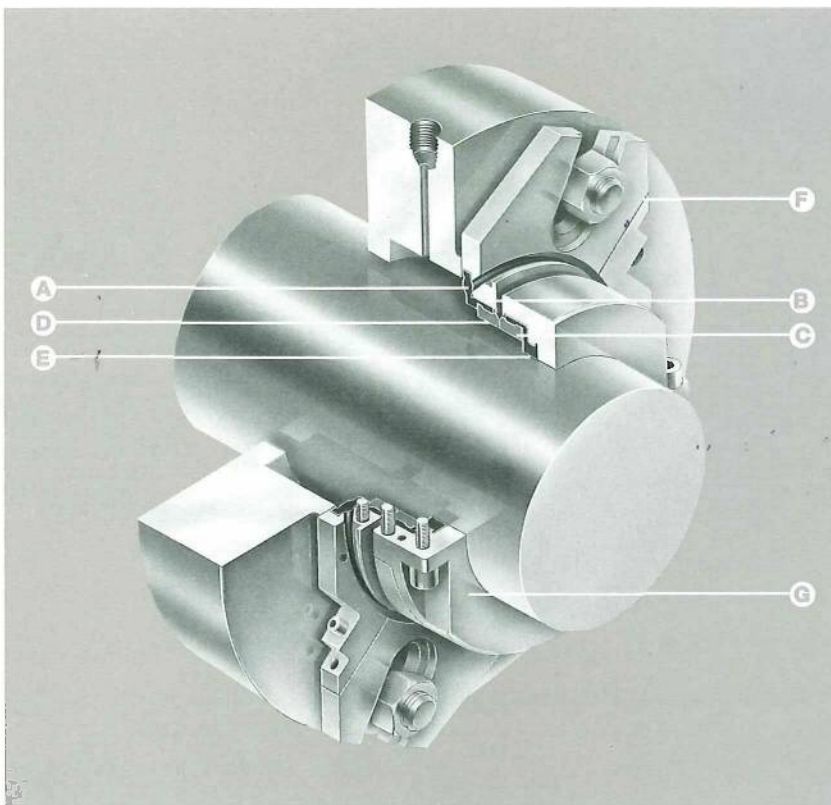


# Type 37FS

## Fully Split Seal

B2.671A



**Industries Served**  
 Chemical Processing  
 Conveyor/Industrial Equipment  
 Food Processing  
 Industrial Blowers and Fans  
 Marine Mixers and Agitators  
 Nuclear Service  
 Offshore Oil and Refinery  
 Paint and Ink Processing  
 Petrochemical Processing  
 Pharmaceutical Pipeline  
 Power Generation  
 Pulp and Paper  
 Wastewater  
 Water Desalination  
 Water Systems

37FS

- A - Compression Ring
- B - Clamp Ring
- C - Face/Primary Ring
- D - Seat/Mating Ring
- E - Sealing Ring
- F - Gland Plate Assembly
- G - Drive Ring Assembly

### Applications

- For use in pumps, agitators, pulpers, blenders, and other rotary equipment.
- For pulp and paper, petrochemical, power plants, food processing, municipal wastewater, and other demanding applications.

Fully split seal allows for reduced maintenance on large, difficult to seal equipment. Seal is outside mounted and can be used on vertical and horizontal installations. Recommended for use on heavy duty, packed pulp and paper equipment, pulpers, pumps, refiners and agitators. Most user-friendly split seal available.

### Operating Conditions\*

- **Temperature:**  
Up to +82°C/180°F
- **Pressure:**  
Up to 5.5 bar g/80 psig
- **Speed:**  
1800 rpm maximum

\*For other operating conditions, consult John Crane Engineering.

### Design Features/Benefits

#### Increased Flexibility

Compression ring provides extreme flexibility. Shaft deflection, angular misalignment, and run-out are 'tracked' by the seal without diminishing performance.

#### Self-Aligning

The rotating assembly aligns itself square with the shaft for true running.

#### Non-Clogging

No springs or O-rings means no clogging. Non-pusher design renders extreme flexibility with no hang-up.

#### Field Repairable

Easy to repair on-site or at any John Crane Seal Rebuilding Centre with genuine John Crane replacement parts. Minimises replacement costs and downtime.

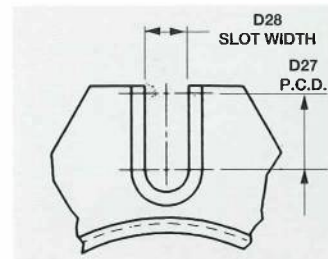
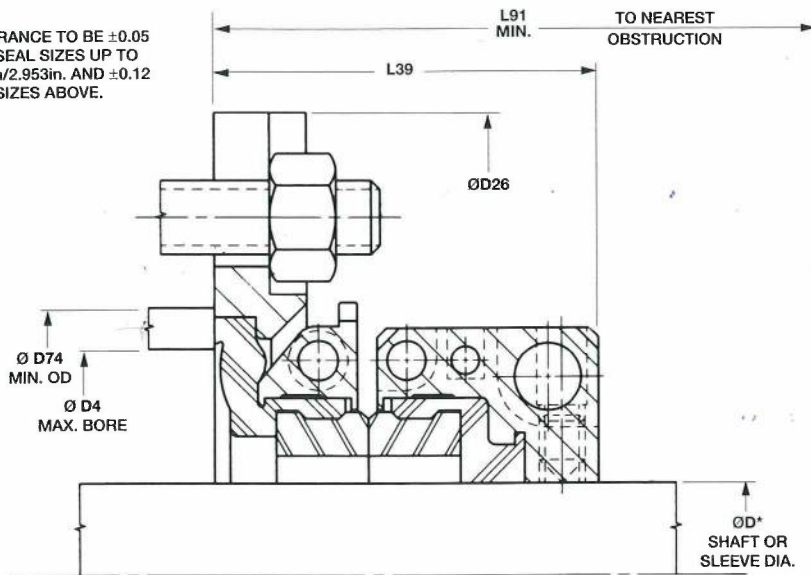
#### Easy Installation

Fewer parts and simple design allow for easy installation. Readily mounted on worn shafts and out-of-square stuffing boxes. No modification to equipment is required. All adaptive parts are supplied to allow fitting of the seal to existing equipment.

## Type 37FS

### Typical Arrangement/Dimensional Data

\*TOLERANCE TO BE  $\pm 0.05$   
FOR SEAL SIZES UP TO  
75mm/2.953in. AND  $\pm 0.12$   
FOR SIZES ABOVE.



Gland plate slots for metric and inch size seals. Two slots equispaced to dimensions shown.

The gland plate is available in circular form as an option to the standard shaped plate. A circular plate may be preferable where holes rather than slots are required for a 4-bolt fixing on a known P.C.D. Installation access and clearance must be suitable.

Chart 1. Type 37FS Metric Range Dimensional Data (mm)

Seal Size (mm)	Seal Size Code	D	D4	D26	D27		D28	D74	L39		L91
					Min.	Max.			SiC/SiC*	Carb./SiC** Carb./Cer.***	
35	0350	35	61	130	95	127	13	76	50	51	64
38	0380	38	64	133	98	130	13	79	50	51	64
40	0400	40	64	133	98	130	13	79	50	51	64
43	0430	43	69	138	103	135	13	84	50	51	64
45	0450	45	71	140	105	137	13	86	50	51	64
48	0480	48	74	143	108	140	13	89	50	51	64
50	0500	50	75	144	110	141	13	90	50	51	64
53	0530	53	77	146	111	143	13	92	50	51	64
55	0550	55	80	149	114	146	13	95	50	51	64
57	0570	57	83	152	117	149	13	98	50	51	64
58	0580	58	83	152	117	149	13	98	50	51	64
60	0600	60	87	156	121	152	13	102	50	51	64
63	0630	63	88	157	122	154	13	103	50	51	64
65	0650	65	90	159	124	156	13	105	50	51	64
68	0680	68	93	162	127	159	13	108	50	51	64
70	0700	70	96	165	130	162	13	111	50	51	64
75	0750	75	101	170	135	167	13	116	50	51	64
80	0800	80	122	219	165	216	13	137	66	68	76
85	0850	85	129	225	171	222	13	143	66	68	76
90	0900	90	140	261	194	257	16	154	66	68	76
95	0950	95	140	261	194	257	16	154	66	68	76
100	1000	100	149	271	203	267	16	163	66	68	76
105	1050	105	149	271	203	267	16	163	66	68	76
110	1100	110	159	280	213	276	16	173	66	68	76
115	1150	115	159	280	213	276	16	173	66	68	76
120	1200	120	168	290	222	286	16	183	66	68	76
125	1250	125	168	290	222	286	16	183	66	68	76
130	1300	130	178	299	232	295	16	192	66	68	76
135	1350	135	187	322	254	318	19	202	66	68	76
140	1400	140	187	322	254	318	19	202	66	68	76
145	1450	145	197	332	264	327	19	211	66	68	76
150	1500	150	197	332	264	327	19	211	66	68	76
155	1550	155	206	341	273	337	19	221	66	68	76
160	1600	160	206	341	273	337	19	221	66	68	76
165	1650	165	216	351	283	346	19	230	66	68	76
170	1700	170	216	351	283	346	19	230	66	68	76

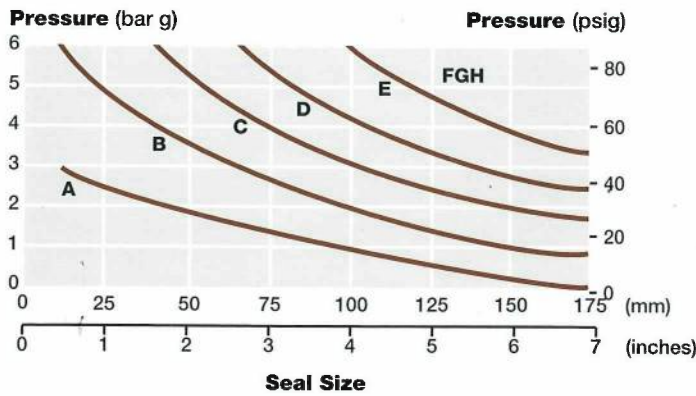
\*SiC/SiC = Silicon Carbide v. Silicon Carbide

\*\*Carb./SiC = Carbon v. Silicon Carbide

\*\*\*Carb./Cer. = Carbon v. Ceramic

# Type 37FS Specifications

**Chart 3. Pressure/Velocity (PV) Limits**



- A. Carbon v. Ceramic at 1800 rpm
- B. Carbon v. Ceramic at 1200 rpm
- C. Silicon Carbide v. Silicon Carbide at 1800 rpm
- D. Carbon v. Ceramic at 800 rpm
- E. Silicon Carbide v. Silicon Carbide at 1200 rpm
- F. Silicon Carbide v. Silicon Carbide at 1800 rpm (Dissimilar Materials)
- G. Carbon v. Silicon Carbide at 1800 rpm
- H. Silicon Carbide v. Silicon Carbide at 800 rpm

**Chart 4. Component and Material Identification Codes**

SEAL COMPONENTS		MATERIALS			
		Standard		Options	
Description	Part No.	Material	Code	Material	Code
Compression Ring	B46	Ethylene Propylene	485	Fluorocarbon	487
	B50	Medium Nitrile	492	Aflas*	491
Face/Primary Ring	B49	Coarse Grain Silicon Carbide	477	Nickel Bonded Tungsten Carbide	435
	B98	Resin Impregnated Carbon	171	-	-
Clamp Ring	B47	316 Stainless Steel	001	Alloy 400	011
Gland Plate Assembly	B51				
Drive Ring Assembly	B53				
Cap Head Screws	301				
Compression Tools	B79	Bronze	004	-	-
Grubscrews	342	High Tensile Steel	050	-	-
Seat/Mating Ring	B49	Coarse Grain Silicon Carbide	477	High Purity Ceramic	059
	B97†	Coarse Grain Silicon Carbide	477	Nickel Bonded Tungsten Carbide	435

Note: A B49 face is identified as a second seat for ordering purposes.

† Used only with a B98 carbon face.

\*Aflas is a trademark of the Asahi Glass Co. Ltd.

**Chart 5. Criteria For Installation**

Shaft/Sleeve	Limits	
Surface Finish	3.0 to 12.5 $\mu$ m Ra	
Out-of-Round (Ovality)	0.13mm/0.005 in.	
Axial Float (End Play)	$\pm$ 0.8mm/0.030 in.	
Out-of-Square (Axial Run-Out)	Carbon v. Ceramic	1.3mm/0.050 in.
	Silicon Carbide v. Silicon Carbide	2.5mm/0.100 in.
	Carbon v. Silicon Carbide	1.3mm/0.050 in.