



CEPIC

Anticorrosion since 1958

Graphite Rupture Discs



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Specialist since 1958 in the manufacture of anticorrosion chemical engineering equipment, CEPIC offers its customers a wide range of material:

- Centrifugal pumps in impregnated graphite and plastics
- Impregnated graphite heat exchangers
- Systems and skids (dilution of H₂SO₄, treatment of HCl, ejectors, vacuums)
- Made-to-specification machined graphite parts
- Rupture discs in impregnated artificial graphite: Carbonite®

Carbonite® rupture discs:

Thanks to their rupture, they protect equipment exposed to the constraints caused by variations in pressurization.

Carbonite® permits the production of economical discs that are safe and resistant to corrosion.

Our technology is based on the best materials (fine grain graphite), on tested machining techniques, on our teams' substantial experience and on close collaboration with our customers.

Production is carried out according to the NF EN ISO 4126-2 standards and in conformity with the Pressure Equipment Directive (PED) 97/23/EC.

Information

CEPIC's Carbonite® rupture discs are used in many industrial sectors: chemicals, fine chemicals and specialties, petrochemicals, pharmaceuticals, the food industry, water treatment, and shipping. For static or mobile applications.

Advantages of Carbonite® rupture discs:

- ✓ **Operating temperature :**
 - Standard use, maximum 170°C
 - 200°C for liquid phases with extra equipment
 - 300°C for gaseous phases with extra equipment
- ✓ **Economical**
- ✓ **Resistant to corrosive products**
- ✓ **Durability**
- ✓ **Easy fitting**
- ✓ **Resistant to creeping, low linear dilatation coefficient**
- ✓ **Low sensitivity to temperature**
- ✓ **Fast opening passageways**
- ✓ **Cepic technical service at your disposition**

CARBONITE® RUPTURE DISCS :

- 7 series designed for different conditions of use
- Monobloc or membrane discs depending on the pressure and the frequency of ruptures

REQUIREMENTS FOR DISC SELECTION :

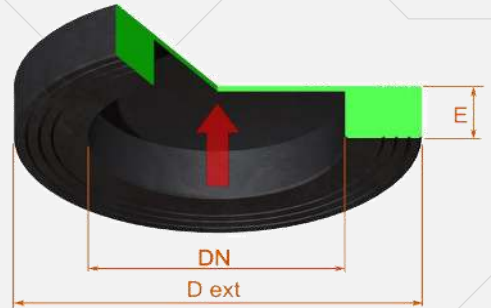
- Type of equipment and product characteristics
- Active diameter
- Effective rupture pressure in bar eff (pee)
- Operating temperature (at the disc level)
- Other conditions (vacuum, counter pressure ...)

GUIDE TO SELECTION

SERIES	TYPE	PRESSURE CLASS	APPLICATION	DN (mm)	TEMP Max.	POSSIBLE OPTION	PEE (bar eff.)
1	MONOBLOC DISCS	MEDIUM PRESSURE	NON OXYDIZING CORROSIVE FLUIDS	25-600	170°C	-	0.08-40
2	MONOBLOC DISCS	MEDIUM PRESSURE	NON OXYDIZING CORROSIVE FLUIDS OPERATING IN VACUUME OR COUNTER PRESSURE	25-600	170°C	VACUUM GRID	0.35-40
3	MONOBLOC DISCS	MEDIUM PRESSURE	CORROSIVE & OXYDIZING FLUIDS	25-600	170°C	FLUORINATED POLYMER FILM	0.1-35
4	MONOBLOC DISCS	HIGH PRESSURE	NON OXYDIZING CORROSIVE FLUIDS & PROTECTION AGAINST COUNTER PRESSURE	50-700	170°C	VACUUM GRID	1.2-100
5	MEMBRANE DISCS	LOW PRESSURE	NON OXYDIZING CORROSIVE FLUIDS OPERATING IN VACUUME OR COUNTER PRESSURE	50-600	170°C	REMOVABLE MEMBRANE / VACUUM GRID	0.07-35
6	MEMBRANE DISCS	MEDIUM PRESSURE	NON OXYDIZING CORROSIVE FLUIDS OPERATING IN VACUUME OR COUNTER PRESSURE	25-600	170°C	REMOVABLE MEMBRANE / VACUUM GRID	0.35-30
7	SPECIAL DISCS	ON REQUEST	CORROSIVE FLUIDS, HEAT PROOFING	25-600	LIQUID PHASE 200°C GASEUS PHASE 300°C	CARBON FIBER THERMAL INSULATION	ON REQUEST

MONOBLOC MEDIUM PRESSURE DISCS

SERIE
1



DN 25 to DN 600

- Effective rupture pressure (E.R.P.) : 0.08 to 40 bars effective, depending on diameter.
- Maximum temperature at continuous operation: 170°C
- Standard E.R.P. tolerance: +/- 10%

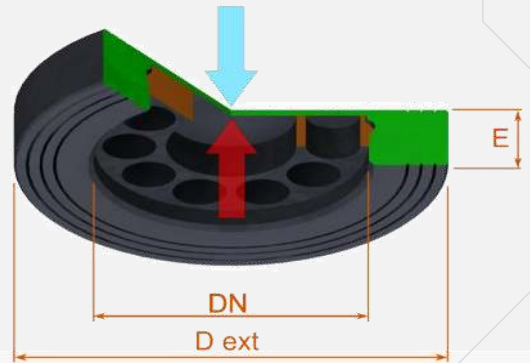
DN		PN	ANSI	D ext	E	ERP		GASKET thk. 2 mm		WEIGHT	
mm	inch	bar	Lbs	mm	mm	mini bar eff	max bar eff	Je mm	Ji mm	Min kg	Max kg
25	1"	10-16 / 25-40	150/300	65	18	2,5	40	65	45	0,1	0,12
40	1 1/2"	10-16 / 25-40	150/300	80	19	1,5	35	80	60	0,15	0,2
50	2"	10-16 / 25-40	150/300	100	20	1	30	100	80	0,23	0,3
65	2 1/2"	10-16 / 25-40	150/300	115	22	0,8	25	115	90	0,3	0,4
80	3"	10-16 / 25-40	150	130	23	0,5	20	130	107	0,36	0,5
100	4"	10-16	150	160	25	0,4	15	160	137	0,6	0,8
125	5"	10-16	150	190	28	0,3	12	190	162	0,9	1,14
150	6"	10-16	150	215	30	0,3	10	215	186	1,1	1,53
200	8"	10	150	275	35	0,2	8	275	243	2	3,5
250	10"	10	150	330	40	0,15	6	330	298	3	4,6
300	12"	10	150	380	45	0,15	4	380	348	4,1	6
350	14"	10	150	440	50	0,1	2,5	440	400	5,8	9
400	16"	10	150	490	50	0,1	2	490	450	6,9	10,1
450	18"	10	150	540	50	0,1	1,5	540	500	7,9	12
500	20"	10	150	595	50	0,08	1,5	595	550	9,3	16
600	24"	10	150	695	50	0,08	1,2	695	653	12	20,1

Dimensions for ISO PN and ASA discs

The exhaust piping must have an interior diameter that is greater than the interior diameter of the gasket and a length that is 1.5 times its nominal diameter. Pressure in bar eff. at room temperature (15-30°C).

MONOBLOC MEDIUM PRESSURE DISCS FOR OPERATION IN A VACUUM

SERIE
2



DN 25 to DN 600

- With supporting grid for operation in a vacuum
- Effective rupture pressure (E.R.P.) : 0.35 to 40 bars effective, depending on diameter
- Maximum temperature at continuous operation: 170°C
- Standard E.R.P. tolerance: +/- 10%

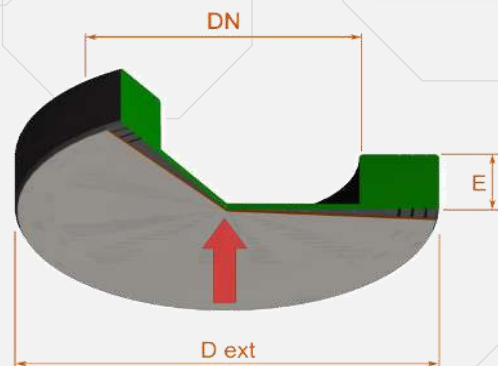
DN		PN	ANSI	D ext	E	ERP		GASKET thk. 2 mm		Free select.	WEIGHT	
mm	inch	bar	Lbs	mm	mm	Min bar eff	Max bar eff	Je mm	Ji mm	%	Min kg	Max kg
25	1"	10-16 / 25-40	300	65	18	2,5	40	65	45	53	0,11	0,13
40	1 1/2"	10-16 / 25-40	150/ 300	80	19	1,5	35	80	60	58	0,15	0,16
50	2"	10-16 / 25-40	150/ 300	100	20	1	30	100	80	59	0,2	0,3
65	2 1/2"	10-16 / 25-40	150/ 300	115	22	0,8	25	115	90	63	0,3	0,4
80	3"	10-16 / 20	150	130	23	0,5	20	130	107	62	0,4	0,7
100	4"	10-16	150	160	25	0,4	15	160	137	63	0,7	0,9
125	5"	10-16	150	190	28	0,35	12	190	162	61	1	1,3
150	6"	10-16	150	215	30	0,35	10	215	186	62	1,4	1,7
200	8"	10	150	275	35	0,35	8	275	243	64	2,1	4
250	10"	10	150	330	40	0,35	6	330	298	60	3,6	5,5
300	12"	10	150	380	45	0,35	4	380	348	66	5,4	8
350	14"	10	150	440	50	0,35	2,5	440	400	63	8,7	12
400	16"	10	150	490	50	0,35	2	490	450	66	10,1	15
450	18"	10	150	540	50	0,35	1,5	540	500	64	13	18
500	20"	10	150	595	50	0,35	1,5	595	550	61	16	22
600	24"	10	150	695	50	0,35	1,2	695	653	71	22	30

Dimensions for ISO PN and ASA discs

Fitting the threaded support grid is mandatory when effective pressure (ERP) is below 1.7 bars if vacuum operation is a possibility. The exhaust piping must have an interior diameter that is greater than the interior diameter of the gasket and a length that is 1.5 times its nominal diameter. Pressure in bar eff. at room temperature (15-30°C).

MONOBLOC MEDIUM PRESSURE DISCS WITH PROTECTIVE FLUORINATED POLYMER FILM

SERIE
3



DN 25 to DN 600

- For use with oxidizing fluids
- Effective rupture pressure (E.R.P.) : 0.1 to 35 bars effective, depending on diameter.
- Maximum temperature at continuous operation: 170°C
- Standard E.R.P. tolerance: +/- 15%.

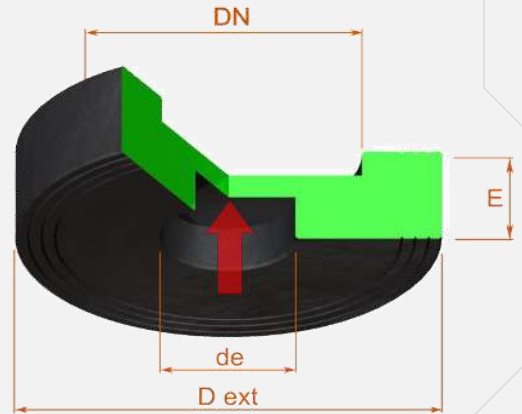
DN		PN	ANSI	D ext	E	ERP		GASKET thk. 2mm		WEIGHT	
mm	inch	bar	Lbs	mm	mm	Min bar eff	Max bar eff	Je mm	Ji mm	Min kg	Max kg
25	1"	10-16 / 25-40	300	65	18	4	35	65	30	0,1	0,12
40	1 1/2"	10-16 / 25-40	150/300	80	19	2,5	30	80	45	0,15	0,2
50	2"	10-16 / 25-40	150/300	100	20	1,5	25	100	57	0,23	0,3
65	2 1/2"	10-16 / 20	150	115	22	1	20	115	70	0,3	0,4
80	3"	10-16	150	130	23	0,8	15	130	82	0,36	0,5
100	4"	10-16	150	160	25	0,5	12	160	105	0,6	0,8
125	5"	10-16	150	190	28	0,4	10	190	130	0,9	1,14
150	6"	10-16	150	215	30	0,3	8	215	155	1,1	1,53
200	8"	10	150	275	35	0,3	6	275	205	2	3,5
250	10"	10	150	330	40	0,2	5	330	250	3	4,62
300	12"	10	150	380	45	0,15	3,5	380	305	4,1	6
350	14"	10	150	440	50	0,15	2	440	355	5,8	9
400	16"	10	150	490	50	0,1	1,5	490	405	6,9	10,1
450	18"	10	150	540	50	0,1	1,5	540	455	7,9	12
500	20"	10	150	595	50	0,1	1,2	595	505	9,3	16
600	24"	10	150	695	50	0,1	1,2	695	605	12,1	20

Dimensions for ISO PN and ASA discs

The exhaust piping must have an interior diameter that is greater than the interior diameter of the gasket and a length that is 1.5 times its nominal diameter. Pressure in bar eff. at room temperature (15-30°C).

MONOBLOC HIGH PRESSURE DISCS

SERIE
4



DN 50 to DN 700

- Effective rupture pressure (E.R.P.) : 1.2 to 100 bars effective, depending on diameter
- Maximum temperature at continuous operation: 170°C
- Standard E.R.P. tolerance: +/- 10%

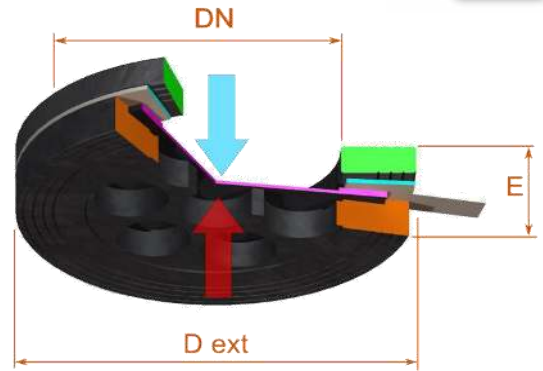
DN		de	PN	ANSI	D ext	E	ERP		GASKET thk. 2mm		WEIGHT	
mm	inch	mm	bar	Lbs	mm	mm	Min bar eff	Max bar eff	Je mm	Ji mm	Min kg	Max kg
50	2"	25	50-100	300-600	100	35	40	100	100	57	0,43	0,45
80	3"	40	40-100	300-600	130	38	35	100	130	82	0,75	0,8
100	4"	50	40-100	300-600	160	40	30	80	160	105	1,19	1,3
125	5"	65	25-100	300-600	190	44	25	60	190	130	1,8	1,9
125	5"	80	20-50	150-300	190	47	20	50	190	130	1,9	2
150	6"	100	16-40	150-300	215	50	15	40	215	155	2,4	2,7
200	8"	125	16-40	150-300	275	53	12	30	275	205	4,1	4,6
250	10"	150	16-25	150-300	330	56	10	25	330	250	6,1	7
300	12"	200	10-16	150	380	66	8	15	380	305	8,9	10
350	14"	250	10-16	150	440	72	6	15	440	355	12,1	16
400	16"	300	10-16	150	490	82	4	12	490	405	16	22
450	18"	350	10	150	540	91	2,5	10	540	455	20	27
500	20"	400	10	150	595	98	2	10	595	505	25	34
600	24"	450	10	150	695	110	1,5	8	695	605	38	56
600	24"	500	10	150	695	123	1,5	8	695	605	37	51
700	28"	600	10	150	790	148	1,2	6	790	705	54	78

Dimensions for ISO PN and ASA discs

Attention: DN is normal diameter for connecting the flanges.

Attention: de is real exhaust diameter.

The exhaust piping must have an interior diameter that is greater than the interior diameter of the gasket and a length that is 1.5 times its nominal diameter. Pressure in bar eff. at room temperature (15-30°C).



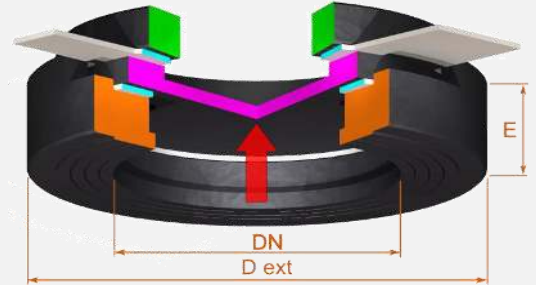
DN 50 to DN 600

- For use in vacuum if needed
- Effective rupture pressure (E.R.P.) : 0.07 to 0.34 bars effective, depending on diameter
- Maximum temperature at continuous operation: 170°C
- Standard E.R.P. tolerance: +/- 25%

DN		PN	ANSI	D ext	E	ERP		GASKET thk. 2 mm		Free select.	WEIGHT	
mm	inch	bar	Lbs	mm	mm	Min bar eff	Max bar eff	Je mm	Ji mm	%	Min kg	Max kg
50	2"	10-16	150	100	32	0,2	0,34	100	57	59	0,04	0,35
65	2 1/2"	10-16	150	115	32	0,2	0,34	115	70	63	0,05	0,5
80	3"	10-16	150	130	32	0,15	0,34	130	82	62	0,07	0,51
100	4"	10-16	150	160	32	0,15	0,34	160	105	63	0,11	0,71
150	6"	10-16	150	215	32	0,07	0,34	215	155	62	0,23	1,21
200	8"	10	150	275	45	0,07	0,34	275	205	64	0,43	2,65
250	10"	10	150	330	65	0,07	0,34	330	250	60	0,7	5,3
300	12"	10	150	380	81	0,07	0,34	380	305	66	1,1	8
350	14"	10	150	440	103	0,07	0,34	440	355	63	1,5	13,8
400	16"	10	150	490	103	0,07	0,34	490	405	66	2	15,8
450	18"	10	150	540	123	0,07	0,34	540	455	64	2,7	22
500	20"	10	150	595	123	0,07	0,34	595	505	61	3,5	27
600	24"	10	150	695	123	0,07	0,34	695	605	71	5,4	31

Dimensions for ISO PN and ASA discs

The exhaust piping must have an interior diameter that is greater than the interior diameter of the gasket and a length that is 1.5 times its nominal diameter. Pressure in bar eff. at room temperature (15-30°C).



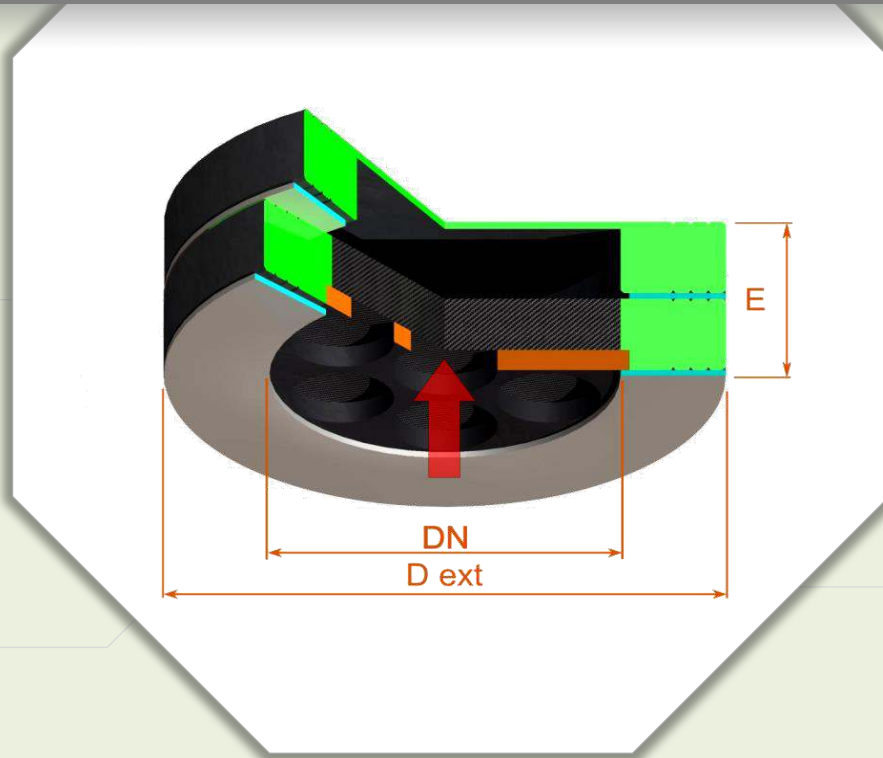
DN 25 to DN 600

- Effective rupture pressure (E.R.P.) : 0.35 to 30 bars effective, depending on diameter.
- Maximum temperature at continuous operation: 170°C
- Standard E.R.P. tolerance: +/- 10%.

DN		PN	ANSI	D ext	de	E		ERP		GASKET thk. 2 mm		WEIGHT	
mm	inch	bar	Lbs	mm	mm	mm	mm	bar eff	bar eff	mm	mm	kg	kg
25	1"	10-16 / 25-40	300	65	56	25	28	0,8	30	56	28	0,02	0,13
40	1 1/2"	10-16 / 25-40	150/300	80	68	27	32	0,5	20	68	45	0,03	0,2
50	2"	10-16 / 25	150/300	100	78	29	33	0,35	15	78	57	0,04	0,3
65	2 1/2"	10-16	150	115	94	33	38	0,35	12	94	70	0,06	0,4
80	3"	10-16	150	130	110	37	42	0,35	10	110	85	0,09	0,53
100	4"	10-16	150	160	140	43	49	0,35	8	140	105	0,27	1
125	5"	10-16	150	190	175	50	58	0,35	6	175	130	0,45	1,6
150	6"	10-16	150	215	200	56	65	0,35	5	200	158	0,65	2
200	8"	10	150	275	260	75	85	0,35	4	260	210	1,3	4,12
250	10"	10	150	330	320	95	115	0,35	3	320	260	2,15	7,15
300	12"	10	150	380	375	110	125	0,35	2,5	375	310	3,24	9,42
350	14"	16	150	445	435	125	145	0,35	2	435	360	4,5	14,8
400	16"	16	150	498	490	150	170	0,35	1,5	490	410	5,7	20,7
450	18"	16	300	560	545	180	195	0,35	1,5	545	460	8	28,8
500	20"	16	300	620	600	205	220	0,35	1,2	600	510	9,6	38
600	24"	16	300	735	710	265	280	0,35	1,2	710	610	16	65

Dimensions for ISO PN and ASA discs

The exhaust piping must have an interior diameter that is greater than the interior diameter of the gasket and a length that is 1.5 times its nominal diameter. Pressure in bar eff. at room temperature (15-30°C).



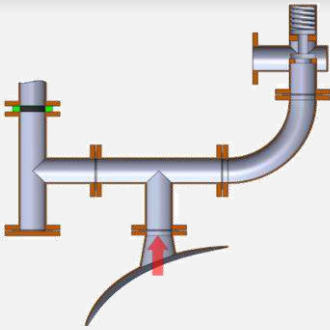
When used with thermal insulation, CEPIC graphite discs can be used to temperatures of up to

- ✓ - 200 °C pour les phases liquides.
- ✓ - 300 °C pour les phases gazeuses.
- ✓ Température supérieure sur demande.

DN [mm]	E [mm]
65	18
80	19
100	20
115	22
130	23
160	25
190	28
215	30
275	35
330	40
380	45
440	50
490	50
540	50
595	50
695	50

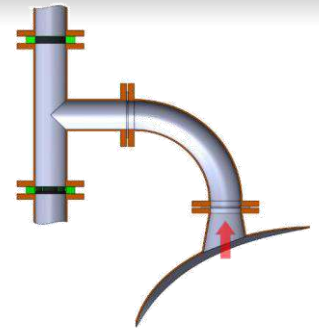
The thickness of the carbon fiber insulation depends on the contact temperature. It can be doubled in some cases.

Our technical services will be happy to discuss your application with you.



PARALLEL FITTING OF A DISCS AND A VALVE

The Effective Rupture Pressure of the Carbonite® rupture disc is greater than that of the opening pressure for the valve. The disc will rupture if the valve should fail



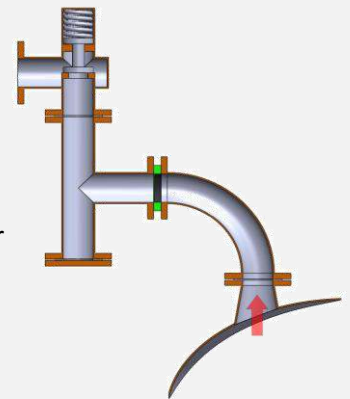
DOUBLE FITTING IN SERIES

Fittings that protect the equipment from over- and under-pressurization

FITTING WITH A VALVE

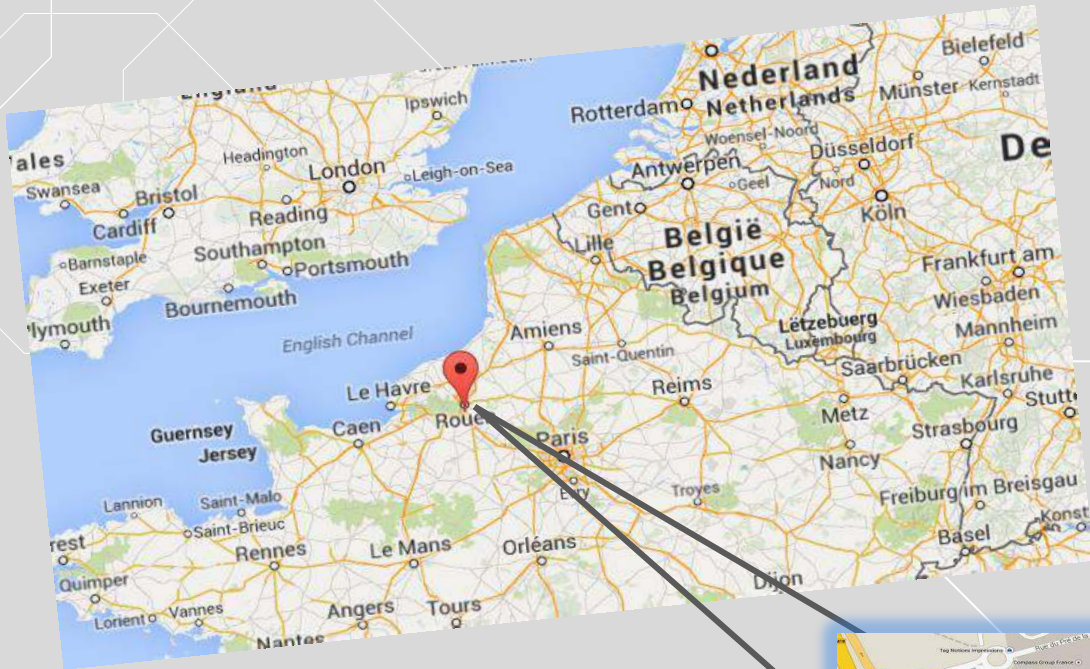
Protects the valves from corrosion.

The Effective Rupture Pressure of the Carbonite® rupture disc is greater than that of the opening pressure for the valve



FITTING INSTRUCTIONS :

- Before any use or intervention, the instruction leaflet must be read without fail. If necessary our services are at your disposal for any information you may need.
- Fitting must be done by trained and informed professionals.
- Install a splinter guard to collect the Carbonite pieces if there is a rupture. Be sure not to limit the rupture capacity of the disc.
- Before fitting, read the information on the label on the disc.
- Always respect current regulations.
- Tighten the diametrically opposed bolts progressively, and do not exceed the tightening force.
- Respect the diameters of the gaskets.



By car Paris, Highway A13, exit 22.
By train from St Lazare -> Oissel

Agent/Distributor :

