

# FOR GLASS LINED VESSELS

**Technical Specification** 



## **Product Description**

The Type CK738 vessel seal range is the high performance DIN cartridge solution for glass lined vessels. The special modular design ensures maximum application flexibility through interchangeable sealing components. The cartridge design is standardised to fit on top entry, glass lined agitator vessels to DIN 28136, with mounting flange to DIN 28137-2 and agitator shaft end dimensions to DIN 28159. Modifications to fit non-standardised equipment are also possible.

All versions are suitable for operation in potentially explosive atmospheres. Depending on individual explosion protection requirements, the seal operating limits may differ from the values given in this data sheet. Consult John Crane for more information.

#### Performance Capabilities\*

- Speed: 0 to 570 rpm
- Vessel pressure: vacuum to 25 bar(g) (W) (D: up to 16 bar(g); G, GD: up to 10 bar(g))
- Barrier pressure: maximum 27 bar(g) (W) (D: max. 17 bar(g); G, GD: max. 13 bar(g))
- Temperature: -40°C to +200°C -100°C special design
- Shaft run out: axial +/- 2.0 mm

\*Maximum values (dependant on combination of operating conditions). For details see chart operating limits in family brochure B-DINVesselSeals/Eng. For operating conditions outside these limits consult John Crane.

## Design Features

- Dual cartridge seal to DIN 28138 for glass lined vessels
- Fits mounting flange to DIN 28137-2 and shaft end dimensions to DIN 28159
- · Back-to-back seal arrangement with balanced faces
- Reverse pressure capabilities inboard
- Available in four variants of the lubrication system:
  - CK738 W Liquid lubricated wet seal
- CK738 D Dry running contacting seal
- CK738 G Gas lubricated non-contacting seal
- CK738 GD Gas lubricated non-contacting inboard, Dry running outboard
- Special bearing design for high performance of non-contacting gas seals
- Special PTFE-based secondary sealing elements support a broad chemical and temperature application range
- Special carbon materials allow for exceptional operation with dry barrier gas without an external humidifier
- · Special designs and material options available on request
- · Cooling flange or cooling jacket available on request
- G design advantages include wear-free and particle-free operation, together with an easy supply system. In addition, the GD design reduces barrier gas consumption
- Suitable for application in explosive areas. Certificates of conformity according to European Directive 94/9/EC (ATEX) Cat. 1, 2 and 3 available on request



# **TYPE CK738** For glass lined vessels

Technical Specification

**CK738W** 

Type CK738 Typical Arrangement/Dimensional Data (mm)





CK738D

Seal Size	Flange Connectivity				Fastening						Cartridge Dimensions								Connections & Mounting			
d3	d1	d4	D8	D9	k1	n x d2	bolt	k2	n x d5	bolt	d7	h	h3	h4	H11	H12	H13	H15	A & B	а	Т	T1
40	175	110	102	-	145	4 x 18	M16	-	-	-	38	225	47	148	25	50	100	126	G 3/8	110	M12	M16
50	240	176	138	-	210	8 x 18	M16	-	-	-	48	253	51	167	25	50	100	141	G 3/8	120	M12	M16
60	275	204	188	-	240	8 x 22	M20	-	-	-	58	259	55	172	25	50	110	146	G 3/8	145	M12	M20
80	305	234	212	-	270	8 x 22	M20	-	-	-	78	285	61	187	30	60	120	157	G 1/2	178	M16	M20
100	395	313	268	-	350	12 x 22	M20	-	-	-	98	285	60	186	30	60	120	156	G 1/2	208	M16	M20
125	505	422	320	306	460	4 x 22	M20	350	12 x 22	M20	120	310	53	201	30	60	140	172	G 1/2	235	M20	M20
140	505	422	320	306	460	4 x 22	M20	350	13 x 22	M20	135	325	64	205	30	60	140	176	G 1/2	260	M20	M20
160	505	422	320	306	460	4 x 22	M20	350	14 x 22	M20	150	345	65	206	30	60	145	176	G 1/2	270	M20	M20

Dimensions according to DIN 28138 Part 1 and 3 and DIN 28154 - special dimensions and designs possible.