



# KUB®

Reverse acting rupture disc

## ENGINEERED TO LAST: ROBUST, HIGH PERFORMANCE, RUPTURE DISC SOLUTION

The KUB® is the only rupture disc to be manufactured using Euler's critical load formula to determine the burst pressure, creating the most robust, high-performance rupture disc available. Unlike other rupture disc solutions where a weak point is created in the metal, the KUB® is a unique, highly engineered solution, benefiting from a series of buckling pins which accurately collapse for reliable, full bore, opening. As there is no specific weak point on the rupture disc, the KUB® is an extremely robust solution, almost immune to damage by incorrect handling, improper installation or even being dropped! This maximizes the lifespan of the disc and minimizes long-term investment by lowering ongoing replacement costs. The KUB® features a two-layer design, with the smooth, unblemished surface of the sealing membrane facing the process minimizing the possibility of damage due to corrosion.

Boasting a 98% operating ratio, the KUB® is not subject to fatigue even at higher operating pressures\* and in the most demanding of process conditions in vapor, gas, liquid or two-phase applications. Unlike many other reverse acting discs, the unique construction of the KUB® makes it fully compatible with liquid-only applications, maximizing installation points which can benefit from this rupture disc, simplifying customers' installation, maintenance and purchasing routines.

### REMBE® Innovation – unique in the market:

The KUB® rupture disc has a robust design and can be removed, inspected, cleaned and reinstalled. Any damage is easy to detect with the naked eye.

### Your advantages

- Unique buckling pin element – creates **the most robust rupture disc design** available.
- **Reinstall and reuse with ease after inspection** – guarantees maximum lifespan of one rupture disc, reducing spares costs.
- **Virtually immune to damage** during installation, transport or storage – maximizes process uptime and unnecessary replacement costs.
- **Extend safety valve lifespan** – robust design protects valves from process media, reducing corrosion risk and maximizing overall investment.
- Widest size and burst pressure range in a single reverse acting disc – one-disc type suitable for a wide range of process conditions, improving purchasing, inspection and maintenance routines.
- **Compatible with liquid-only applications** – maximizes installation points where the benefits of this technology can be achieved.

\*Depending on the specific application.



You can find detailed information and contact details for enquiries relating to KUB® at [www.rembe.us](http://www.rembe.us). Give us a call on: T +1 704 716 7022 or contact us via email: [info@rembe.us](mailto:info@rembe.us).





Safety is for life.™

DATA SHEET

## Certification

Works Certificate	PED	ASME	KOSHA (South Korea)	CML (China)	TR CU (Russia)

Technical restrictions must be observed dependent on the certification.

## Technical Data

### Product Parameters

Feature	Characteristics	Variations
Holder compatibility	(I)G-KUB®()	IG-KUB®; IG-KUB®-V; IG-KUB®-PTU; G-KUB®; G-KUB®-V; G-KUB®-PTU
Signaling available	✓	NIMU, SIGU, BT-S, FOS, SB(-S), SGK, SKB-S
Safety valve isolation	✓	-
Pulsating/Cycling	✓	-
Vacuum resistance	absolute*	-
Back pressure resistance	✓	-
K <sub>RG</sub> (ASME)	0.7	-
K <sub>RL</sub> (ASME)	3.51	-
Torque independent burst pressure	✓	-
Tolerance [%]	± 10 (±5; -0/+10; +0/-10 upon request)	-
Manufacturing design range [%]	0	-
Operating ratio [%]	Up to 98**	-
Non-fragmenting design	✓	-
Temperature range [°C]	-80 to 600***	-
Leakrate [mbar l s <sup>-1</sup> ]	10 <sup>-4</sup> to 10 <sup>-6</sup>	-

\*for burst pressure > 1bar  
\*\*Depending on the specific application.

### Temperature Range PED

Material	min. Temperature [°C]	max. Temperature [°C]
Inconel	-196	600***
Hastelloy	-196	400
Monel	-10	425
Nickel	-10	600
Stainless steel	-80	320
Titanium	-10	300
Tantalum	-10	250

\*\*\*Further temperature ranges on request.

### Process medium

Process medium	Suitability
Gas/Steam	✓✓
Liquid with gas cushion	✓✓
Liquid	✓
Two phase flow	✓
Hygienic applications	✓✓

✓✓ Recommended  
✓ Suitable





Safety is for life.™

## DATA SHEET

### Burst Pressure Range (PED)

DN	NPS [in]	Vent area		Burst pressure			
		[cm <sup>2</sup> ]	[in <sup>2</sup> ]	min. [bar g]	max. [bar g]	min. [psi g]	max. [psi g]
20	0.75	3.4	0.53	3	120	43.5	1740
25	1	5.5	0.85	2	120	29	1740
32	1.25	9.5	1.47	2	100	29	1450
40	1.5	13	2.02	1.7	100	24.7	1450
50	2	22	3.41	1.5	90	21.8	1310
65	2.5	35	5.43	1	70	14.5	1020
80	3	50	7.75	0.8	70	11.6	1020
100	4	80	12.4	0.5	50	7.25	725
125	5	120	18.6	0.5	35	7.25	508
150	6	180	27.9	0.5	30	7.25	435
200	8	280	43.4	0.5	16	7.25	232
250	10	440	68.2	0.5	14	7.25	203
300	12	650	101	0.5	10	7.25	145
350	14	860	133	0.5	8	7.25	116
400	16	1100	171	0.5	6	7.25	87
450	18	1485	230	0.5	6	7.25	87
500	20	1855	288	0.5	6	7.25	87
600	24	2515	390	0.5	6	7.25	87
650	26	3100	481	0.5	6	7.25	87
700	28	3680	570	0.5	6	7.25	87
750	30	4250	659	0.5	6	7.25	87
800	32	4470	693	0.5	6	7.25	87

### Burst Pressure Range (ASME)

DN	NPS [in]	Vent area		Burst pressure			
		[cm <sup>2</sup> ]	[in <sup>2</sup> ]	min. [bar g]	max. [bar g]	min. [psi g]	max. [psi g]
20	0.75	2.7	0.42	8	150	116	2175
25	1	4.5	0.7	6.5	150	94.3	2175
32	1.25	8.5	1.32	5	140	72.5	2030
40	1.5	11	1.7	4	130	58	1885
50	2	21	3.29	3	130	43.5	1885
65	2.5	30	4.72	2	120	29	1740
80	3	47	7.33	1.5	120	21.8	1740
100	4	80	12.4	0.6	110	8.7	1595
125	5	120	18.6	0.6	100	8.7	1450
150	6	180	27.9	0.5	80	7.3	1160
200	8	280	43.4	0.5	60	7.3	870
250	10	440	68.2	0.4	50	5.8	725
300	12	650	100.7	0.2	30	2.9	435
350	14	860	133	0.2	25	2.9	363
400	16	1100	171	0.2	25	2.9	363
450	18	1485	230	0.1	25	1.5	363
500	20	1855	288	0.1	20	1.5	290
600	24	2710	420	0.05	20	0.7	290
650	26	3100	480	0.05	17	0.7	247
700	28	3680	570	0.05	15	0.7	218
750	30	4240	657	0.05	12	0.7	174
800	32	4850	752	0.05	10	0.7	145



Material Specific Parameters

DN	NPS [in]	Burst pressure							
		SS/SS		Ni/Ni		SS/Ni		SS/Has	
		min. [bar g]	max. [bar g]	min. [bar g]	max. [bar g]	min. [bar g]	max. [bar g]	min. [bar g]	max. [bar g]
20	0.75	3.2	130	3.5	110	3.5	130	3.5	130
25	1	2.0	150	2.5	100	2.5	150	2.5	180
32	1.25	2	135	2	100	2	135	2	145
40	1.5	1.5	140	1.5	90	1.5	140	1.5	150
50	2	1.2	120	1.2	80	1.2	120	1.2	130
65	2.5	1	100	1	70	1	100	1	110
80	3	0.5	95	0.8	60	0.8	95	0.8	100
100	4	0.4	80	0.5	45	0.5	80	0.5	90
125	5	0.4	60	0.4	30	0.4	60	0.4	70
150	6	0.3	45	0.3	25	0.3	45	0.3	50
200	8	0.3	35	0.3	16	0.3	35	0.3	40
250	10	0.3	25	0.3	12	0.3	25	0.3	30
300	12	0.2	15	0.25	10	0.25	15	0.2	18
350	14	0.2	12	0.2	8	0.2	12	0.2	15
400	16	0.2	10	0.15	5	0.15	10	0.2	10
450	18	0.2	7.5	0.15	4.5	0.15	7.5	0.15	7.5
500	20	0.15	6	0.15	4	0.15	6	0.15	6
600	24	0.15	4	-	-	-	-	-	-
650	26	0.15	4	-	-	-	-	-	-
700	28	0.15	3.5	-	-	-	-	-	-
750	30	0.15	3	-	-	-	-	-	-
800	32	0.15	2	-	-	-	-	-	-

Material Specific Parameters

DN	NPS [in]	Burst pressure							
		Inc/Inc		SS/Inc		Mo/Mo		SS/Mo	
		min. [bar g]	max. [bar g]	min. [bar g]	max. [bar g]	min. [bar g]	max. [bar g]	min. [bar g]	max. [bar g]
20	0.75	5	125	3.5	130	3	90	3	130
25	1	3	150	2.5	150	3	90	3	150
32	1.25	3	135	2	135	2.5	70	2.3	135
40	1.5	2.5	140	1.5	140	2	70	2	140
50	2	2	120	1.2	120	1.8	60	1.8	120
65	2.5	1.5	100	1	100	1.8	40	1.8	100
80	3	1	95	0.8	95	1	40	1	95
100	4	1	80	0.5	80	0.5	30	0.5	80
125	5	0.8	60	0.4	60	0.5	25	0.5	60
150	6	0.6	45	0.3	45	0.4	20	0.4	45
200	8	0.4	35	0.3	35	0.4	12	0.4	35
250	10	0.4	25	0.3	25	0.3	10	0.3	25
300	12	0.35	15	0.2	15	0.2	7	0.2	15
350	14	0.3	12	0.2	12	0.2	5	0.2	12
400	16	0.25	10	0.2	10	0.2	4	0.2	10
450	18	0.25	7.5	0.2	7.5	0.2	3.5	0.2	7.5
500	20	0.2	6	0.15	6	0.1	3	0.1	6
600	24	0.2	4	0.15	4	-	-	-	-



Material Specific Parameters

DN	NPS [in]	Burst pressure							
		Inc/Has		Inc/Ni		Has/Has		Ti/Ti	
		min. [bar g]	max. [bar g]	min. [bar g]	max. [bar g]	min. [bar g]	max. [bar g]	min. [bar g]	max. [bar g]
20	0.75	4	130	3.5	130	4	130	5	90
25	1	3	150	2.5	150	3	200	3	90
32	1.25	2.3	135	2	135	2.3	145	2.5	70
40	1.5	2	140	1.5	140	2	150	2	70
50	2	1.5	120	1.2	120	1.5	130	2	60
65	2.5	1.5	100	1	100	1.5	110	2	40
80	3	1.2	95	0.8	95	1.2	100	2	40
100	4	1	80	0.5	80	1	90	1.5	30
125	5	1	60	0.4	60	1	70	1	25
150	6	0.8	45	0.3	45	0.8	50	0.5	20
200	8	0.5	35	0.3	35	0.5	40	0.4	12
250	10	0.4	25	0.3	25	0.4	30	0.3	10
300	12	0.3	15	0.25	15	0.3	18	0.2	7
350	14	0.3	12	0.2	12	0.3	15	0.2	5
400	16	0.2	10	0.15	10	0.2	10	0.2	4
450	18	0.2	7.5	0.15	7.5	0.2	7.5	0.15	3.5
500	20	0.2	6	0.15	6	0.2	6	0.1	3

Material Specific Parameters

DN	NPS [in]	Burst pressure					
		SS/Ti		Ta/Ta		SS/Ta	
		min. [bar g]	max. [bar g]	min. [bar g]	max. [bar g]	min. [bar g]	max. [bar g]
20	0.75	5	130	5	90	5	130
25	1	3	150	3	90	3	150
32	1.25	2.5	135	2.5	70	2.5	135
40	1.5	2	140	2	70	2	140
50	2	2	120	2	60	2	120
65	2.5	2	100	2	40	2	100
80	3	2	95	1.5	40	1.5	95
100	4	1.5	80	0.5	30	0.5	80
125	5	1	60	0.8	25	0.5	60
150	6	0.5	45	0.5	20	0.5	45
200	8	0.4	35	0.4	10	0.4	35
250	10	0.3	25	0.4	7	0.4	25
300	12	0.2	15	0.3	4	0.3	15
350	14	0.2	12	-	-	-	-
400	16	0.2	10	-	-	-	-
450	18	0.15	7.5	-	-	-	-
500	20	0.1	6	-	-	-	-

Material specific parameters should be considered in combination with the applicable certification. Due to different type testing requirements, deviations in technical parameters are possible. SS = Stainless Steel; Has = Hastelloy; Inc = Inconel; Ni = Nickel; Mo = Monel; Ti = Titanium; Ta = Tantalum

Company Names or trademarks combined with material descriptions are only used for description purposes. The product promoted is not product of the respective companies and trademarks.

Consulting. Engineering. Products. Service.