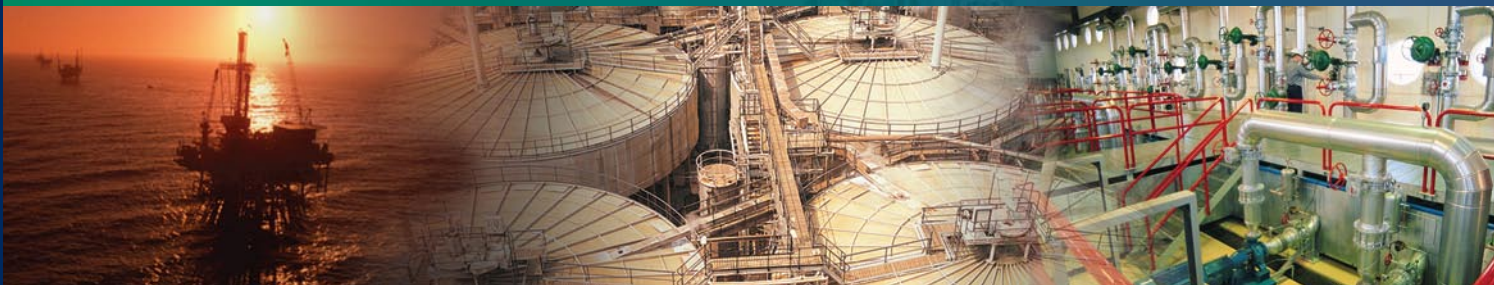




MORGAN
INDUSTRIAL CARBON

MORGAN INDUSTRIAL CARBON



**BURSTING DISCS
...YOUR SAFEGUARD!**

 **Morgan**

GRAPHITE SAFETY DISCS

'Equipment under pressure needs special Care'

The protection of plant operating under pressure and the safety of the personnel operating the plant are not only a matter of concern to Management but are requirements by law. The use of bursting discs for this purpose provides an effective and economical solution.

Morganite have developed a range of carbon discs which cover working pressures from 0.1 to 84 Kg/cm² with orifice sizes of 25 mm to 300 mm as standard. Sizes above 300 mm up to 500 mm are special and would be treated as such. Types 0, 1, 2, 3, 4 and 5 discs have been designed to fit within the bolts of British, American and most continental flanges whilst type 5 discs require larger flanges.

The discs are manufactured out of impregnated graphite in order to achieve the following features:

IMPORTANT FEATURES – YOUR SAFEGUARD

Morgan Industrial Carbon carbon safety discs are:

- Unaffected by temperature stress effects and are not subject to creep
- Resistant to almost all industrial chemicals even at temperatures as low as -50°C and as high as 200°C
- Will withstand an unlimited number of pressure applications at 75% of stated burst pressure without loss of accuracy
- Bursts cleanly allowing maximum escape area
- Easy to install and maintain – plant shut down is thus reduced to a minimum.

INSTALLATION - DO'S AND DON'TS

DO'S

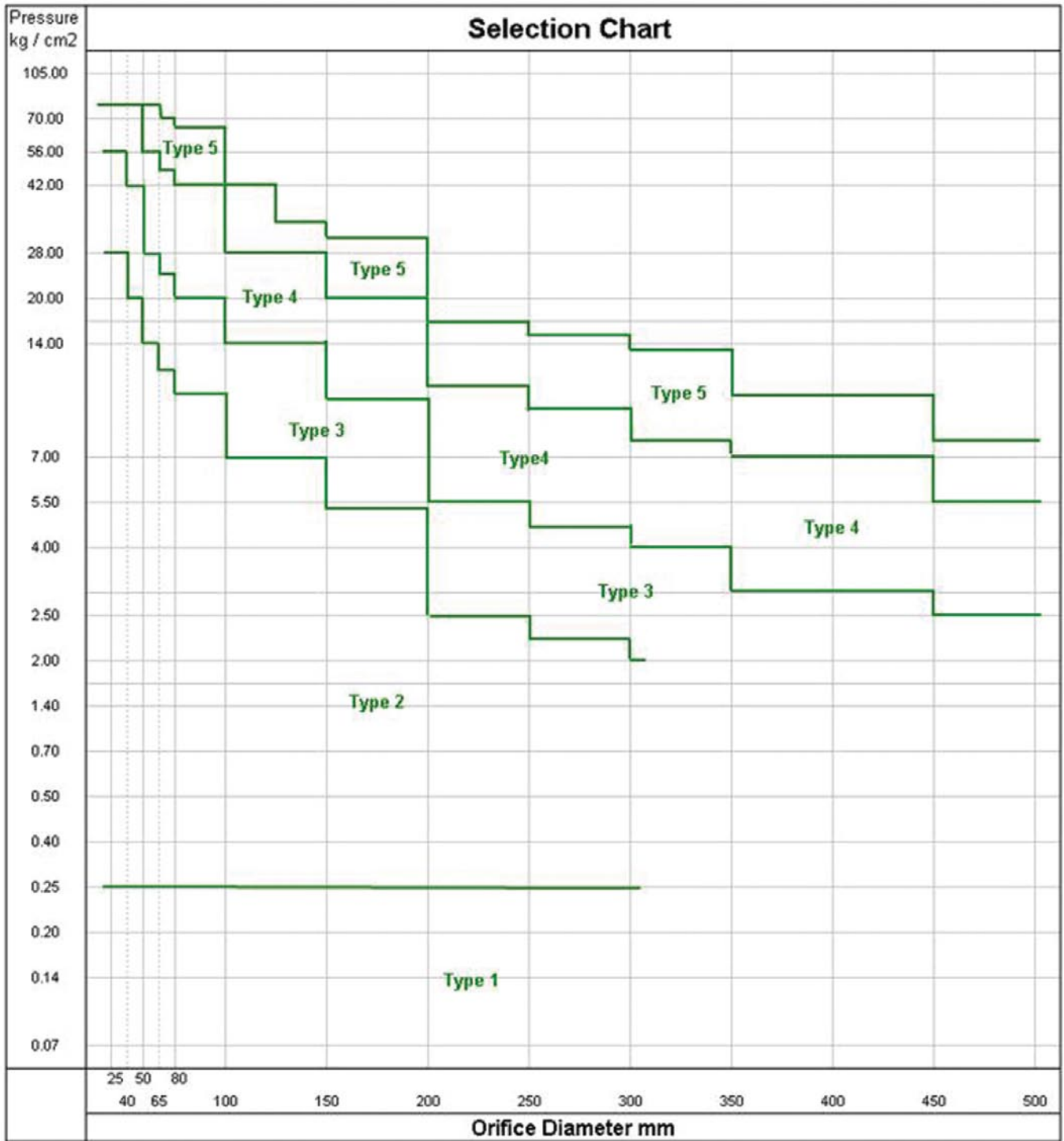
- DO Ensure that the flange faces are flat, square and parallel to each other, and that the pipes are properly aligned.
- DO Ensure that the flanges and bursting discs or disc components are perfectly clean.
- DO Ensure that the bursting disc or disc components are installed in the correct direction. See markings on the discs.
- DO Ensure that the bolts are evenly pulled up and tightened to the correct torque. (A torque chart will be supplied with a certificate of conformance for purchased product).

DON'TS

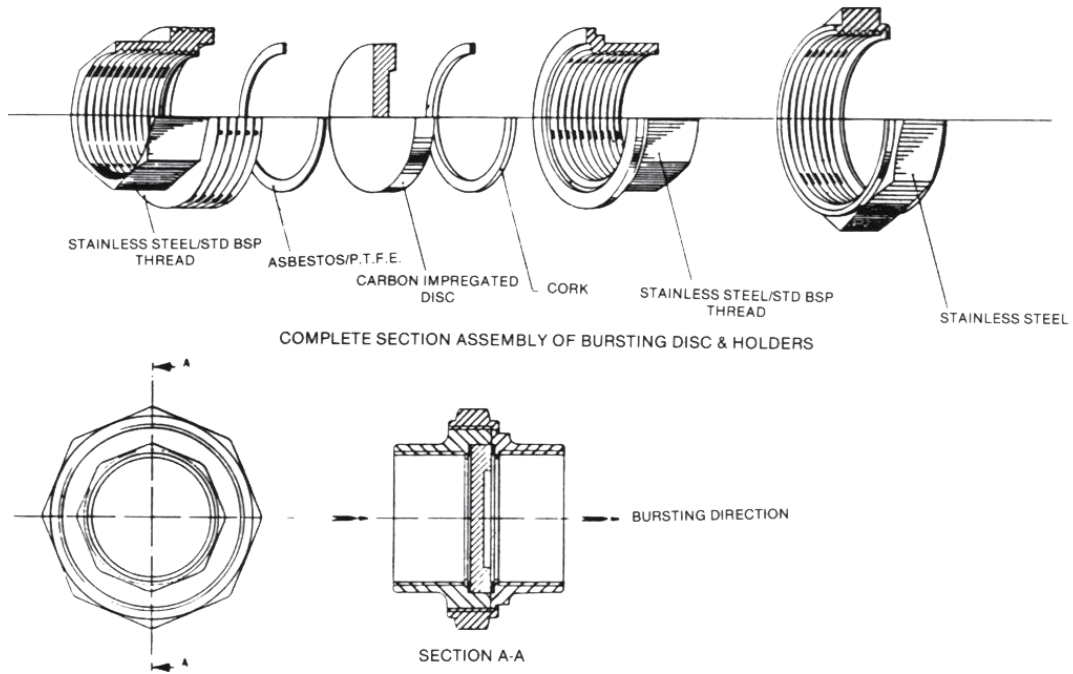
- DO NOT Use any jointing compound on Discs when installing.
- DO NOT Use recesses in the flanges to fit over the edge of the disc. This will apply transverse load to the disc if distortion of the piping occurs under pressure. Shrouding of the disc in this fashion also makes it very difficult to detect sources of leaks, and makes it very difficult to check flanges for flatness. As mentioned above the flatness of the flange face is very important.

SELECTION

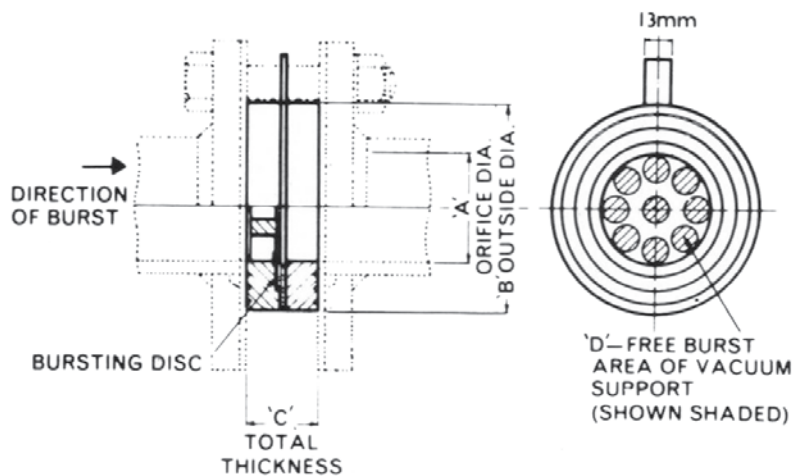
See the selection chart for deciding which Type of disc meets your needs.



TYPE 0 316 Stainless Steel



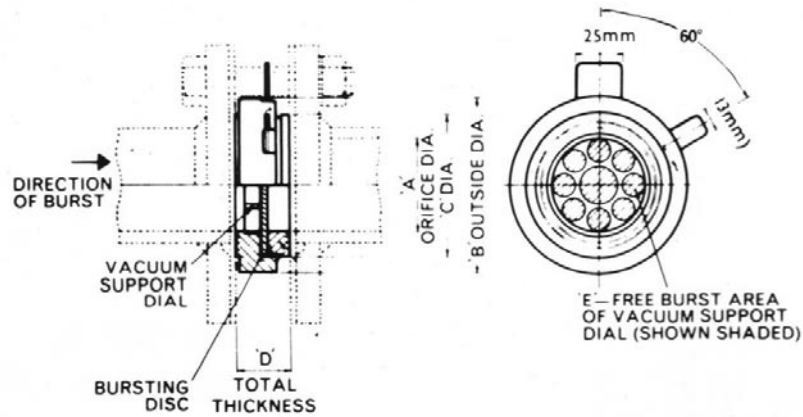
TYPE 1 Carbon holders



DIMENSIONS AND PRESSURES

'A' Orifice diameter	mm	50	65	80	100	150	200	250	300	300-500 mm diameter disc assemblies are manufactured with METAL Holders only	FOR SECURING BOLT TORQUE - SEE TORQUE CHART
'B' Outside diameter	mm	97	110	130	161	215	275	330	380		
'C' Total thickness	mm	32	32	32	32	32	51	65	81		
'D' Free burst area	%	56	55	54	50	50	50	50	50		
Minimum burst	Kg/cm ²	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1		
Maximum Burst	Kg/cm ²	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		

TYPE 2 Carbon holders

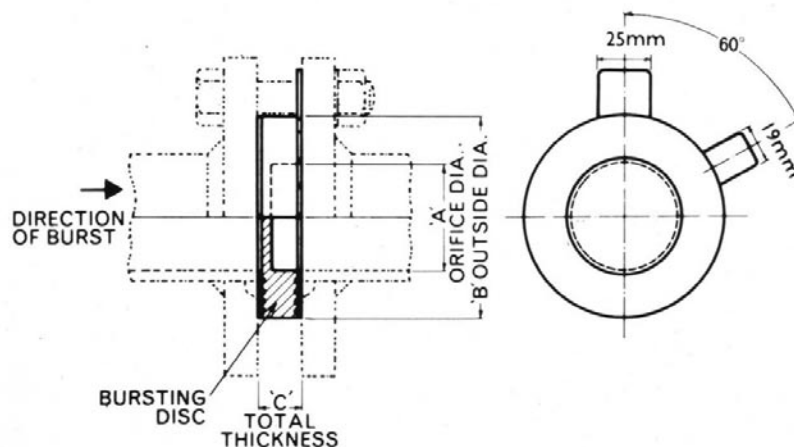


DIMENSIONS AND PRESSURES

'A' Orifice diameter	mm	25	40	50	65	80	100	150	200	250	300	300-500 mm diameter disc assemblies are manufactured with METAL Holders only	FOR SECURING BOLT TORQUE - SEE TORQUE CHART
'B' Outside diameter	mm	66	83	97	110	130	161	215	275	330	380		
'C' Diameter	mm	56	68	78	94	110	141	202	262	318	374		
'D' Minimum Thickness	mm	25	26	28	32	36	43	56	75	97	116		
'D' Maximum Thickness	mm	26	29	31	36	40	48	62	82	104	123		
'E' Free burst area	%	66	66	66	66	66	60	60	58	58	56		
Minimum burst	Kg/cm ²	1.1	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
Maximum Burst	Kg/cm ²	28	20	14	12	10.5	7	5	2.5	2	2		

Note: Information relating to metal holders from 25mm to 300mm orifice will be supplied on request for Type 1 & 2 Discs.

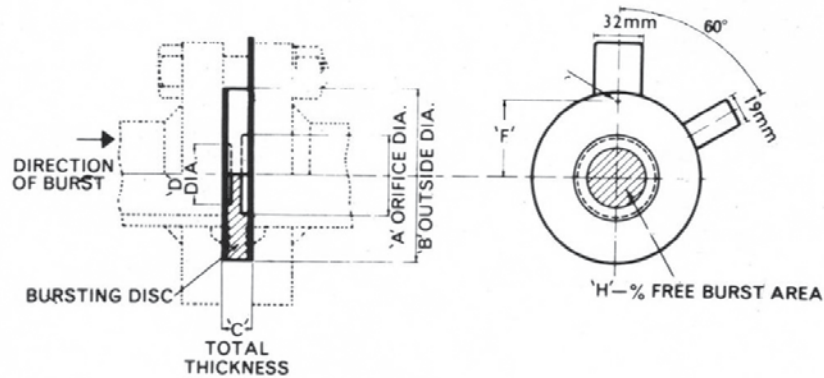
TYPE 3 Integral holders



DIMENSIONS AND PRESSURES

'A' Orifice diameter	mm	25	40	50	65	80	100	150	200	250	300	350	400	450	500	FOR SECURING BOLT TORQUE - SEE TORQUE CHART
'B' Outside diameter	mm	66	83	97	110	130	161	215	275	330	380	441	467	548	605	
'C' Total Thickness	mm	14	17	21	22	22	25	29	35	38	41	43	44	48	51	
Minimum burst	Kg/cm ²	30	22	16	12.5	11	7.5	5.5	3	2.5	2	2	2	1.5	1.5	
Maximum Burst	Kg/cm ²	56	42	28	24	20	14	10.5	5.5	4.5	4	3.5	3.5	2.5	2.5	

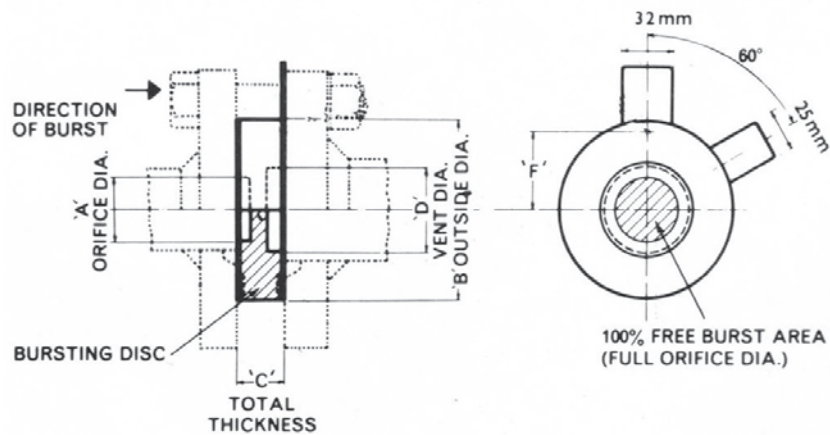
TYPE 4 Integral holders



DIMENSIONS AND PRESSURES

'A' Orifice diameter	mm	25	40	50	65	80	100	150	200	250	300	350	400	450	500	FOR SECURING BOLT TORQUE - SEE TORQUE CHART
'B' Outside diameter	mm	72	94	108	126	141	163	218	272	328	379	438	471	539	594	
'C' Total Thickness	mm	14	16	19	22	25	29	35	40	46	52	57	60	67	73	
'D' Burst Diameter	mm	17	29	38	49	59	82	127	176	226	263	311	337	408	454	
'F' To location pin	mm	29	35	43	49	60	71	100	125	152	178	211	225	254	279	
'G' Diameter of pin	mm	3.17	3.17	3.17	3.17	3.17	3.17	4.76	4.76	4.76	4.76	6.35	6.35	6.35	6.35	
'H' free burst area	%	47	56	56	60	60	66	70	76	76	76	76	79	79	79	
Minimum burst	Kg/cm ²	60.0	44	30	26	22	16	11	6	5	4.5	4	4	3	3	
Maximum Burst	Kg/cm ²	84.0	84	56	49	42	28	20	11	9.5	8	7	7	5.5	5.5	

TYPE 5 Integral holders



DIMENSIONS AND PRESSURES

'A' Orifice diameter	mm	50	65	80	100	125	150	200	250	300	350	400	425	450	500
'B' Outside diameter	mm	163	196	196	218	272	328	379	438	471	539	594	594	695	695
'C' Total Thickness	mm	44	48	51	54	57	60	70	76	86	95	102	108	114	127
'D' Vent diameter	mm	100	125	125	150	200	250	300	350	425	450	500.0	500.0	600.0	600.0
'E' Diameter of pin	mm	3	4.76	4.76	4.76	4.76	4.76	4.76	4.76	6.35	6.35	6.35	6.35	6.35	9.52
'F' To location pin	mm	71	89	89	100	125	152	178	211	238	254	279	279	333	333
Minimum burst	Kg/cm ²	60	51	44	30	24	22	11.5	10	8.5	7.5	7.5	7.5	6	6
Maximum Burst	Kg/cm ²	84	73	63	42	33.5	31.5	16.5	14.5	12.5	10.5	10.5	10.5	8	8

ACCURACY

TYPE	RANGE	ACCURACY
1	0.1 to 0.3 Kg/cm ² 50 mm. to 600 mm	±10% to ±25% of stated pressure (according to size and pressure)
2	0.4 to 28 Kg/ cm ² 25 mm. to 600 mm	±5°% to ±10% of stated pressure (according to size and pressure)
3	1.4 to 56 Kg/ cm ² 25 mm. to 600 mm	±10% of stated pressure (according to size and pressure)
4	2.5 to 84 Kg/ cm ² 25 mm. to 600 mm	±10% of stated pressure (according to size and pressure)
5	4.5 to 84 Kg/ cm ² 25 mm. to 600 mm	±10% of stated pressure (according to size and pressure)





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