.062	.250
							631	C	.937	.812	1C	1.000	.312
							632	C	.937	.812	1SS	1.000	.290
142	B	1.125	.537	1C	1.000	.218	984	C	.937	.812	1SS	.938	.250
149	B	1.125	.537	8SS	M.O.S.	.062	985	C	.937	.812	1C	1.125	.230
150	B	1.125	.537	----	----	----	1002	C	.937	.812	1C	1.000	.312
155	B	1.125	.537	8SS	M.O.S.	.125	1002E	C	.937	.812	1C	1.000	.312
163	B	1.125	.537	1C	1.000	.312	1002V	C	.937	.812	1C	1.000	.312
164	B	1.125	.537	9SS	M.O.S.	.312	1005AN	C	.937	.625	----	----	----
165	B	1.125	.537	9C	M.O.S.	.312	1012	C	.937	.812	1C	.938	.225
489	B	1.125	.513	1C	1.250	.406	1043	C	.937	.718	1C	1.000	.218
788	B	1.125	.537	1SS	1.000	.290	1043A	C	.937	.718	1B	1.062	.344
1036A	B	1.125	.537	1SS	1.000	.312	1050	C	.937	.812	----	----	----
1037A	B	1.125	.537	1C	1.000	.560	1050A	C	.937	.718	1B	1.187	.203
1073A	B	1.125	.537	SP	M.O.S.	.201	1050AV	C	.937	.718	1B	1.187	.203
1075A	B	1.125	.537	11CS	M.O.S.	.342	1055AN	C	.937	.718	1B	1.312	.312
1078AE	B	1.125	.537	1C	1.000	.281	1065AN	C	.937	.718	1SS	1.000	.250
1079A	B	1.125	.537	7C	M.O.S.	.295	1070A	C	.937	.718	1SS	1.062	.312
1082AV	B	1.125	.537	7C	M.O.S.	.295	1084A	C	.937	.812	3SS	1.125	.312
1098	B	1.125	.537	1C	.875	.165	1120	C	.937	.718	1C	1.062	.312
1137	B	1.125	.418	1C	1.000	.187	1900AN	C	.937	.718	3SS	1.500	.297
1149	B	1.125	.537	9C	M.O.S.	.212	2050A	C	.937	.718	1B	1.187	.203
1500AV	B	1.125	.537	----	----	----	2138	C	.937	.605	SPSS	1.360	.300
1550A	B	1.125	.537	8SS	M.O.S.	.123	2320AN	C	.937	.718	54	1.375	PLT
1630AV	B	1.125	.537	1C	1.000	.312	2420A	C	.937	1.200	1C	1.000	.312
1640A	B	1.125	.537	7SS	M.O.S.	.295	3843	C	.937	.625	1	.938	.218
1643A	B	1.125	.537	1C	1.000	.279	3844	C	.937	.625	1	.938	.213
6300A	B	1.125	.537	10SS	M.O.S.	.342	4003AE	C	.937	.718	----	----	----
0506X	B	1.125	.537	----	----	----	4011A	C	.937	.718	11CS	.875	.205
							4011AV	C	.937	.718	11CS	.875	.205
							4200AN	C	.937	.718	1B	1.062	.250
							4625AN	C	.937	.718	----	----	----
							5040AN	C	.937	.656	1B	1.062	.350
							5300A	C	.937	USE EXISTING SPRING			----
							5350A	C	.937	.656	51SS	.995	PLT
							6710A	C	.937	.656	3SS	.875	.218
							6935A	C	.937	.875	1B	1.125	.375
							7526A	C	.937	.605	1B	1.000	.250
							9030AN	C	.937	.718	1SS	1.000	.312
							9956A	C	.937	.656	1SS	1.125	.250
							0507X	C	.937	.718	2B	1.062	.375
							0536XV	C	.937	.718	2SC	1.093	.190
							1539X	C	.937	.718	1SS	1.000	.203
							0555X	C	.937	.812	1SS	1.000	.312
							0589X	C*	.937	.605	1SS	1.000	.312
							05060X	C*	.937	.605	1C	1.000	.312
							7712	C	.937	.750	1	1.125	.237

Part No.	Type	O.D.	OP Height	Type	C° Bore	Thk.	Part No.	Type	O.D.	OP. Height	Type	C° Bore	Thk.
.625 SHAFT							.625 SHAFT						
ROTARY				SEAT			ROTARY				SEAT		
501	A	1.218	.811	1C	1.250	.406	8710A	A	1.218	.718	11CS	1.250	.406
501VOR	A	1.218	.811	3C	1.250	.406	9070A	A	1.218	.718	1SS	1.250	.250
507	A	1.218	.718	1SS	1.250	.406	9071A	A	1.218	.718	1C	1.250	.250
507VOR	A	1.218	.718	3SS	1.250	.406	9900A	A	1.218	.718	1B	1.312	.312
516	A	1.218	.718	1C	1.250	.406	0619X	A	1.218	.812	----	----	----
518	A	1.218	.718	1SS	1.187	.288	0630X	A	1.218	.812	----	----	----
524	A	1.218	.718	1SS	1.250	.406	0672XX	A	1.218	.718	1SC	1.250	.406
524E	A	1.218	.718	1SS	1.250	.406	06987XX	A	1.218	.718	1TC	1.187	.343
528	A	1.218	.718	1C	1.375	.562							
528V	A	1.218	.718	1C	1.375	.562							
551	A	1.218	.718	1C	1.250	.283							
628	A	1.218	.718	3SS	1.250	.406	113	B	1.437	.615	1C	1.093	.218
637	A	1.218	.718	3C	1.250	.406	151	B	1.437	.615	1C	1.375	.288
680	A	1.218	.718	1C	1.187	.288	200A	B	1.437	.615	1C	1.250	.283
701	A	1.218	.718	1SS	1.187	.288	202	B	1.437	.615	11CS	----	.375
701V	A	1.218	.718	1SS	1.187	.288	202V	B	1.437	.615	11CS	----	.375
702	A	1.218	.718	1C	1.187	.288	233	B	1.437	.615	1C	1.312	.250
702V	A	1.218	.718	1C	1.187	.288	260	B	1.437	.615	11CS	----	.375
656-711	A	1.218	.718	3C	1.187	.343	409	B	1.437	.615	8SS	----	.187
711CA-AV	A	1.218	.718	3SS	1.187	.343	411	B	1.437	.615	11CS	----	.487
896	A	1.218	.718	3C	1.187	.343	411P	B	1.437	.615	11CS	----	.487
920	A	1.218	.718	1SS	1.141	.312	411V	B	1.437	.615	11CS	----	.487
952	A	1.218	.811	1C	1.250	.406	414	B	1.437	.615	11CS	----	.328
953	A	1.218	.811	1C	1.187	.343	447	B	1.437	.615	9C	----	.215
954	A	1.218	.811	1SS	1.250	.406	447V	B	1.437	.615	9C	----	.215
955	A	1.218	.811	1SS	1.187	.288	451	B	1.437	.615	9SS	----	.320
957	A	1.218	.718	1C	1.187	.343	452	B	1.437	.615	9C	----	.312
1006A	A	1.218	.718	8C	1.094	.312	453	B	1.437	.615	9SS	----	.215
1061A	A	1.218	.718	1TC	1.250	.406	522	B	1.437	.615	1SS	----	.288
1061AV	A	1.218	.718	1TC	1.250	.406	600	B	1.437	.615	1C	----	.343
1114	A	1.218	.811	P-IN	1.096	.312	600V	B	1.437	.615	3C	----	.343
1116AV	A	1.218	.718	1SS	1.250	.437	616	B	1.437	.615	1SS	----	.288
1121A	A	1.218	.718	1C	1.375	.461	642	B	1.437	.615	----	----	----
1121AV	A	1.218	.718	1C	1.375	.461	700	B	1.437	.615	1C	1.187	.288
1126A	A	1.218	.718	1C	1.150	.295	712	B	1.437	.615	3SS	1.250	.406
1150	A	1.218	.718	1SS	1.187	.343	715	B	1.437	.615	3C	1.250	.406
1160A	A	1.218	.718	3SS	1.125	.459	716	B	1.437	.615	3C	1.187	.288
1185A	A	1.218	.812	1C(TF)	1.250	.406	717	B	1.437	.615	3C	1.187	.343
1212A	A	1.218	.812	8C	1.081	.312	720	B	1.437	.615	9CS	----	.343
1240A	A	1.218	.718	3C	1.187	.312	882	B	1.437	.615	----	----	----
1240AV	A	1.218	.718	3C	1.187	.341	961	B	1.437	.615	1C	1.250	.406
1241AE	A	1.218	.718	3C	1.187	.341	963	B	1.437	.615	1C	1.187	.343
1243AE	A	1.218	.718	1SS	1.250	.250	964	B	1.437	.615	1SS	1.250	.406
1244A	A	1.218	.718	3C	1.187	.406	1000	B	1.437	.615	1C	1.250	.406
1249A	A	1.218	.875	1C	1.250	.437	1000V	B	1.437	.615	1C	1.250	.406
2000AE	A	1.218	.718	1C	1.250	.406	1005A	B	1.437	.615	1SS	1.375	.406
2002AV	A	1.218	.718	1SS	1.250	.406	1013V	B	1.437	.615	11CS	----	.375
2131	A	1.218	.718	----	----	----	1021	B	1.437	.615	9C	----	.215
2204	A	1.218	.718	1	1.250	.406	1089V	B	1.437	.615	1C	1.093	.406
2321A	A	1.218	.718	3SS	1.187	.250	1129	B	1.437	.615	1SS	1.187	.343
3000A	A	1.218	.950	1C	1.250	.406	1147A	B	1.437	.615	8C	----	.215
3000AV	A	1.218	.950	1C	1.250	.406	1151	B	1.437	.615	2SS	1.250	.343
3816	A	1.218	.843	1	1.250	.406	1152	B	1.437	.615	1SS	1.250	.406
3864	A	1.218	.811	1	1.250	.406	1246A	B	1.437	.615	9C	----	.307
4165A	A	1.218	.718	1B	1.312	.343	2161	B	1.437	.615	1C	1.375	.406
4705A	A	1.218	.718	1C	1.320	.343	3865	B	1.437	.615	1	1.250	.406
5200A	A	1.218	.718	1SS	1.125	.484							
5955A	A	1.218	.718	1SS	1.312	.469							
7000AE	A	1.218	.718	1C	1.187	.296							

Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.
.625 SHAFT							.625 SHAFT						
ROTARY				SEAT			ROTARY				SEAT		
4112A	B	1.437	.615	1C	1.187	.296	1112A	C	1.062	.665	1C	1.312	.312
4112AV	B	1.437	.615	1C	1.187	.296	1115AN	C	1.062	1.060	54	----	PLT
4114A	B	1.437	.615	7SS	----	.406	1119	C	1.062	1.025	1C	1.250	.406
4290A	B	1.437	.615	11CS	----	.375	1119V	C	1.062	.968/1.093	1	1.250	.406
4660A	B	1.437	.615	3SS	1.180	.250	1124AE	C	1.062	.875	1C	1.375	.406
5940A	B	1.437	.615	7C	----	.406	1124AV	C	1.062	.875	1C	1.375	.406
6005	B	1.437	.615	1B	1.187	.172	1125AN	C	1.062	.812	1SS	1.062	.312
6860	B	1.437	.622	2	1.250	.390	1140A	C	1.062	.980	1SS	1.000	.297
7813YBO	B	1.437	----	1	1.207	----	1145A	C	1.062	.875	1SS	1.125	.406
9904A	B	1.437	.615	1SS	1.187	.172	1154	C	1.062	.875	1SS	1.187	.343
9928A	B	1.437	.615	1C	1.250	.343	1155	C	1.062	.875	1C	1.187	.288
10004	B	1.437	.615	1SS	----	.215	1155V	C	1.062	.875	1C	1.187	.288
10050A	B	1.437	.615	1C	1.375	.280	1155VTC	C	1.062	.875	1	1.187	.288
10050AV	B	1.437	.615	1C	1.375	.280	1156	C	1.062	.875	1C	1.250	.406
10051A	B	1.437	.615	1SS	1.375	.280	1156V	C	1.062	.875	1	1.250	.406
0611X	B	1.437	.615	1C	1.078	.210	1165A	C	1.062	.690	1SS	1.125	.406
0613X	B	1.437	.615	6SS	----	.225	1170AN	C	1.062	.875	51	----	PLT
							1215AN	C	1.062	.937	----	----	----
							1216AN	C	1.062	.937	1B	1.125	.125
							1218A	C	1.062	.937	1C	1.145	.312
							1220AN	C	1.062	.875	1SS	1.125	.250
104	C	1.062	.875	3B	1.000	.470	1230A	C	1.062	1.060	----	----	----
110	C	1.062	.812	5SS	1.125	.500	1230AV	C	1.062	1.060	----	----	----
118	C	1.062	.812	1C	1.187	.343	1233A	C	1.062	.937	1C	1.141	.312
181N	C	1.062	.843	50	----	PLT	1250AN	C	1.062	.750	1C	1.312	.312
222	C	1.062	.875	3SS	1.125	.500	1252AV	C	1.062	.725	1C	1.250	.406
290	C	1.062	.875	1C	1.250	.406	1260AN	C	1.062	.812	50	1.188	PLT
290V	C	1.062	.875	1C	1.250	.406	1260AV	C	1.062	.812	50	1.188	PLT
359	C	1.062	.875	1C	1.250	.406	1505	C	1.062	.875	1C	1.312	.250
359V	C	1.062	.875	1C	1.250	.406	1618	C	1.062*	.937	1C	1.250	.406
359VHD	C	1.062	.875	3	1.250	.406	1625	C	1.062	.609	3SS	1.250	.406
493	C	1.062	.875	1SS	1.187	.288	1626V	C	1.062	.609	3SS	1.250	.406
536	C	1.062	.875	3C	1.187	.343	1810A	C	1.062	.973	50	1.125	PLT
552	C	1.062	.875	3C	1.250	.875	2135AN	C	1.062	.812	54B	----	PLT
552E	C	1.062	.875	3	1.250	.406	2149	C	1.062*	.937	3SS	1.250	.406
626V	C	1.187	SLEEVE	1C	1.375	.406	2160	C	1.062	.718	1C	1.250	.406
633	C	1.062	.875	1SS	1.250	.406	2175AN	C	1.062	.937	54	----	PLT
633V	C	1.062	.875	3SS	1.250	.406	2206	C	1.062	.812	3	1.250	.406
633VHD	C	1.062	.875	1	1.250	.406	2214	C	1.062	.875	1	1.187	.296
732	C	1.062	.875	3SS	1.250	.406	2390AN	C	1.062	.812	54	----	PLT
732E	C	1.062	.875	3SS	1.250	.406	3230AN	C	1.062	.780	51	----	PLT
733	C	1.062	.875	3C	1.187	.288	3525	C	1.062	.875	3	1.250	.375
800	C	1.062	.875	1C	1.156	.312	3707	C	1.048	.859	1	1.187	.296
810N	C	1.062*	.765	1C	1.250	.406	3910A	C	1.062	.812	51	.995	PLT
869	C	1.062	.875	3C	1.448	.265	4156AN	C	1.062	1.050	51	----	PLT
900	C	1.062	.812	2B	1.187	.312	4215AN	C	1.062	1.050	52	----	PLT
901	C	1.062	.812	8B	1.187	.312	4305A	C	1.062	.700	1C	1.250	.250
933	C	1.062	.875	----	----	----	4460AN	C	1.062	.937	1C	1.250	.406
933V	C	1.062	.875	----	----	----	4535AN	C	1.062	.770	1C	1.150	.312
951V	C	1.062	.875	3SS	1.375	.406	4670A	C	1.062	.690	1C	1.188	.219
970	C	1.062	.875	2B	1.312	.312	5160A	C	1.062	.875	1SS	1.437	.250
980	C	1.062	.875	1C	1.250	.406	5235A	C	1.062	.720	1C	1.250	.343
989N	C	1.062*	.765	1C	1.187	.288	5235AV	C	1.062	.720	1C	1.250	.343
990N	C	1.062	.765	2B	1.312	.312	6216	C	1.062	.875	1	1.250	.406
1016	C	1.062*	.765	1C	1.187	.343	6234	C	1.062	.609	1	1.250	.406
1027	C	1.062	.906	1SS	1.141	.312	6340A	C	1.062	.437	----	----	----
1045U	C	1.062	.718	3C	1.250	.406	7547	C	1.062	.875	1	1.250	.406
1066	C	1.062	.875	3C	1.250	.406	7840AN	C	1.062	.875	1B	1.000	.437
1079N	C	1.062	.875	1C	1.250	.406	8500AN	C	1.062	1.000	1C	1.250	.406
1080N	C	1.062	.875	1C	1.250	.406	9001AN	C	1.062	.875	1SS	1.187	.343
1085V	C	1.062*	.937	1C	1.250	.406	9075A	C	1.062	1.000	----	----	----
1091V	C	1.062	.715	1C	1.187	.343	9220A	C	1.062	.770	1SS	1.141	.312
							0606XE	C	1.062	.750	3SS	1.187	.343
							0611XP	C	1.062	.875	1C	1.250	.406
							0688XV	C	1.062	.875	3SS	1.250	.312
							06145X	C	1.062*	.687	----	----	----
							06164XN	C	1.062*	.765	----	----	----
							061674X	C	1.062*	.875	1SS	1.250	.406
							15-52	C	1.062	.812	1C	1.175	.375

Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.
.625 SHAFT							.625 SHAFT						
ROTARY				SEAT			ROTARY				SEAT		
1100A	C-S	1.062	.937	3B	1.000	.656	2016	E	1.093	1.312	1C	1.250	.406
1108A	C-S	1.062	.937	----	----	----	2017	E	1.093	1.312	1SS	1.250	.406
1135A	C-S	1.062	.937	----	----	----	2018	E	1.093	1.312	3C	1.250	.406
4212AN	C-S	1.062	.770	51	----	PT	2019	E	1.093	1.312	3SS	1.250	.406
							2020	E	1.093	1.312	1C	1.187	.343
							2021	E	1.093	1.312	1SS	1.187	.343
							2022	E	1.093	1.312	3C	1.187	.343
							2023	E	1.093	1.312	3SS	1.187	.288
							8000AN	E	1.093	1.312	1C	1.150	.312
							9710A	E	1.093	1.312	1C	1.187	.343
							06163X	E	1.093	1.312	----	----	----
102	D	1.312	.875	1SS	1.250	.406							
102V	D	1.312	.875	3SS	1.250	.406							
109	D	1.312	.875	----	----	----							
226	D	1.312	.875	1SS	1.187	.288	626V	G	1.062	.875	1C	1.375	.406
263	D	1.312	.875	1SS	1.187	.343							
508	D	1.312	.875	1C	1.250	.406							
508V	D	1.312	.875	3C	1.250	.406	678	K	1.062	1.187	----	----	----
531	D	1.312	.875	1C	1.187	.288	863N	K	1.062	1.187	----	----	----
734	D	1.312	.875	3SS	1.250	.406	8630A	K	1.062	1.287	----	----	----
735	D	1.312	.875	3C	1.250	.406	8631A	K	1.062	1.287	51B	----	PLT
736	D	1.312	.875	3C	1.187	.288	06166X	K	1.062	1.187	1C	1.250	.406
737	D	1.312	.875	3C	1.141	.343	06167X	K	1.062	1.187	1SS	1.250	.406
922	D	1.312	.875	1SS	1.250	.312	06168X	K	1.062	1.187	3C	1.250	.406
1157	D	1.312	.875	2SS	1.250	.343	06169X	K	1.062	1.187	3SS	1.250	.406
2000	D	1.312	.875	1C	1.250	.406							
2001	D	1.312	.875	1SS	1.250	.406	1318AN	L-1	1.000	1.625	----	----	----
2002	D	1.312	.875	3C	1.250	.406	5965AV	L-1	1.000	.812	----	----	----
2003	D	1.312	.875	3SS	1.250	.406							
2004	D	1.312	.875	1C	1.187	.343							
2005	D	1.312	.875	1SS	1.187	.343	1150AN	L-2	1.000	1.250	----	----	----
2006	D	1.312	.875	3C	1.187	.343	8300A	L-2	1.000	1.500	----	----	----
2007	D	1.312	.875	1SS	1.187	.288							
2119	D	1.312	.875	1C	1.187	.288							
4210AN	D	1.312	.875	51	----	PLT	0604X	Q	1.500	.556	1C	1.187	.343
4245A	D	1.312	.925	1C	1.250	.406	0606X	Q	1.500	.556	----	----	----
4245AV	D	1.312	.925	1C	1.250	.406							
5150A	D	1.312	.875	1C	1.187	.338							
							4420A	R	1.312	1.625	1C	1.875	.437
5590AN	D-B	1.312	.775	8B	THREADED	.203							
							795N	S	1.312	1.395	8SS	1.187	.125
							3920AN	S	1.263	1.310	8SS	M.O.S.	.125
							3960A	S	1.200	1.180	8SS	M.O.S.	.125
274	E	1.093	1.312	1C	1.250	.406							
274V	E	1.093	1.312	1	1.250	.406							
485	E	1.093	1.312	1C	1.187	.343	1155AN	T	1.093	1.400	----	----	----
486	E	1.093	1.312	1SS	1.187	.288	06165X	T	1.093	1.625	----	----	----
487	E	1.093	1.312	1SS	1.250	.406	06170X	T	1.093	1.625	1C	1.250	.406
738	E	1.093	1.312	3SS	1.250	.406	06171X	T	1.093	1.625	1SS	1.250	.406
739	E	1.093	1.312	3C	1.250	.406	06172X	T	1.093	1.625	3C	1.250	.406
740	E	1.093	1.312	3C	1.187	.288	06173X	T	1.093	1.625	3SS	1.250	.406
748	E	1.093	1.312	3C	1.187	.343							
1158	E	1.093	1.312	2SS	1.250	.343							
1210AN	E	1.093	1.110	1SS	1.250	.406							
1210AV	E	1.093	1.110	1SS	1.250	.406							
1689	E	1.093	1.312	1SS	1.187	.343							

Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.
.875 SHAFT							.984 SHAFT (25MM)						
ROTARY				SEAT			ROTARY				SEAT		
1705A	L-2	1.375	1.050	----	----	----	20-52	C	1.687	1.000	1C	1.750	.406
4794A	L-2	1.437	1.250	25CA	1.525	.514	21-52	C	1.687	1.000	1C	1.750	.406
140	R	1.562	1.625	----	----	----	1785AN	C	1.687	.843	----	----	----
428	R	1.562	1.625	1C	1.500	.406	1790AN	C	1.687	.843	3SS	1.500	.375
685	R	1.562	1.625	1SS	1.500	.406	7815YB1	C	1.687	----	SP	----	----
10003	SP	SP	.937	----	----	----	25SCSC	K	1.687	1.250	2SC	44MM	.406
6940A	U	1.312	1.500	3SS	1.375	.406	2900AN	L-1	1.688	1.375	3B	1.625	.500
.937 SHAFT							1.000 SHAFT						
1755A	C	1.687	1.000	1B	1.750	.437	360	A	1.687	.812	1C	1.625	.437
1760A	C	1.687	.843	1SS	1.750	.344	360V	A	1.687	.812	1	1.625	.437
1765A	C	1.594	.843	3SS	2.050	.469	370	A	1.687	.812	1SS	1.625	.437
1770AN	C	1.687	.843	1SS	1.750	.344	405	A	1.687	.812	15C	1.625	.625
1780A	C	1.687	1.375	1SS	1.750	.437	640	A	1.687	.812	SPEC	----	.187
5110AN	C	1.687	1.000	52	----	PLT	777	A	1.687	.812	3C	1.625	.437
5197AN	C	1.687	1.000	51	----	PLT	778	A	1.687	.812	3SS	1.625	.437
9460A	C	1.687	.750	8SS	1.750	.234	975	A	1.687	.812	----	----	----
9444AN	D	2.375	1.625	7SS	M.O.S.	.437	1014V	A	1.687	.812	1C	1.625	.437
9470A	F	1.625	.625	8SS	1.750	.234	1086	A	1.687	.812	3C	2.000	.406
1775AN	L-1	1.594	.600	----	----	----	1086V	A	1.687	.812	3	2.000	.406
527	U	1.437	1.656	2C	1.562	.406	1115	A	1.687	.812	1C	1.625	.437
560	U	1.437	1.656	2SS	1.562	.406	1164	A	1.687	.812	1SS	1.625	.437
560SS	U	1.437	1.656	2SS	1.562	.406	5630A	A	1.687	.812	3SS	1.625	.437
823	U	1.437	1.656	3SS	1.562	.406	5630AV	A	1.687	.812	3SS	1.625	.437
824	U	1.437	1.656	3C	1.562	.406	1619	B	1.625	.874	1C	1.625	.437
845	U	1.437	1.656	3SS	1.562	.406	1806A	B	1.875	.812	1C	1.625	.437
3275AN	C	1.687	1.000	2B	1.625	.375	19180A	B	1.875	1.000	----	----	----
6357AN	C	1.687	1.250	51	2.000	PLT	235	C	1.687	1.000	1C	1.625	.437
245*	C	1.687	1.000	1C	1.625	.437	235V	C	1.687	1.000	1	1.625	.437
245V	C	1.687	1.000	1	1.625	.437	245*	C	1.687	1.000	1C	1.625	.437
245E	C	1.687	1.000	1	1.625	.437	245V	C	1.687	1.000	1	1.625	.437
248*	C	1.687	1.000	1SS	1.625	.437	245E	C	1.687	1.000	1	1.625	.437
248V	C	1.687	1.000	1	1.625	.437	248*	C	1.687	1.000	1SS	1.625	.437
248E	C	1.687	1.000	1	1.625	.437	248V	C	1.687	1.000	1	1.625	.437
311*	C	1.687	1.062	18C	1.700	.370	248E	C	1.687	1.000	1	1.625	.437
357	C	1.687	1.000	1SS	1.625	.437	311*	C	1.687	1.062	18C	1.700	.370
357V	C	1.687	1.000	1	1.625	.437	357	C	1.687	1.000	1SS	1.625	.437
397	C	1.687	1.000	----	----	----	357V	C	1.687	1.000	1	1.625	.437
397V	C	1.687	1.000	----	----	----	397	C	1.687	1.000	----	----	----
413	C	1.687	1.000	15C	1.625	.625	397V	C	1.687	1.000	----	----	----
499	C	1.687	1.000	3SS	1.625	.437	413	C	1.687	1.000	15C	1.625	.625
499E	C	1.687	1.000	3	1.625	.437	499	C	1.687	1.000	3SS	1.625	.437
539	C	1.437	1.625	1C	1.625	.437	499E	C	1.687	1.000	3	1.625	.437
548	C	1.687	1.000	3C	1.625	.437	539	C	1.437	1.625	1C	1.625	.437
779	C	1.437	1.625	1SS	1.625	.437	548	C	1.687	1.000	3C	1.625	.437
982	C	1.687	1.562	1SS	1.625	.437	779	C	1.437	1.625	1SS	1.625	.437
1023	C	1.687	1.056	1C	1.625	.437	982	C	1.687	1.562	1SS	1.625	.437
1034	C	1.687	1.000	28	2.440	.438	1023	C	1.687	1.056	1C	1.625	.437
1048	C	1.437	.750	1C	1.625	.437	1034	C	1.687	1.000	28	2.440	.438
1049	C	1.687	.750	3C	1.625	.437	1048	C	1.437	.750	1C	1.625	.437
1072	C	1.687	1.015	3C	1.812	.687	1049	C	1.687	.750	3C	1.625	.437
1094V	C	1.687	.812	1C	1.625	.437	1072	C	1.687	1.015	3C	1.812	.687
1095	C	1.687	.812	----	----	----	1094V	C	1.687	.812	1C	1.625	.437
1117	C	1.687	.812	3C	2.380	.406	1095	C	1.687	.812	----	----	----
1123	C	1.687	.843	1SS	1.625	.406	1117	C	1.687	.812	3C	2.380	.406
1126	C	1.687	1.000	1C	1.625	.406	1123	C	1.687	.843	1SS	1.625	.406
1827A	C	1.437	1.625	1C	1.500	.375	1126	C	1.687	1.000	1C	1.625	.406

Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.
1.000 SHAFT							1.125 SHAFT						
ROTARY				SEAT			ROTARY				SEAT		
276	T	1.500	2.312	1C	1.625	.437	529	C	1.812	1.062	3SS	1.750	.437
277	T	1.500	2.312	1SS	1.625	.437	529E	C	1.812	1.062	3	1.750	.437
688	T	1.500	2.250	3C	1.625	.437	549	C	1.812	1.062	25C	1.750	.437
1631N	T	1.500	1.968	3SS	1.625	.312	588*	C	1.812	1.062	3SS	1.750	.437
1631VSS	T	1.500	2.312	3TC	1.625/1.687	.437	627*	C	1.812	1.406	1C	1.750	.437
1845AN	T	1.500	1.600	5I	2.000	PLT	801	C	1.812	1.062	3C	1.750	.437
1850AN	T	1.500	1.600	----	----	----	983	C	1.812	1.562	1SS	1.750	.437
1851AN	T	1.500	1.600	8SS	1.690	.190	983V	C	1.812	1.562	3	1.750	.437
2115AN	T	1.500	2.000	1C	1.625	.875	1014AN	C	1.812	.700	52/1	2.062	PLT
2115AV	T	1.500	2.000	1C	1.625	.875	1052	C	1.812	1.062	1C	1.750	.437
3070AN	T	1.500	1.600	5I	----	PLT	1122	C	1.812	1.500	1C	1.937	.437
3912A	T	1.500	1.875	5I	1.625	PLT	1125SCSC	C	1.625	1.062	1SC	1.750	.437
3975A	T	1.500	1.500	2SS	2.000	.437	1125SCTC	C	1.625	1.062	1TC	1.750	.437
4015AN	T	1.500	1.600	5I	----	PLT	1143	C	1.812	1.062	3SS	1.750	.437
							1167*	C	1.812	1.062	1SS	1.750	.437
							1332A	C	1.812	1.062	5I	----	PLT
							1682*	C	1.812	1.062	1C	1.750	.437
1.040 SHAFT							2185AN	C	1.812	1.062	3SS	1.625	.500
2145AN	C	1.687	1.062	5I	----	PLT	2185AV	C	1.812	1.062	3SS	1.625	.500
9291AN	C	1.687	1.062	5I	----	PLT	2187A	C	1.812	1.062	8SS	----	PLT
							2205AN	C	1.812	1.062	----	----	----
							2226	C	1.812	1.062	3	1.750	.437
							2227	C	1.812	1.562	1	1.750	.437
							2240AN	C	1.812	1.500	5I	1.875	PLT
1.062 SHAFT (27MM)							2250A	C	1.812	1.000	5I	2.250	PLT
1407A	C	1.687	.750	5I	----	PLT	2255AN	C	1.812	1.562	2SS	1.750	.375
2140A	C	1.687	1.062	2SS	1.750	.437	2260A	C	1.812	1.062	52	----	PLT
2155	C	1.812	1.062	3SS	1.750	.437	2261A	C	1.812	1.062	3SS	2.843	.375
2155A	C	1.687	1.062	2SS	1.812	.312	2270AN	C	1.812	2.375	5I	2.562	PLT
2160AN	C	1.687	1.062	----	----	----	2280AN	C	1.812	1.500	5I	2.562	PLT
5330A	C	1.687	.750	52	----	PLT	2285AN	C	1.812	1.500	2SS	2.000	.500
							2285AV	C	1.812	1.500	2SS	2.000	.500
							2350A	C	1.812	1.062	2SS	2.000	.500
127	D	1.875	1.062	1SS	1.750	.437	2386AV	C	1.812	1.062	1TC	1.750	.437
796	D	1.875	1.062	3SS	1.750	.437	7920AN	C	1.812	1.562	5I	----	PLT
797	D	1.875	1.062	3C	1.750	.437	9375AN	C	1.812	1.562	5I	----	PLT
							9376AN	C	1.812	2.500	52	----	PLT
498	E	1.625	1.593	1SS	1.750	.437	254	D	1.875	1.062	3SS	1.750	.437
710	E	1.625	1.593	1C	1.750	.437	344	D	1.875	1.062	1C	1.750	.437
798	E	1.625	1.593	3C	1.750	.437	521	D	1.875	1.062	2SS	1.875	.562
799	E	1.625	1.593	3SS	1.750	.437	604	D	1.875	1.062	1C	1.750	.437
							604E	D	1.875	1.062	1	1.750	.437
							605	D	1.875	1.062	1SS	1.750	.437
							605V	D	1.875	1.062	3	1.750	.437
							613	D	1.875	1.062	1SS	1.750	.437
2162AV	L-1	1.500	1.175	----	----	----	802	D	1.875	1.062	3C	1.750	.437
6694AN	L-1	2.000	1.375	----	----	----	1131	D	1.875	1.062	1C	1.750	.437
							1140	D	1.875	1.062	3C	1.750	.437
							2037	D	1.875	1.062	1C	1.750	.437
1946AV	Z	2.125	.950	SEATS UNITIZED WITH SEAL			2038	D	1.875	1.062	1SS	1.750	.437
							2039	D	1.875	1.062	3C	1.750	.437
							2040	D	1.875	1.062	3SS	1.750	.437
							5116A	D	1.875	1.575	50	1.922	PLT
1.083 SHAFT													
2093A	C	1.812	1.062	2B	1.937	.437							
2165A	C	1.812	1.062	2B	1.937	.437							
1.125 SHAFT													
348	C	1.812	1.062	----	----	----	204	E	1.625	1.625	1C	1.750	.437
348V	C	1.812	1.062	----	----	----	204V	E	1.625	1.625	3	1.750	.437
355	C	1.812	1.062	1SS	1.750	.437	253	E	1.625	1.187	3SS	1.750	.437
355V	C	1.812	1.062	1	1.750	.437	384	E	1.625	1.625	1SS	1.750	.437
355HD	C	1.812	1.062	1	1.750	.437	584	E	1.625	1.625	3C	1.750	.437
355SCSC	C	1.812	1.062	1	1.750	.437	607	E	1.625	1.625	1C	1.687	.437
356	C	1.812	1.062	1C	1.750	.437	608	E	1.625	1.625	1SS	1.687	.437
356E	C	1.812	1.062	1	1.750	.437	619	E	1.625	2.000	3C	1.812	.437
356V	C	1.812	1.062	1	1.750	.437	636	E	1.625	2.000	3SS	1.812	.437
356VSCSC	C	1.812	1.062	1	1.750	.437							

Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.
1.250 SHAFT							1.250 SHAFT						
ROTARY				SEAT			ROTARY				SEAT		
2041	D	2.000	1.062	1C	1.875	.437	394	U	1.812	1.625	3SS	1.875	.437
2042	D	2.000	1.062	1SS	1.875	.437	681	U	1.812	2.406	1C	1.875	.437
2043	D	2.000	1.062	3C	1.875	.437							
2044	D	2.000	1.062	3SS	1.875	.437	2532AV	Z	2.250	.875	SEAT UNITIZED WITH SEAL		
2550AN	D	2.000	1.062	2SS	1.937	.312	2533AV	Z	2.250	.875	SEAT UNITIZED WITH SEAL		
2595AN	D	2.000	.875	51/1SS	----	PLT	2538A	Z	2.250	.750	SEAT UNITIZED WITH SEAL		
2596AN	D	2.000	.875	52/1SS	----	PLT							
2596AV	D	2.000	.875	52/1SS	----	PLT							
3938	D	2.000	1.062	1	1.875	.437							
108N	E	1.812	1.542	1SS	1.875	.437	1.312 SHAFT						
137	E	1.812	1.625	1SS	1.875	.437	2503AN	C	2.062	1.000	3SS	1.875	.344
137VHD	E	1.812	1.625	3	1.875	.437	2610AN	C	2.062	1.500	----	----	----
256	E	1.812	1.187	3SS	1.875	.437	2615AN	C	2.062	1.750	2SS	2.000	.437
264	E	1.812	1.625	3SS	1.875	.437	6680AN	C	2.062	1.062	2SS	2.062	.375
264HD	E	1.812	1.625	3	1.875	.437	9500AN	C	2.062	2.000	2SS	2.062	.437
361	E	1.812	1.625	1C	1.875	.437							
361E	E	1.812	1.625	1	1.875	.437	6600AN	L-1	2.062	1.675	----	----	----
546	E	1.812	1.625	3C	1.875	.437							
1015	E	1.812	1.625	----	----	----	1.375 SHAFT (35MM)						
1029	E	1.812	1.625	3C	1.875	.437	60-52	C	2.062	1.125	1C	2.250	.437
1181	E	1.812	1.625	1SS	1.875	.437	172	C	2.062	1.125	----	----	----
1182	E	1.812	1.625	1C	1.875	.437	172EHD	C	2.062	1.125	----	----	----
1183	E	1.812	1.625	3SS	1.875	.437	177	C	2.062	1.125	1C	2.000	.437
1184	E	1.812	1.625	3C	1.875	.437	210	C	2.062	1.125	1SS	2.000	.437
1185N	E	1.812	1.542	1C	1.875	.437	210E	C	2.062	1.125	3	2.000	.437
1186	E	1.812	1.625	1SS	2.000	.437	467	C	2.062	1.187	2SS	2.125	.437
2128	E	1.812	2.281	3C	1.875	.437	547	C	2.062	1.125	3SS	2.000	.437
2129	E	1.812	2.281	3C	1.875	.437	805	C	2.062	1.125	3C	2.000	.437
2493AV	E	1.812	1.542	3SS	1.750	.437	919*	C	2.062	1.125	1SS	2.000	.437
2508AV	E	1.812	1.187	3SS	1.875	.437	929	C	2.062	.900	25C	2.000	.500
3913A	E	1.812	1.062	51	1.812	PLT	1062V	C	2.062	1.156	3SS	2.125	.406
4550A	E	1.812	1.625	2B	1.937	.437	1667	C	2.062	1.687	1SS	2.000	.437
5340A	E	1.812	1.187	1C	1.875	.437	1667V	C	2.062	1.687	1	2.000	.437
							2134	C	2.062	1.687	1C	2.000	.437
6265	G	1.811	1.024	1	1.875	.437	2647A	C	2.062	1.125	3SS	3.543	.437
6259	G	1.811	1.062	1	1.875	.437	2650AN	C	2.062	1.500	51	2.750	PLT
6260	G	1.811	1.062	1	1.875	.437	2680A	C	2.062	1.125	3SS	3.543	.687
6261	G	1.811	1.062	1	1.875	.437	2707A	C	2.062	1.125	3SS	3.543	.687
6264	G	1.811	1.062	1	1.875	.437	2710AN	C	2.062	1.125	----	----	----
6266	G	1.811	1.062	3	1.875	.437	2713AN	C	2.062	1.125	----	----	----
							2720AN	C	2.062	1.187	2SS	2.125	.375
815	J	1.960	1.187	1C	2.000	.375	2745A	C	2.062	1.187	1C	1.937	.375
							2756A	C	2.062	.900	----	----	----
169	K	1.937	1.625	----	----	----	4040A	C	2.062	.900	3SS	2.000	.692
169SSP	K	1.937	1.406	----	----	----	4040AV	C	2.062	.900	3SS	2.000	.692
176	K	1.937	1.406	1C/1C	1.875/2.000	.297/.297	4044	C	2.062	1.187	1	2.125	.375
228	K	1.937	1.625	3SS	1.875	.437	5676	C	2.187	.925	2	2.187	.312
883	K	1.937	1.625	1C	1.875	.437	8160A	C	2.062	1.187	2SS	2.062	.437
883V	K	1.937	1.625	1	1.875	.437	70081	C	2.062	1.125	1SS	2.832	.437
890	K	1.937	1.625	1SS	1.875	.437							
1118	K	1.937	1.625	1C	1.875	.437							
1623A	K	1.937	2.000	¹ C/SS	1.875	.437	7695	C/Bal.	2.062	1.437	3	1.875	.437
1623	K	1.937	2.000	3	2.125	.375	7697	C/Bal.	2.062	1.437	3	1.875	.437
2590A	K	1.937	1.875	51/2	^{2.125} PLATE	.437	7795	C/Bal.	2.062	1.437	3	1.875	.437
3977A	K	1.937	1.625	2SS	2.250	.437							
4406A	K	1.750	2.500	3SS	1.906	.437							
4406AV	K	1.750	2.500	3SS	1.906	.437							
4675A	K	1.937	2.500	3SS	1.875	.437							
7323	K	1.937	1.750	1	1.875	.437							
2520AN	L-1	2.218	1.625	----	----	----							
2570AN	L-1	2.000	NO SPRING	1CA	2.078	.406							
2485AN	L-2	1.875	1.750	----	----	----							
7925AN	L-2	1.875	2.500	----	----	----							
426	R	2.000	1.875	1C	1.875	.437							
794	S	2.296	2.218	8S	2.125	.281							
3923AN	S	^{2.250} BORE	2.000	8SS	2.125	.281							
308N	T	1.812	2.375	3SS	1.875	.437							
1187	T	1.812	2.375	1C	1.875	.437							
2211	T	1.812	2.375	3	1.875	.437							
2494A	T	1.812	1.625	1C	1.875	.437							
3607	T	1.812	2.375	3	1.875	.437							

Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.
1.375 SHAFT (35MM)							1.375 SHAFT (35MM)						
ROTARY				SEAT			ROTARY				SEAT		
186	D	2.187	1.125	1SS	2.000	.437	3854	Q	2.515	.625	25	2.000	.281
376	D	2.187	1.125	----	----	----							
376V	D	2.187	1.125	----	----	----	178	R	2.187	2.187	1C	2.000	.437
404	D	2.187	1.093	25C	2.000	.500							
491	D	2.187	1.125	1C	2.000	.437	11451-2	SP	1.875	----	2SS	2.125	----
806	D	2.187	1.125	3SS	2.000	.437							
807	D	2.187	1.125	3SS	2.000	.437	690BW	T	1.875	2.437	1C	2.000	.437
1132NW	D	2.187	1.093	1C	2.000	.437	725	T	1.875	2.437	1C	2.000	.437
2045	D	2.187	1.125	1C	2.000	.437	726	T	1.875	2.437	1SS	2.000	.437
2046	D	2.187	1.125	1SS	2.000	.437	2635AN	T	1.875	1.687	----	----	----
2047	D	2.187	1.125	3C	2.000	.437							
2048	D	2.187	1.125	3SS	2.000	.437	396BW	T/U	1.875	2.687	1C	2.000	.437
2772AV	D	2.187	.800	3SS	2.687	.380	1188BW	T/U	1.875	2.687	1C	2.000	.437
4123	D	2.000	1.256	3	2.000	.437							
6048	D	2.250	1.006	3	2.000	.218	561	U	1.875	2.125	2SS	2.000	.437
							561SS	U	1.875	2.125	2SS	2.000	.437
							1104	V	SPEC*	2.812	25C	2.140	.437
257	E	1.875	1.187	3SS	2.000	.437							
354	E	1.875	1.687	1C	2.000	.437	1.406 SHAFT						
677	E	1.875	1.687	1SS	2.000	.437	4685AN	C	2.062	1.187	----	----	----
808	E	1.875	1.687	3C	2.000	.437							
809	E	1.875	1.687	3SS	2.000	.437							
864	E	1.875	2.000	3C	2.000	.437	1.437 SHAFT						
865	E	1.875	2.000	3SS	2.000	.437	2156	C	2.125	1.125	3SS	2.250	.625
2049	E	1.875	1.687	1C	2.000	.437	2785A	C	2.125	1.000	2SS	2.187	.312
2049V	E	1.875	1.687	1	2.000	.437	2785AV	C	2.125	1.000	2SS	2.187	.312
2050	E	1.875	1.687	1SS	2.000	.437	7105	C	2.125	1.250	3	2.250	.375
2104	E	1.875	1.687	----	----	----	8310A	C	2.125	1.125	2SS	2.187	.500
2104V	E	1.875	1.687	----	----	----	8310AV	C	2.125	1.125	2SS	2.187	.500
2657A	E	1.875	1.187	3SS	2.000	.437							
2775A	E	1.875	1.687	2SS	2.000	.437							
3783	E	1.875	1.625	3	2.125	.437	4545A	D	2.312	1.000	1C	2.062	.437
3901	E	1.875	2.031	3	2.000	.437	4925A	D	2.312	1.000	3SS	3.875	.437
3925	E	1.875	1.637	3	2.125	.437	4930A	D	2.312	1.000	1C	2.250	.437
4119AN	E	1.875	2.375	52	----	PLT	4931A	D	2.312	1.250	3SS	2.250	.437
6830A	E	1.875	1.687	1C	2.000	.375							
9957A	E	1.875	1.187	3SS	2.000	.437							
9957AV	E	1.875	1.187	3SS	2.000	.437							
3769	E/Bal.	1.875	2.000	3	1.875	.437	334	E	1.937	1.625	2SS	2.062	.437
3991	E/Bal.	1.875	2.000	3	1.875	.437	705	E	1.937	1.688	3C	2.062	.437
7702	E/Bal.	1.875	2.000	3	1.875	.437	943N	E	1.937	1.516	3SS	2.312	.360
							943V	E	2.110	1.516	3	2.312	.360
291	J	2.125	1.187	1C	2.125	.375	1634	E	1.937	1.250	3SS	2.250	.375
							1635	E	1.937	1.250	3SS	2.250	.375
209	K	2.062	1.625	----	----	----	2234	E	1.937	1.688	3	2.062	.437
495	K	2.062	1.625	1C	2.000	.437	2234V	E	1.937	1.688	3	2.062	.437
540	K	2.062	1.625	1SS	2.000	.437	2790AN	E	1.937	1.516	51	2.750	PLT
2640AN	K	2.062	1.375	3SS	----	PLT	2810AN	E	1.937	1.250	----	----	----
2645A	K	2.062	2.000	51	----	PLT	2811AN	E	1.937	1.516	52	----	PLT
2665A	K	2.062	2.250	----	----	----	3848	E	2.109	1.515	3	2.310	.359
2695A	K	2.062	1.625	1C/3SS	2.000/2.125	.375	4067	E	1.937	1.688	3	2.125	.437
2730AN	K	2.062	2.000	----	----	----	6055	E	1.937	1.688	28	2.125	.437
2760AN	K	2.062	1.950	----	----	----	6075AN	E	1.937	1.250	2SS	2.250	.312
3935A	K	2.062	2.500	1C	2.000	.437	7930AN	E	1.937	1.516	51	----	PLT
4851A	K	2.062	2.000	3SS	2.250	.500							
2760AN	L-1	2.000	1.750	----	----	----							
2725AN	L-1	2.062	.900	----	----	----							
8155AN	L-1	2.000	1.675	----	----	----							
2670AN	L-2	2.000	2.500	2B	2.406	.437							
2675AN	L-2	1.875	1.125	2B	2.031	.406							
4793A	L-2	1.938	2.250	25CA	2.143	.733							

Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	
1.437 SHAFT							1.500 SHAFT (38MM)							
ROTARY				SEAT			ROTARY				SEAT			
862		2.125	1.750	----	----	----	283	D	2.312	1.125	1C	2.156	.437	
2284AN	K	2.125	2.125	3SS	2.188	.375	371	D	2.312	1.125	1SS	1.125	.437	
2284AV	K	2.125	2.125	3SS	2.188	.375	382	D	2.312	1.125	1C	1.125	.437	
6890A	K	2.125	1.750	2SS	2.375	.437	534	D	2.312	1.125	3SS	1.125	.437	
8620AN	K	2.125	1.750	----	-----	----	599N	D	2.312	1.000	3SS	2.187	.437	
							817	D	2.312	1.125	3C	2.125	.437	
							939	D	2.312	1.125	----	----	----	
2780AN	L-2	2.062	2.250	----	----	----	1028ASC	D	2.312	1.125	1SC	2.375	SP	
							2051	D	2.312	1.125	1C	2.125	.437	
							2052	D	2.312	1.125	1SS	2.125	.437	
1633N	T	1.937	2.125	3SS	2.187	.375	2053	D	2.312	1.125	3C	2.125	.437	
							2054	D	2.312	1.125	3SS	2.125	.437	
							2127V	D	2.312	1.125	3SS	2.125	.437	
1.475 SHAFT							2940A	D	2.312	1.125	----	----	----	
5205AN	D	2.312	2.375	----	----	----	7079	D	2.375	1.125	28	2.375	.618	
1.490 SHAFT														
2820AN	C	2.187	3.000	2B	2.250	.437								
1.500 SHAFT (38MM)														
192N	C	2.187	1.437	3SS	2.125	.437								
247*	C	2.187	1.125	1SS	2.156	.437								
320	C	2.187	1.125	1C	2.250	.437								
347*	C	2.187	1.125	1C	2.125	.437								
378*	C	2.187	1.125	1SS	2.125	.437								
553	C	2.187	1.125	3SS	2.125	.437								
659	C	2.187	1.125	1SS	2.125	.437	224N	E	2.000	1.688	3SS	2.125	.437	
659TC	C	2.187	1.125	1	2.125	.437	258	E	2.000	1.688	3SS	2.125	.437	
659VCHD	C	2.187	1.125	1	2.125	.437	259	E	2.000	1.187	3SS	2.125	.437	
659VTCVSTC	C	2.187	1.125	1	2.125	.437	305	E	2.000	1.688	1C	2.125	.437	
682*	C	2.187	1.125	1C	2.156	.437	305E	E	2.000	1.688	1	2.125	.437	
758	C	2.187	1.125	1C	2.125	.437	314	E	2.000	1.688	3C	2.000	.437	
758E	C	2.187	1.125	1	2.125	.437	316	E	2.000	1.688	3SS	2.000	.437	
758SC	C	2.187	1.125	1	2.125	.437	374	E	2.000	1.688	1SS	2.125	.437	
758SCSC	C	2.187	1.125	1	2.125	.437	395	E	2.000	1.688	3C	2.125	.437	
758VSCSC	C	2.187	1.125	1	2.125	.437	395E	E	2.000	1.688	3	2.125	.437	
758VSC	C	2.187	1.125	1	2.125	.437	515	E	2.000	1.688	3C	2.250	.437	
816	C	2.187	1.125	3C	2.125	.437	620	E	2.000	2.062	3C	2.312	.437	
926	C	2.187	1.125	3C	2.312	.437	629	E	2.000	2.062	3SS	2.312	.437	
1017AN	C	2.187	1.687	52	3.062	PLT	899	E	2.000	1.562	3C	2.125	.437	
1019AN	C	2.187	1.125	51	3.500	PLT	947	E	2.000	2.062	3C	2.312	.437	
1110	C	2.187	1.687	3SS	2.125	.437	950	E	2.000	2.062	3SS	2.312	.437	
1110V	C	2.187	1.687	3	2.125	.437	1190	E	2.000	1.688	1C	2.125	.437	
1144V	C	2.187	1.125	3SS	2.125	.437	1191	E	2.000	1.688	1SS	2.125	.437	
1189	C	2.187	1.125	1C	2.250	.437	1192	E	2.000	1.688	3SS	2.125	.437	
1921AN	C	2.187	1.687	51	2.875	PLT	1640	E	2.000	1.688	3TC	2.125	.437	
19211AN	C	2.187	1.687	----	----	----	1641	E	2.000	1.688	3C	2.125	.437	
2105	C	2.187	1.125	----	----	----	1642	E	2.000	1.688	3SS	2.125	.437	
2120AN	C	2.187	1.687	2B	2.250	.562	1643	E	2.000	1.688	3TC	2.125	.437	
2209	C	2.187	1.125	1	2.125	.437	1644V	E	2.000	1.688	3C	2.125	.437	
2217	C	2.187	1.125	3	2.125	.437	1645V	E	2.000	1.688	3SS	2.125	.437	
2221	C	2.187	1.687	3	2.125	.437	1646	E	2.000	1.688	3TC	2.125	.437	
2223	C	2.187	1.125	3	2.125	.437	1647B/V	E	2.000	1.688	3C	2.312	.437	
2232	C	2.187	1.125	1	2.125	.437	1648B/V	E	2.000	1.688	3SS	2.312	.437	
2845A	C	2.187	1.125	2SS	2.125	.406	1649	E	2.000	1.688	3C	2.312	.437	
2870AN	C	2.187	1.687	51	3.500	PLT	1650	E	2.000	1.688	3SS	2.312	.437	
2890AN	C	2.187	1.687	51	2.562	PLT	1651V	E	2.000	1.688	3C	2.312	.437	
2895A	C	2.187	1.000	1C	2.156	.437	1652V	E	2.000	1.688	3SS	2.312	.437	
2909A	C	2.187	.875	3SS	2.125	.312	1671	E	2.000	1.688	3TC	2.312	.437	
2910AN	C	2.187	1.125	2B	2.250	.375	1673	E	2.000	1.688	3TC	2.312	.437	
2920AN	C	2.187	1.687	----	----	----	1690V	E	2.000	2.062	3C	2.312	.437	
2925AN	C	2.187	1.125	----	----	----	1691V	E	2.000	2.062	3SS	2.312	.437	
2935AN	C	2.187	1.125	----	----	----	1692V	E	2.000	2.062	3TC	2.312	.437	
3821A	C	2.187	1.125	1SS	2.125	.437	2106	E	2.000	1.688	----	----	.437	
3979	C	2.187	1.125	Spec.	2.740	.875	2106HD	E	2.000	1.688	----	----	----	
5670AN	C	2.187	1.687	52	----	PLT	2117	E	2.000	1.688	1C	2.250	.473	
6170AN	C	2.187	2.000	51	3.610	PLT	2137	E	2.000	1.688	1SS	2.156	.437	
6222	C	2.187	1.125	1	2.125	.437	2837ASC	E	2.000	1.187	3SC	2.125	.375	
7409	C	2.187	1.125	1	2.125	.437	7562	E	2.000	1.688	3	2.125	.437	
7632	C	2.187	1.125	1	2.125	.437	7933	E	2.000	1.688	1	2.125	.437	
7792	C	2.187	1.125	1	2.125	.437								
7953	C	2.187	1.125	1	2.125	.437								
9918AN	C	2.187	2.000	----	----	----	4088	E/Bal.	2.000	2.000	3	2.000	.437	
14122AN	C	2.187	1.687	52	----	PLT								
2851AMP	SC	2.062	.700	3SC	2.125	.312	292	J	2.210	1.250	1C	2.250	.375	

Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	
1.500 SHAFT (38MM)							1.562 SHAFT							
ROTARY				SEAT			ROTARY				SEAT			
216	K	2.187	1.625	----	----	----	1949AV	Z	2.625	.950	SEAT UNITIZED WITH SEAL			
541	K	2.187	1.625	1C	2.125	.437	2967AV	Z	2.625	.950	SEAT UNITIZED WITH SEAL			
884	K	2.187	1.625	1SS	2.125	.437								
1624	K	2.187	2.125	3C/3S	2.312	.437								
2850AN	K	2.187	2.000	----	----	----	1.575 SHAFT (40MM)							
2860AN	K	2.187	1.687	51	2.250	PLT	4960A	C	2.187	2.000	1C	2.375	.468	
2945A	K	2.187	1.687	2SS	2.250	.312								
2955A	K	2.187	2.000	3B/5 1	PLT 2.312	.562								
3918A	K	2.187	1.687	3TCIC	2.187/2.125	.812/.438	4955A	D	2.312	2.000	2SS	2.500	.406	
3919A	K	2.187	1.687	3SS	2.125/2.000	.447/.880	4956A	D	2.312	2.000	2SS	2.500	.312	
							4957A	D	2.312	2.000	2SS	2.500	.406	
2875AN	L-1	2.000	1.437	----	----	----	1.594 SHAFT							
							2980A	C	2.500	1.687	2SS	2.375	.437	
2930AN	L-2	2.125	1.875	----	----	----	1.601 SHAFT							
4791A	L-2	2.062	1.437	3CA	2.500	.828	4852AN	K	2.500	2.000	3SS	2.500	.500	
9930A	M	2.252	.350	8SS	M.O.S.	.152	1.625 SHAFT							
							238	C	2.500	1.375	1C	2.375	.500	
431	R	2.312	1.875	1C	2.125	.437	238E	C	2.500	1.375	1	2.375	.500	
432	R	2.312	1.875	1SS	2.125	.437	238VSC	C	2.500	1.375	1	2.375	.500	
							239	C	2.500	1.375	1SS	2.375	.500	
1500G	S	----	----	8SS	SP	----	239E	C	2.500	1.375	3	2.375	.500	
							239E	C	2.500	1.375	3	2.375	.500	
691	T	2.000	2.437	1C	2.125	.437	544	C	2.500	1.375	3SS	2.375	.500	
868	T	2.000	2.437	1C	2.125	.437	818	C	2.500	1.375	3C	2.375	.500	
							1019	C	2.500	1.375	3SS	2.625	.500	
							1035	C	2.500	1.375	28SS	3.544	1.250	
915	U	2.000	2.062	3C	2.000	.437	1039	C	2.500	1.375	28SS	3.544	1.250	
							2107	C	2.500	1.375	----	----	----	
							2201	C	2.500	1.375	3	2.625	.500	
1943AV	Z	2.500	.850	SEAT UNITIZED WITH SEAL				2202	C	2.500	1.375	3	2.625	.500
							3015AN	C	2.500	1.375	51	3.000	PLT	
							3020A	C	2.500	1.375	3SS	2.437	.375	
							3020AV	C	2.500	1.375	3SS	2.437	.375	
							3022A	C	2.500	1.125	52	----	PLT	
							3025AN	C	2.500	1.375	2B	2.500	.500	
							3035A	C	2.500	1.375	2SS	2.375	.500	
							3055A	C	2.500	1.000	2SS	2.469	.250	
							3055AV	C	2.500	1.000	2SS	2.469	.250	
							3066AE	C	2.500	1.000	2SS	2.469	.250	
							3075A	C	2.500	1.125	8SS	----	PLT	
							3664	C	2.500	1.375	1	2.375	.500	
							6685AN	C	2.500	1.375	2SS	2.375	.375	
							6995A	C	2.000	1.375	2SS	2.312	.500	
							7017	C	2.500	1.375	3	2.375	.500	
							7497	C	2.500	1.312	25	2.500	.812	
							7885AV	C	2.500	.800	3SS	2.750	.312	
							331	D	2.718	1.125	3SS	2.437	.500	
							461	D	2.718	1.375	1SS	2.375	.500	
							514	D	2.718	1.375	1C	2.375	.500	
							514VHD	D	2.718	1.375	1	2.375	.500	
							514DS	D	2.718	----	1C	2.375	----	
							819	D	2.718	1.375	3SS	2.375	.500	
							821	D	2.718	1.375	3C	2.375	.500	
							1697	D	2.718	1.375	3SS	2.375	.500	
							1698	D	2.718	1.375	3C	2.375	.500	
							2055	D	2.718	1.375	1C	2.375	.500	
							2056	D	2.718	1.375	1SS	2.375	.500	
							2165	D	2.718	1.375	28SS	3.544	1.250	
							6262	G	2.205	1.375	1	2.375	.500	
							6263	G	2.205	1.375	1	2.375	.500	
							1195	K	2.500	2.125	1	2.375	.500	

Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.
1.812 SHAFT (46MM)							1.875 SHAFT						
ROTARY				SEAT			ROTARY				SEAT		
3297AV	Z	2.875	.900	SEAT UNITIZED WITH SEAL			1669V	E	2.500	2.125	3TC	2.687	.500
3298AV	Z	2.875	.900	SEAT UNITIZED WITH SEAL			1672V	E	2.500	2.125	3TC	2.687	.500
							1845VX	E	2.500	2.125	3C	2.687	.500
							2069	E	2.500	2.125	1C	2.625	.500
1.844 SHAFT							2070	E	2.500	2.125	1SS	2.625	.500
3305AN	C	2.750	2.250	2SS	2.750	.500	2071	E	2.500	2.125	3C	2.625	.500
							2072	E	2.500	2.125	3SS	2.625	.500
							2110	E	2.500	2.125	----	----	----
1.875 SHAFT							3315A	E	2.500	1.750	1C	2.625	.579
312	C	2.750	1.500	3SS	2.625	.500	3322AN	E	2.500	1.625	----	----	----
340	C	2.750	1.500	1C	2.625	.500	4025A	E	2.500	2.125	1SS	2.625	.453
340EC	C	2.750	1.500	1	2.625	.500	4105A	E	2.500	1.500	1C	2.625	.578
340TCSC	C	2.625	1.500	1	2.625	.500	4595AN	E	2.500	1.625	2SS	2.625	.437
340TCTC	C	2.625	1.500	1	2.625	.500	6865A	E	2.500	1.500	2SS	2.625	.469
1608	C	2.750	1.500	1SS	2.625	.500	7020	E	2.500	2.125	3	2.687	.500
2114	C	2.750	1.500	3C	2.625	.500	7869	E	2.500	2.125	1	2.625	.500
3269BLS	C	2.750	----	1	2.500	----	7962	E	2.500	2.125	3	2.625	.500
3310A	C	2.750	1.500	----	----	----	8020A	E	2.500	1.500	2SS	2.625	.469
3335AN	C	2.750	2.125	2B	2.750	.562	50089	E/SP	2.500	2.125	3TC	2.625	.500
3352AV	C	2.750	.800	3SS	2.453	.312							
3353A	C	2.750	.800	3SS	2.453	.312	3648	E/Bal.	2.500	2.500	Spec.	2.687	.500
3356A	C	2.750	1.000	8SS	3.528	.437	7827	E/Bal.	2.500	2.500	3	2.500	.500
3360AN	C	2.750	1.500	----	----	----	7884	E/Bal.	2.500	2.500	3	2.500	.500
3365A	C	2.750	.950	----	----	----	7884V	E/Bal.	2.500	2.500	3	2.500	.500
3370AN	C	2.750	1.625	51	----	PLT							
4645A	C	2.750	1.000	2B	3.000	.437							
4485A	C	2.750	1.750	1C	2.625	.578	318	K	2.750	2.125	1C	2.625	.500
7935AN	C	2.750	1.750	51	----	PLT	1693	K	2.750	2.125	1SS	2.625	.500
							2237	K	2.750	1.750	1	2.625	.500
							3694	K	2.500	2.500	3	2.625	.437
223	D	2.875	1.500	----	----	----	7352	K	2.750	2.125	1	2.625	.500
593	D	2.875	1.500	3SS	2.625	.500							
828	D	2.875	1.500	1C	2.625	.500	4787A	L-1	2.562	1.150	25CA	2.625	.500
1097	D	2.875	1.500	1SS	2.625	.500							
1620	D	2.875	1.500	3C	2.625	.500	4790A	L-2	2.562	1.750	25CA	2.625	.500
2065	D	2.875	1.500	1C	2.625	.500	4790AV	L-2	2.562	1.750	25CA	2.625	.500
2066	D	2.875	1.500	1SS	2.625	.500	7940AN	L-2	2.500	2.625	51	2.871	PLT
2067	D	2.875	1.500	3C	2.625	.500							
2068	D	2.875	1.500	3SS	2.625	.500	742	T	2.500	3.000	1C	2.625	.500
46512	D	2.875	----	SP	SP	----	743	T	2.500	3.000	1SS	2.625	.500
							1653V	T	2.500	3.000	3C	2.687	.500
513	E	2.500	2.125	1SS	2.625	.500	2087A	T	2.500	3.000	1C	2.625	.578
523	E	2.500	2.125	1C	2.625	.500	3320AN	T	2.500	1.187	----	----	----
586	E	2.500	2.125	3SS	2.625	.500	3321AN	T	2.500	1.187	8SS	2.625	.312
586TCTC	E	2.500	2.125	3TC	2.625	.500	3979A	T	2.500	1.187	2SS	2.875	.437
829	E	2.500	2.437	3C	2.687	.500	4487A	T	2.500	1.187	1C	2.625	.578
831	E	2.500	2.437	3SS	2.687	.500	4780AN	T	2.500	2.250	1SS	2.625	.453
946	E	2.500	2.437	3C	2.687	.500	4805AN	T	2.500	3.000	2SS	2.625	.469
949	E	2.500	2.437	3SS	2.687	.500							
1654	E	2.500	2.125	3C	2.625	.500							
1655	E	2.500	2.125	3TC	2.625	.500	538	U	2.500	2.437	1C	2.625	.500
1656	E	2.500	2.125	3C	2.625	.500	538S	U	2.500	----	2SS	2.625	----
1657	E	2.500	2.125	3SS	2.625	.500	554	U	2.500	2.437	3SS	2.500	.500
1658	E	2.500	2.125	3TC	2.625	.500	898	U	2.500	2.437	3C	2.500	.500
1659V	E	2.500	2.062	3C	2.625	.500							
1660V	E	2.500	2.062	3SS	2.625	.500							
1661V	E	2.500	2.062	3TC	2.625	.500	1105	V	2.500	2.000	25C	2.640	.406
1662V	E	2.500	2.125	3	2.687	.500	1108	V	2.500	2.000	1C	2.625	.500
1662B/V	E	2.500	2.125	3C	2.687	.500	21456	V	2.500	2.000	3C	2.625	.437
1663B/V	E	2.500	2.125	3SS	2.687	.500							
1664B/V	E	2.500	2.125	3C	2.687	.500							
1665B/V	E	2.500	2.125	3SS	2.687	.500							

Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.
2.000 SHAFT							2.125 SHAFT (54MM)						
ROTARY				SEAT			ROTARY				SEAT		
385A	U	2.625	2.500	3SS	2.750	.500	327	E	2.812	2.375	3C	3.000	.562
386	U	2.625	2.500	3SS	2.812	.500	353	E	2.812	2.375	2SS	3.000	.625
456	U	2.625	2.218	3SS	2.750	.500	537	E	2.812	2.375	1C	3.000	.562
888	U	2.625	2.437	3C	2.625	.500	611	E	2.812	2.375	3C	2.812	.437
							612	E	2.812	2.250	3SS	2.812	.437
							856	E	2.812	2.375	3C	2.875	.562
3418AV	Z	3.250	.950	SEAT UNITIZED WITH SEAL			857	E	2.812	2.375	3SS	2.875	.562
							1612	E	2.812	2.250	3SS	2.812	.437
							1612V	E	2.812	2.250	3	2.812	.437
							1617	E	2.812	2.375	3C	3.000	.562
							1666	E	2.812	2.375	3SS	3.000	.562
2.062 SHAFT							2.125 SHAFT (54MM)						
707	E	2.812	2.375	3SS	2.875	.562	2084	E	2.812	2.375	1C	3.000	.562
1611	E	2.812	2.375	3C	2.875	.562	2085	E	2.812	2.375	1SS	3.000	.562
3487A	E	2.812	2.375	3SS	2.875	.562	2086	E	2.812	2.375	3SS	3.000	.562
							2159	E	2.812	2.375	1SS	3.000	.562
							3490A	E	2.812	1.750	2SS	3.000	.500
3421AV	Z	3.500	.875	SEAT UNITIZED WITH SEAL			3490AV	E	2.812	1.750	2SS	3.000	.500
3422AV	Z	3.500	.875	SEAT UNITIZED WITH SEAL			3492A	E	2.812	2.375	1C	3.000	.625
							3513A	E	2.812	1.750	3C	3.000	.500
							3514A	E	2.812	1.750	3C	3.000	.562
2.125 SHAFT (54MM)							5125SSA	E	2.812	3.000	3SS	3.000	.562
336	C	3.000	1.687	2SS	3.000	.562	9964A	E	2.812	1.750	3C	2.875	.562
338	C	3.000	1.687	3C	3.000	.562	9966A	E	2.812	1.750	3SS	2.875	.562
338LS	C	3.000	2.375	3C	3.000	.562	9968A	E	2.812	2.375	3SS	2.875	.625
338V	C	3.000	1.687	3	3.000	.562	8035A	E	2.812	1.500	2SS	3.000	.500
543	C	3.000	1.687	1SS	3.000	.625	8105A	E	2.812	1.750	2SS	3.000	.500
543V	C	3.000	1.687	3	3.000	.562							
844	C	3.000	1.687	1C	3.000	.562							
854	C	3.000	1.687	3C	2.875	.562	887	K	3.000	2.125	1C	3.000	.562
855	C	3.000	1.687	3SS	2.875	.562							
1057B/V	C	3.000	1.687	3SS	3.000	.562							
3495AN	C	3.000	3.000	2SS	3.000	.500	4792A	L-2	2.812	1.625	25CA	3.143	1.031
3500AN	C	3.000	2.000	2B	3.000	.500	4792AV	L-2	2.812	1.625	25CA	3.143	1.031
3505A	C	3.000	1.000	3SS	3.250	.500	4799A	L-2	2.812	1.625	25CA	3.187	.844
3510A	C	3.000	1.000	2SS	3.000	.375							
3510AE	C	3.000	1.000	2SS	3.000	.375							
3510AV	C	3.000	1.000	2SS	3.000	.375	2126	T	2.812	3.375	1C	3.000	.562
3520AN	C	3.000	2.125	51	3.625	PLT							
3521AN	C	3.000	1.687	51	4.250	PLT							
3525AN	C	3.000	1.687	51	4.250	PLT	457	T/U	2.812	3.656	1C	3.000	.562
5700AN	C	3.000	1.687	2SS	2.844	.468							
6110A	C	3.000	2.000	1SS	2.812	.469							
6120A	C	3.000	2.000	1SS	2.812	.469	556	U	2.812	2.375	2SS	3.000	.562
6120AV	C	3.000	2.000	1SS	2.812	.469	556SS	U	2.812	2.375	2SS	3.000	.562
							5126A	U	2.812	3.000	3SS	3.000	.562
1686	D	3.250	1.687	1C	3.000	.562							
1687	D	3.250	1.687	1SS	3.000	.562	1102	V	2.750	2.562	25C	3.140	.562
2087	D	3.250	1.687	1C	3.000	.562	1107	V	2.750	1.625	25C	3.187	.875
2088	D	3.250	1.687	1SS	3.000	.562							
2089	D	3.250	1.687	3C	3.000	.562							
2090	D	3.250	1.687	3SS	3.000	.562	3497AV	Z	3.500	.875	SEAT UNITIZED WITH SEAL		
2093	D	3.250	1.687	3C	3.000	.562	3498AV	Z	3.500	.875	SEAT UNITIZED WITH SEAL		
2102	D	3.250	1.687	3SS	3.000	.562							
2125	D	3.250	1.687	2SS	3.000	.562							
3515AN	D	3.250	1.125	51	3.625	PLT							

Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.	Part No.	Type	O.D.	OP. Height	Type	C' Bore	Thk.
2.437 SHAFT (62MM)							2.500 SHAFT						
ROTARY				SEAT			ROTARY				SEAT		
3624A	D	3.500	1.175	3SS	3.875	.468	6640AN	L-1	3.125	2.000	----	----	----
3627AV	Z	3.750	.875	SEAT UNITIZED WITH SEAL			3670AN	L-2	3.125	2.625	----	----	----
2.500 SHAFT							889N	R	3.625	2.187	3SS	3.375	.531
269	C	3.344	1.813	3C	3.375	.562	3652A	T	3.187	2.125	1C	3.375	.562
853	C	3.344	1.813	3SS	3.375	.562	6243	T	3.187	2.656	3	3.500	.422
1058	C	3.344	1.813	3SS	3.375	.562	6244	T	3.187	2.656	3	3.500	.422
2120	C	3.344	1.813	1C	3.375	.562	6257	T	3.187	2.656	3	3.500	.422
2158	C	3.344	2.125	1C	3.375	.562	8044AV	U	3.187	.800	7SS	M.O.S.	.312
3630AN	C	3.344	1.500	51	4.500	PLT	2147	V	3187	2.375	3C	3.500	.562
3645AN	C	3.344	3.000	51	3.750	PLT	2.625 SHAFT						
3650A	C	3.344	1.500	2SS	3.500	.468	571	C	3.469	2.732	3SS	3.336	.531
3679A	C	3.344	2.500	3C	3.375	.562	1051A	C	3.469	1.125	3SS	4.000	.434
3680A	C	3.344	2.375	2SS	3.375	.562	3695AN	C	3.469	2.732	2SS	3.500	.500
3681AN	C	3.344	3.000	2SS	3.375	.500	3705AN	C	3.469	2.732	2SS	3.625	.437
4075A	C	3.344	1.250	3SS	3.500	.562	8060AN	C	3.469	2.732	2SS	3.437	.687
4085A	C	3.344	1.813	3SS	3.375	.375	9917AV	C	3.469	1.125	3B	4.000	.496
4230A	C	3.344	2.375	----	----	----	7888AV	D	3.750	1.125	3SS	3.750	.565
4465AN	C	3.344	1.500	3SS	3.500	.562	7909	D	3.875	1.937	3	3.375	.625
6095AN	C	3.344	1.813	2SS	3.375	.500	328	E	3.375	2.750	3C	3.375	.625
8045A	C	3.344	1.813	2SS	3.625	.500	328HD	E	3.375	2.750	3	3.375	.625
8055A	C	3.344	1.375	2SS	3.375	.469	542	E	3.375	2.750	3SS	3.375	.625
335N	D	3.625	1.250	3SS	3.375	.562	7703	E/Bal.	3.375	3.125	3	3.375	.562
463	D	3.625	1.813	3SS	3.375	.562	7773	E/Bal.	3.375	3.125	3	3.375	.562
468	D	3.625	1.813	3C	3.250	.437	7927	E/Bal.	3.375	3.125	3	3.375	.562
469	D	3.625	1.813	3SS	3.250	.437	4797A	L-2	3.500	1.625	25CA	3.645	.562
481	D	3.625	1.750	3SS	3.500	.562	1106	V	3.375	2.562	25C	3.643	.562
835	D	3.625	1.813	3C	3.375	.562	2.687 SHAFT						
2099	D	3.625	1.813	3C	3.375	.562	3710A	C	3.469	1.375	2SS	3.937	.438
2100	D	3.625	1.813	3SS	3.375	.562	2.750 SHAFT						
3625	D	3.625	1.813	1	3.375	.562	483	C	3.750	1.937	3SS	3.500	.625
3631AN	D	3.625	1.250	3SS	3.375	.562	483VTC	C	3.750	1.937	3	3.500	.625
3888	D	3.625	1.813	3	3.375	.562	836	C	3.750	1.937	3C	3.500	.625
279	E	3.187	2.500	3C	3.375	.562	836SS	C	3.750	1.300	3C	3.500	.625
349	E	3.187	2.500	3SS	3.375	.562	1058AN	C	3.750	1.375	51	4.500	PLT
349HD	E	3.187	2.500	3	3.375	.562	2124N	C	3.750	1.937	3SS	3.500	.625
349V	E	3.187	2.500	3	3.375	.562	2152	C	3.750	1.937	3SS	3.500	.625
916	E	3.187	2.500	3C	3.375	.562	2154	C	3.750	1.125	3C	3.500	.625
916BTC	E(B)	3.187	2.500	3TC	3.250	.562	2154SCSC	C	3.750	1.125	1	3.500	.625
2101	E	3.187	2.500	3SS	3.375	.562	2154TCTC	C	3.750	1.125	3	3.500	.625
2205	E	3.187	2.500	3	3.375	.562	2154VSCSC	C	3.750	1.125	3	3.500	.625
2205E	E	3.187	2.500	3	3.375	.562	3661	C	3.750	1.500	3	3.500	.625
3632A	E	3.187	2.500	3C	3.375	.562	3719AV	C	3.750	1.375	3SS	3.500	.500
4380AN	E	3.187	1.500	3SS	3.500	.562	3720A	C	3.750	1.937	3SS	3.312	.562
6254	E	3.187	1.813	3	3.500	.422	3727A	C	3.750	1.375	3SS	3.500	.500
7985	E	3.062	2.500	3	3.375	.562	3994	C	3.750	1.500	3	3.500	.625
3640AN	G	3344	1.625	51	----	PLT	6125	C	3.750	1.125	1	3.500	.625
1280AN	K	3.344	2.500	2SS	3.375	.500	6205	C	3.750	1.125	1	3.500	.625
1613	K	3.344	2.125	3C	3.375	.562	6207	C	3.750	1.125	3	3.500	.625
1695	K	3.344	2.125	3SS	3.375	.562	6220	C	3.750	1.125	1	3.500	.625
2158	K	3.344	2.125	1	3.375	.562	6239	C	3.750	1.500	3	3.500	.625
3635AN	K	3.344	2.125	----	----	----	8070A	C	3.750	1.937	2SS	3.500	.469
3655A	K	3.344	1.625	2SS	3.500	.468							
8050AN	K	3.344	1.625	2S/51	3.625	.438							

