

# PRODUCT INFORMATION

## PRESSURE RELIEF

# TC(R)-KUB®

## Reverse Acting Buckling Pin Bursting Disc



**REMBE®** GMBH  
SAFETY+CONTROL



Engineered  
and Manufactured  
in Germany

## Safe Sterility for Aseptic Processes

The TC(R)-KUB® bursting disc suitable for gas and fluid media was developed particularly for hygienic, aseptic and sanitary applications, e.g. in the pharmaceutical, biotec and food industries.

This bursting disc has a smooth convex surface upstream of the pressure / process side which reliably guarantees sterility at an operating ratio up to 98 % of the burst pressure and efficient work load.

This extremely stable and sturdy design allows a safe, easy and torque-independent installation in standard pipe connections.

The TCR-KUB® model additionally offers integrated PTFE clamp sealing (IAW FDA- and USPS Class VI), which can be replaced if and when required.



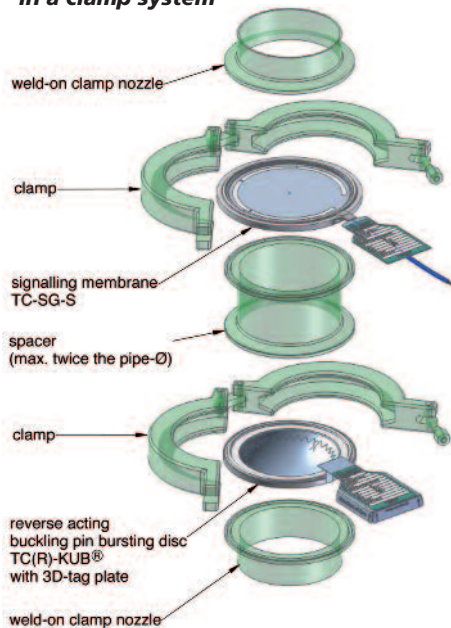
### Features

- Sizes from 1" (DN 25) through to 4" (DN 100)
- Pressure range: from 0.6 barg
- Operating ratio up to 98% of burst rating
- Standard materials: stainless steel, nickel, aluminium, monel, inconel, Hastelloy C, tantalum, titanium
- Full vent area
- Non fragmenting design
- High vacuum / back pressure resistance, even with low burst pressures
- Universally suitable for gas and liquids
- Fully metallic CIP / SIP design
- TCR-KUB bursting disc with integrated and replaceable clamp sealing (FDA and USPS Class IV conform)\*
- Constant burst pressure and long lifetime due to non-corrosive influence of the pressure defining buckling pin element
- Signalling with separate membrane\*
- Fully torque independent installation

*\*optional*



### TC(R)-KUB® bursting disc with TC-SG-S signalling membrane in a clamp system



Optionally bursting disc actuation can be indicated with an TC-SG-S signalling membrane. It is installed in a position of max. twice the pipe diameter downstream the original bursting disc.

The signalling function corresponds to that one of the opening dry contact. In case of bursting the TC(R)-KUB® reverse acting buckling pin disc resp. if dynamic pressure is sensed the electrical intrinsically safe closed circuit is interrupted. This interruption in the closed circuit can be used by means of an approved isolated switch amplifier with relay output or the like for signalling and/or process controlling.



TC(R)-KUB® in test facility

## Application

- Complex chemical processes
- GMP facilities
- Pressure Equipment
  - Reactors
  - Tanks
  - Pipework
  - Gas cylinders
  - All kinds of pressure vessels

## Customer Benefits

- Direct installation in existing pipe connections
- Safe sterility and FDA compliant
- Cost-saving operation

## Quality and Certifications

REMBE® bursting discs are tested and approved IAW PED. Based on basis required guidelines, e. g. PED 97/23 EG, all series are produced, tested and delivered with inspection certificate 3.1 IAW DIN EN 10204.

The REMBE® team provides total support in designing, sizing and selecting the bursting disc IAW customer specifications and

- PED
- EN ISO 4126-2 and EN 4126-6
- AD-2000 Merkblatt A1
- ASME Sec. VIII, Div. 1
- API Standard 520, Part 1 requirements (whichever applies)

### TECHNICAL DATA

#### TC(R)-KUB® for direct Installation in Standard Pipe Connections

NPS	DN	Vent Area <sup>1)</sup>	min. Burst Pressure P <sub>min</sub> <sup>1) 2)</sup>
[in]	[mm]	[cm <sup>2</sup> ]	[barg @ 121 °C]
1"	25 *	3	3.0
1½"	40 *	8	2.5
2"	50 *	14	2.0
2½"	65	25	1.0
3"	80	40	0.8
4"	100	62	0.6

<sup>1)</sup> DIN 32676 for piping standard DIN 11866 series A

TC(R)-KUB bursting discs for other clamping systems and piping standards on request

<sup>2)</sup> Minimum manufacturable burst pressure of the TC(R)-KUB with sealing part and stainless steel buckling pin element

\* in TC(R)-KUB design available

Other sizes on request