

**Arma-Gard (AGS)**  
**Composite Arma-Gard (AGX)**

**Technical Information**

Including specifications, performance data, temperature ranges and schematic

**General specifications**

Size range	AGS: 25mm to 350mm (1" to 14") AGX: 25mm to 300mm (1" to 12")
Burst pressure range	AGS: 0.07 barg to 55 barg (1 psig to 798 psig) AGX: 0.03 barg to 13 barg (0.44 psig to 189 psig)
Materials available	Graphite
Maximum operating ratio	85% of minimum burst pressure (76.5% of nominal burst pressure)
Performance tolerance	+/- 10% (zero manufacturing design range)
Fragmenting / non-fragmenting	Fragmenting
Vacuum service	Support not required above 1.7 barg (24.6 psig)
Fluid compatibility	Liquid, gas, vapour
K <sub>r</sub> value	0.6 (no support)
Torque sensitive	No
Cycle life	Average
Reversal ratio	n/a
Damage ratio	<1 fail-safe
Protective linings	Available on both faces
Relief valve isolation	No
Leak tightness	Average
Disc surface finish	n/a

**Burst pressure range in barg (psig) at 15-30°C (59-86°F)**

Nominal bore		Type of disc			
		Arma-Gard (AGS)		Composite Arma-Gard (AGX)	
mm	inch	min	max	min	max
25	1	0.7(10)	55(798)	0.35(5.1)	13(189)
40	1.5	0.48(7)	41(595)	0.25(3.6)	9.5(138)
50	2	0.28(4.1)	28(406)	0.15(2.2)	6(87)
65	2.5	0.21(3)	28(406)	0.1(1.5)	5.5(79.8)
80	3	0.21(3)	24(348)	0.1(1.5)	4.5(65.3)
100	4	0.14(2)	17(247)	0.06(0.87)	3(43.5)
150	6	0.1(1.5)	10(145)	0.05(0.73)	2(29)
200	8	0.07(1)	5.5(79.8)	0.03(0.44)	1(14.5)
250	10	0.07(1)	4.8(69.6)	0.03(0.44)	1(14.5)
300	12	0.07(1)	4.1(59.5)	0.03(0.44)	1(14.5)
350	14	0.07(1)	3.4(49.3)	-	-

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**Free flow area / Minimum net flow area (MNFA)**

Nominal bore		AGS and AGX With vacuum dial (NVS)		AGS Without vacuum dial		AGX Without vacuum dial (etched stainless steel support)	
mm	inch	mm <sup>2</sup>		mm <sup>2</sup>	inch <sup>2</sup>	mm <sup>2</sup>	inch <sup>2</sup>
25	1	269	0.42	269	0.42	284	0.44
40	1.5	665	1.03	665	1.03	638	0.99
50	2	1348	2.09	1348	2.09	1135	1.76
65	2.5	2149	3.33	2149	3.33	1774	2.75
80	3	2925	4.53	2925	4.53	2554	3.96
100	4	4911	7.61	4911	7.61	4541	7.04
150	6	10780	16.71	10780	16.71	10217	15.84
200	8	17295	26.81	17295	26.81	17162	26.60
250	10	29943	46.41	29943	46.41	28379	43.99
300	12	43118	66.83	43118	66.83	40866	63.34

**NB Performance tolerance < 65mm (Zero manufacturing design range)**

Burst Pressure	Tolerance	Burst Pressure	Tolerance
≤ 0.21 barg	+/- 0.07 barg	≤ 3 psig	+/- 1 psig
>0.21 – ≤1.7 barg	+/- 0.18 barg	>3 – ≤ 24.7 psig	+/- 2.5 psig
>1.7 barg	+/- 10%	>24.7 psig	+/- 10%

**NB Performance tolerance ≥ 65mm (Zero manufacturing design range)**

Burst Pressure	Tolerance	Burst Pressure	Tolerance
<0.35 barg	+/- 0.07 barg	< 5 psig	+/- 0.51 psig
≥ 0.35 barg	+/- 10%	≥ 5 psig	+/- 10%

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**Standard temperature ranges °C (°F)**

Please note: For temperatures below zero, caution is needed if shock loading is involved.

**Metals**

<b>Metal</b>	<b>Min temp</b>	<b>Max temp</b>
Hastelloy B2 SB33 5N10665	-200 (-328)	426 (800)
Hastelloy C22 SB574 N06022	-196 (-321)	600 (1112)
Hastelloy C276 SB575 N10276	-196 (-321)	600 (1112)
Inconel Alloy SB 166 N06600	-196 (-321)	482 (900)
Inconel Alloy SB 443 N06625	-196 (-321)	400 (750)
Inconel Alloy SB 425 N08825	-182 (-296)	400 (750)
Monel Alloy SB 164 N04400 Annealed	-182 (-296)	400 (750)
Monel Alloy SB 164 N04400 Hot Worked	-253 (-423)	537 (1000)
Nickel Alloy 2200	-185 (-301)	315 (600)
Nickel Alloy 2201	-185 (-301)	400 (750)
Steel - Stainless Steel (316 & 304)	-196 (-321)	600 (1112)
Steel - Duplex Steel UNS31803 UN32205	-50 (-58)	300 (572)
Titanium SB348 R50400 Gr2	-196 (-321)	315 (600)
Zirconium SB550 R60702 (Zr)	No info	371 (700)
Zirconium SB550 R60705 (Zr +5%Nb)	No info	371 (700)

**PFA, PTFE and graphite**

<b>Material</b>	<b>Min temp</b>	<b>Max temp</b>
PFA	-200 (-392)	200 (392)*
PTFE	-200 (-392)	200 (392)*
Graphite MXAS600	-50 (-58)	180 (356)

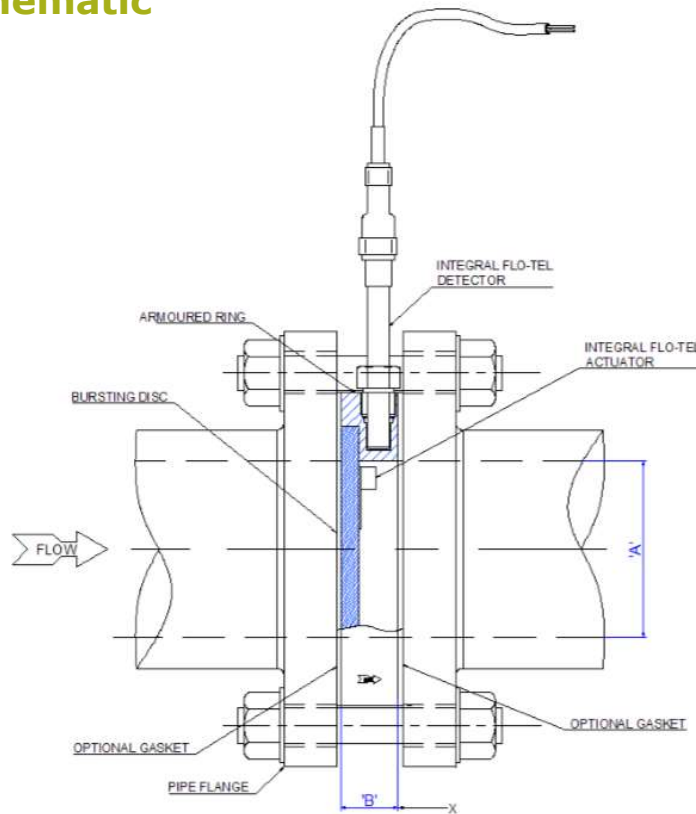
\*Low temperature embrittlement is at -268°C (-450.4°F)

**Standard testing ranges °C (°F)**

Discs up to 200mm	-45°C (-49°F) to 450°C (842°F)
Discs up to 500mm	Ambient to 450°C (842°F)
OEM products	-75°C (-103°F) to 450°C (842°F)

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**Product Schematic**



Nominal Bore (A)		Face To Face (B)		
mm	Inch	No gasket mm	Fibre gasket mm	Envelope gasket mm
25	1	20	23	25
40	1.5	20	23	25
50	2	20	23	25
65	2.5	20	23	25
80	3	20	23	25
100	4	23	26	28
150	6	25	28	30
200	8	32	35	37
250	10	35	38	40
300	12	38	41	43
350	14	62*	65*	67*
400	16	65*	68*	70*
450	18	69*	72*	79*
500	20	74*	77*	79*

Flange Specifications	
EN 1092-1 PN Designated	BS EN 1759-1 ANSI Designated
PN 6	ANSI 150
PN 10	ANSI 300
PN 16	ANSI 600
PN 20	ANSI 900
PN 25	ANSI 1500
PN 40	ANSI 2500
PN 50	-
PN 63	-
PN 100	-

\* Dimensions for indication only, actual dimensions to be clarified on purchase order