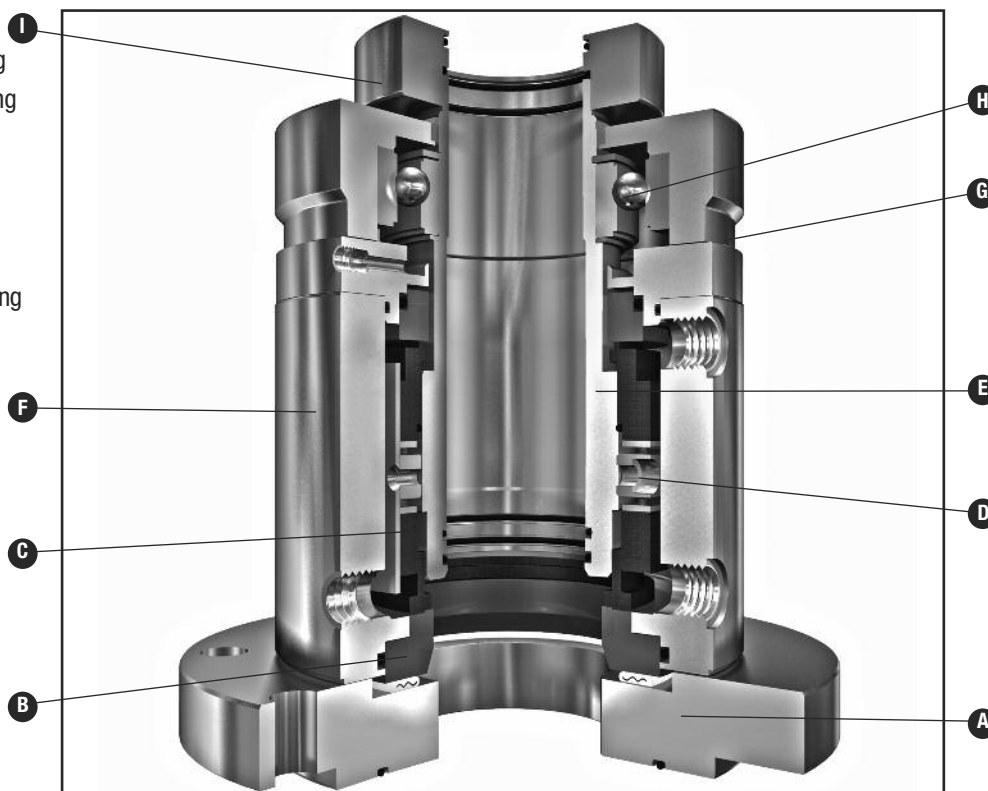


- A – DIN Flange
- B – Seat/Mating Ring
- C – Face/Primary Ring
- D – Retainer
- E – Sleeve
- F – Housing
- G – Gauging Edge
- H – Type CK726 Bearing
- I – Clamp Ring



### Product Description

The Type CK 728 vessel seal range is the high performance DIN cartridge solution for various industries including high purity pharmaceutical applications. They are available in wet lubricated, contacting dry running and non-contacting gas lubricated versions. The special modular design ensures maximum application flexibility through interchangeable sealing components. The cartridge design is standardised to fit on top entry, steel agitator vessels to DIN 28136, with mounting flange to DIN 28141 and agitator shaft end dimensions to DIN 28154.

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.

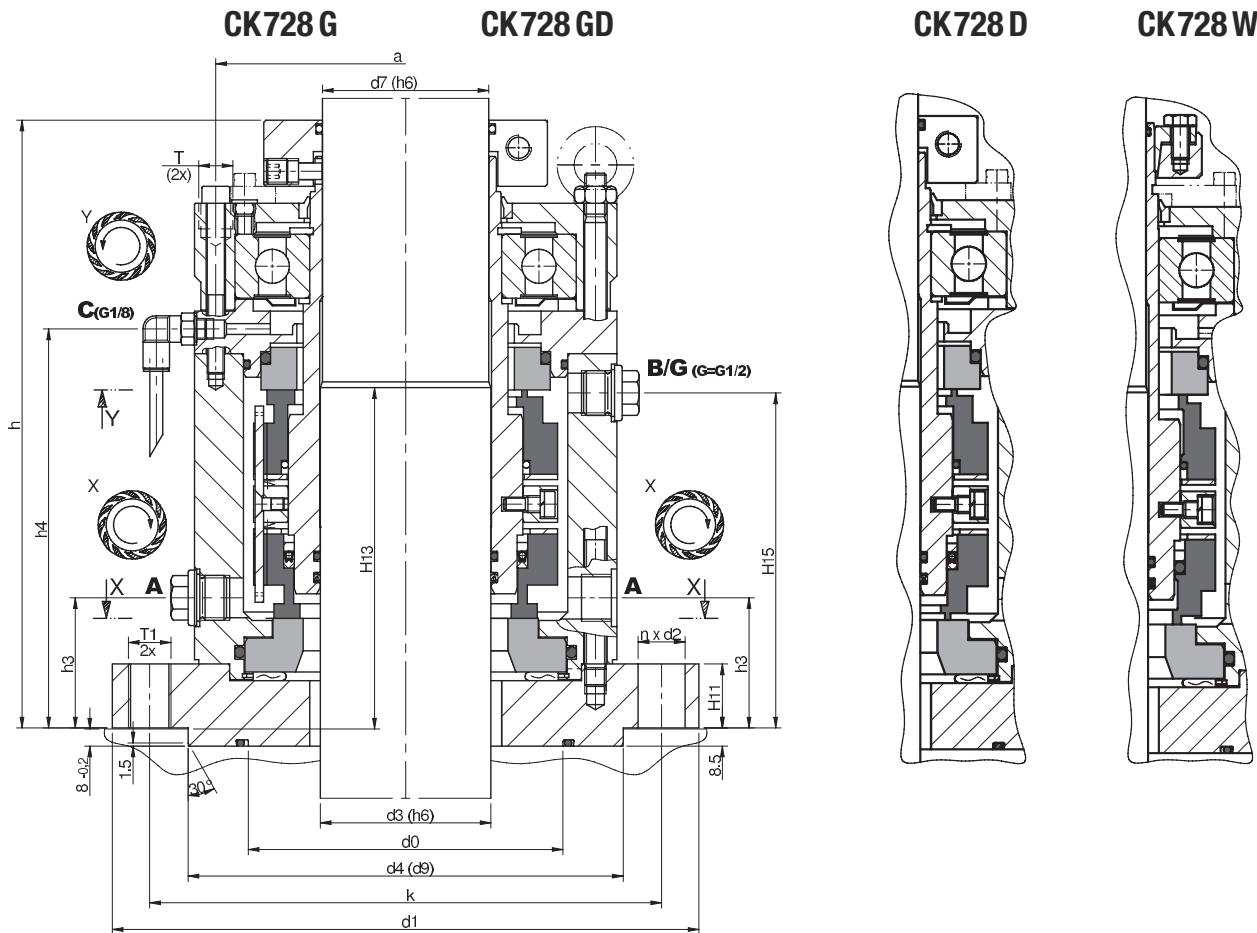
### Design Features

- Dual cartridge seal to DIN 28138 for stainless steel vessels
- Fits mounting flange to DIN 28141 and shaft end dimensions to DIN 28154
- Back-to-back seal arrangement with balanced faces
- Debris well and cooling flange options available
- Reverse pressure capabilities inboard
- Available in four variants of the lubrication system:
  - CK728 W - Liquid lubricated wet seal
  - CK728 D - Dry running contacting seal
  - CK728 G - Gas lubricated non-contacting seal
  - CK728 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
- 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 CK728

## FOR STEEL VESSELS

### Type CK728 Typical Arrangement/Dimensional Data (mm)



| Seal | Flange Connectivity |     |     |     | Fastening |         |      | Cartridge Dimensions |     |    |     |     |     | Connections & Mounting |       |     |     |     |
|------|---------------------|-----|-----|-----|-----------|---------|------|----------------------|-----|----|-----|-----|-----|------------------------|-------|-----|-----|-----|
|      | d3                  | d0  | d1  | d4  | k         | n x d2  | bolt | d7                   | h   | h3 | h4  | H11 | H13 | H15                    | A & B | a   | T   | T1  |
| 40   | 91                  | 175 | 110 | 145 | 145       | 4 x 18  | M16  | 38                   | 232 | 38 | 135 | 23  | 135 | 113                    | G 3/8 | 106 | M12 | M16 |
| 50   | 107                 | 240 | 176 | 210 | 210       | 8 x 18  | M16  | 48                   | 250 | 51 | 167 | 25  | 140 | 141                    | G 3/8 | 136 | M12 | M16 |
| 60   | 116                 | 240 | 176 | 210 | 210       | 8 x 18  | M16  | 58                   | 259 | 55 | 172 | 25  | 150 | 146                    | G 3/8 | 145 | M12 | M16 |
| 80   | 147                 | 275 | 204 | 240 | 240       | 8 x 22  | M20  | 78                   | 285 | 61 | 187 | 30  | 160 | 157                    | G 1/2 | 178 | M16 | M20 |
| 100  | 173                 | 305 | 234 | 270 | 270       | 8 x 22  | M20  | 98                   | 285 | 60 | 186 | 30  | 170 | 156                    | G 1/2 | 208 | M16 | M20 |
| 125  | 198                 | 330 | 260 | 295 | 295       | 8 x 22  | M20  | 120                  | 310 | 53 | 201 | 30  | 195 | 172                    | G 1/2 | 235 | M20 | M20 |
| 140  | 218                 | 395 | 313 | 350 | 350       | 12 x 22 | M20  | 135                  | 325 | 64 | 205 | 30  | 200 | 176                    | G 1/2 | 270 | M20 | M20 |
| 160  | 237                 | 395 | 313 | 350 | 350       | 12 x 22 | M20  | 150                  | 325 | 65 | 206 | 30  | 205 | 176                    | G 1/2 | 295 | M20 | M20 |
| 180  | 263                 | 445 | 364 | 400 | 400       | 12 x 22 | M20  | 170                  | 335 | 60 | 210 | 32  | 225 | 185                    | G 1/2 | 320 | M24 | M20 |
| 200  | 288                 | 445 | 364 | 400 | 400       | 12 x 22 | M20  | 190                  | 370 | 60 | 225 | 32  | 235 | 185                    | G 1/2 | 340 | M24 | M20 |
| 220  | 326                 | 505 | 422 | 460 | 460       | 16 x 22 | M20  | 210                  | 430 | 60 | 250 | 32  | 255 | 213                    | G 1/2 | 370 | M24 | M20 |

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



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