

- A – Intelliface Stress Band
- B – Primary Ring
- C – T-Bar Drive
- D – Spring
- E – Retainer



Product Description

Type 32i seals are dry-running, outside mounted, single seals for top entering mixers incorporating John Crane intelli-face™ technology for quiet operation.

These seals are excellent for general duty applications on mixers, agitators, and reactors. The design is capable of handling up to 0.150"/3.81mm TIR and is well suited to vacuum or pressure. The Type 32i can be applied to pharmaceutical or general chemical services, and is ideally suited to indoor sites where equipment noise exceeds OSHA limits.

- For top entering mixers, agitators and reactor vessels
- Dry-running
- Featuring intelli-face technology
- Proprietary low wear carbon face material
- O-ring design, dual balanced
- Type 32i can be equipped with a sanitary gland featuring NPT ports or welded ferrules and certified materials. Electro-polished product contact hardware is optional
- Robust T-bar drive
- Field repairable

Performance Capabilities

- Temperature: -50°F to 300°F/-45°C to 150°C (depending on materials used)
- Pressure: full vacuum to 225 psig/15 bar g
- Speed: up to 400 fpm/2 mps

Technology

The 32i features unique patented seal face technology from John Crane's intelli-face. A common operating problem encountered with many single, dry-running contacting face seals on mixers is audible running noise or face squeal. Intelli-face technology uses applied engineered stresses on the carbon primary ring to modulate the frequency harmonics and seal face flatness of the seal ring.

The Type 32i stress ring attenuates the generation of a vibration signal associated with dynamic face contact squealing. Intelli-face technology actively provides predictable, controlled seal face flatness modulation in response to changing levels of stress at the seal face. The resulting effect is a continuously self-adjusting interruption in resonance and a desired quiet seal operation.

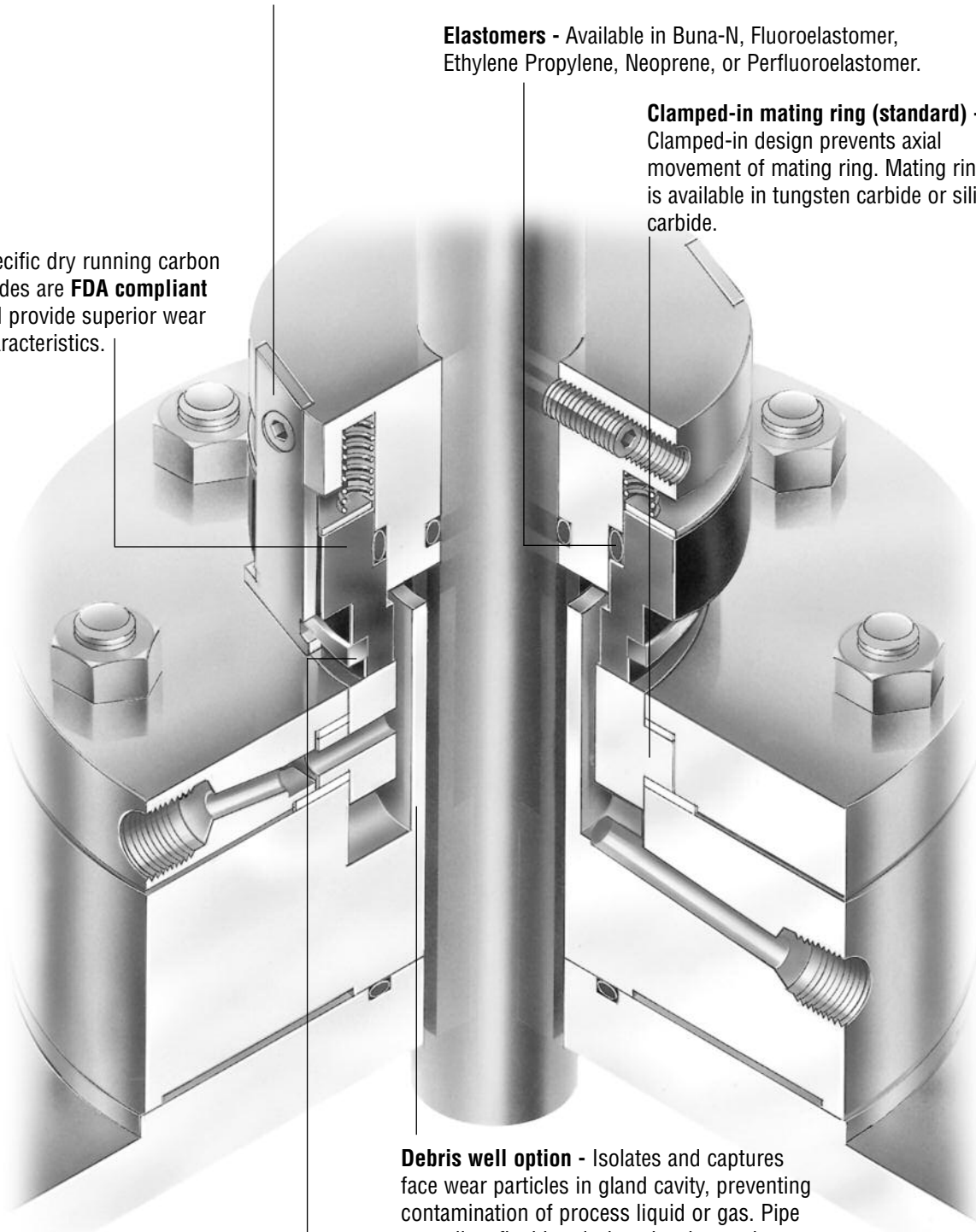
Design Features

"T" bar design - Simple, rugged drive design that withstands constant movement and vibrations of mixer applications. The Type 32i has been designed to accommodate up to 0.150" total runout.

Elastomers - Available in Buna-N, Fluoroelastomer, Ethylene Propylene, Neoprene, or Perfluoroelastomer.

Clamped-in mating ring (standard) - Clamped-in design prevents axial movement of mating ring. Mating ring is available in tungsten carbide or silicon carbide.

Specific dry running carbon grades are **FDA compliant** and provide superior wear characteristics.



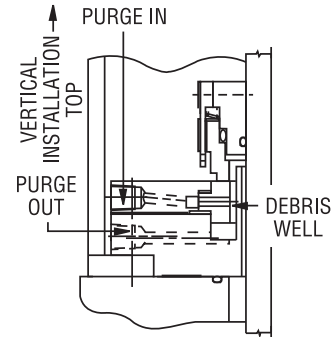
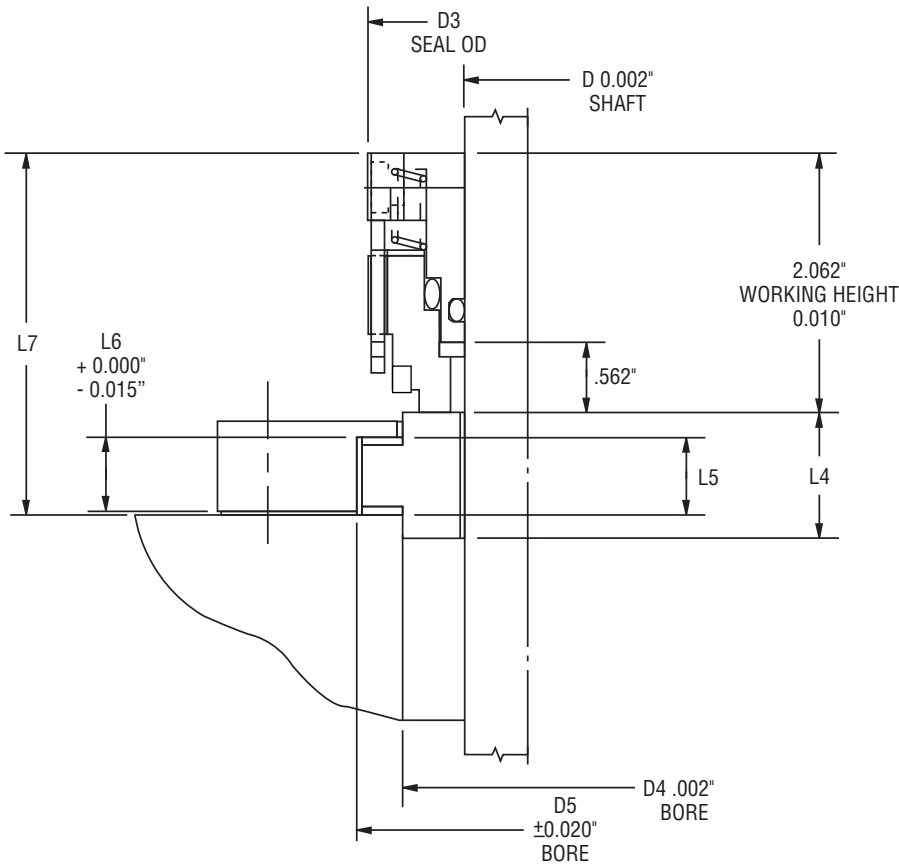
Debris well option - Isolates and captures face wear particles in gland cavity, preventing contamination of process liquid or gas. Pipe taps allow flushing during cleaning cycle. Hardware is available in 316SS, 316L, Alloy C-276 and Alloy B-3.

intelli-face - Engineered stress ring modulates frequency harmonics and face flatness.

TYPE 32i

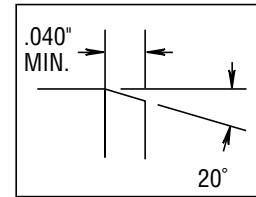
DRY-RUNNING, OUTSIDE MOUNTED SINGLE SEAL

Type 32i Typical Arrangement/Dimensional Data



Debris Well Option

For space required use dimensions indicated below for seal size 1/2" larger than shaft diameter.



For ease of installation, the lead-in edge of the shaft or sleeve should be chamfered as shown.

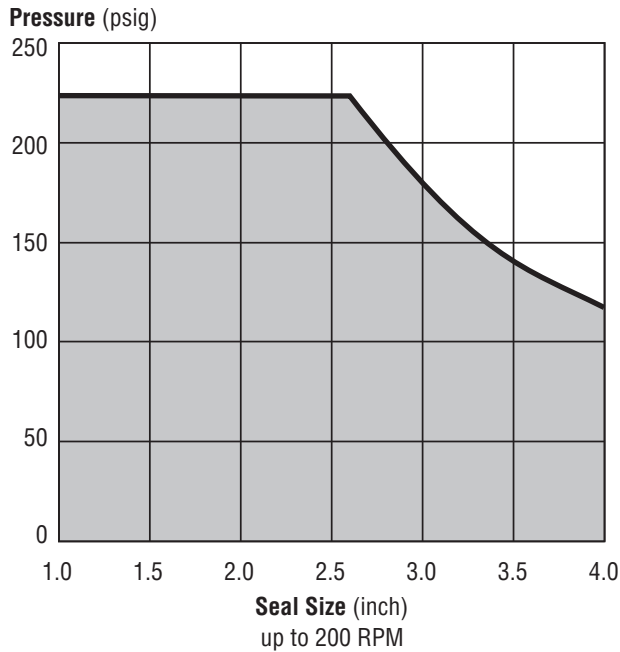
Type 32i Dimensional Data (inches)

Seal Size/D (inches)	D3	D4	D5	L4	L5	L6	L7
1.000	2.500	2.000	2.406	.812	.500	.468	2.718
1.125	2.625	2.125	2.656	.875	.500	.468	2.750
1.250	2.750	2.250	2.781	.875	.500	.468	2.750
1.375	2.875	2.500	3.031	.875	.500	.468	2.750
1.500	3.000	2.625	3.156	.875	.500	.468	2.750
1.625	3.125	2.750	3.281	.875	.500	.468	2.750
1.750	3.250	2.875	3.531	1.000	.625	.593	2.875
1.875	3.375	3.000	3.656	1.000	.625	.593	2.875
2.000	3.500	3.125	3.781	1.000	.625	.593	2.875
2.125	3.625	3.250	3.906	1.000	.625	.593	2.875
2.250	3.750	3.375	4.031	1.000	.625	.593	2.875
2.375	3.875	3.500	4.156	1.000	.625	.593	2.875
2.500	4.000	3.625	4.281	1.000	.625	.593	2.875
2.625	4.125	3.750	4.406	1.000	.625	.593	2.875
2.750	4.250	3.875	4.531	1.000	.625	.593	2.875

Seal Size/D (inches)	D3	D4	D5	L4	L5	L6	L7
2.875	4.375	4.000	4.656	1.000	.625	.593	2.875
3.000	4.500	4.125	4.781	1.000	.625	.593	2.875
3.125	4.625	4.250	4.906	1.000	.625	.593	2.875
3.250	4.750	4.375	5.031	1.000	.625	.593	2.875
3.375	4.875	4.500	5.156	1.000	.625	.593	2.875
3.500	5.000	4.625	5.281	1.000	.625	.593	2.875
3.625	5.125	4.750	5.406	1.000	.625	.593	2.875
3.750	5.250	4.875	5.531	1.000	.625	.593	2.875
3.875	5.375	5.000	5.656	1.000	.625	.593	2.875
4.000	5.500	5.125	5.781	1.000	.625	.593	2.875
4.125	5.625	5.250	5.906	1.000	.625	.593	2.875
4.250	5.750	5.375	6.031	1.000	.625	.593	2.875
4.375	5.875	5.500	6.156	1.000	.625	.593	2.875
4.500	6.000	5.625	6.281	1.000	.625	.593	2.875

Note: Standard sizes: 1" - 4.5". For sizes above 4.5" contact John Crane.

Type 32i PV Limits



Criteria for Installation

Shaft/Sleeve	Limits
Surface Finish	63 Ra
Ovality/Out of Roundness (Shaft)	0.002" / 0.051mm
End Play/Axial Float Allowance	± 0.062" / 1.57mm
Shaft Runout	0.150" / 3.81mm TIR max.
Squareness of Vessel Flange Face to Shaft	0.031" / 0.78mm TIR max.

Type 32i Materials

Materials	Standard	Option
Primary Ring	Carbon	—
Mating Ring	Tungsten Carbide	Silicon Carbide
Gasket	Mineral Filled TFE	—
Springs	316 ss	—
Hardware	316 ss	Alloy C-276 / Alloy 20



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