



## CRYOGENIC TANK SERVICES (CTS) DATA SHEET

### Gas Booster (Gas Intensifier)

Our range of air operated gas booster pumps are designed to boost bottled gases such as air, nitrogen or helium, up to higher pressures. They can be used for pressure testing or for pre-charging accumulators and down hole tools. Being air operated they are inherently safe and can be used in fire hazardous areas.

The output pressure and flow generated by these versatile pumps can be infinitely varied by simply adjusting the air drive pressure and flow rate.



#### Standard equipment

- Air filter, air pressure regulator, air pressure gauge and pump start/stop valve
- Inlet gas filter
- 6" (150mm) dia panel mounted output pressure gauge reading PSI and Bar
- Pressure release valve
- All interconnecting pipework and fittings
- Robust Stainless Steel framework

#### Technical specifications

Type	Model	Max Output Pressure		Piston Displacement Per Cycle		Max Compression Ratio	Supply Pressure Required to Achieve Max Output Pressure		Actual Output Pressure (Stall Condition)
		PSI	Bar	cu.ins	cc		PSI	Bar	
SA	GB4S	400	27	24	393	12.1	33	2.3	4PA
SA	GB15S	1,500	103	6.00	98.0	12.1	125	8.6	15PA
SA	GB36S	3,600	248	2.49	40.8	12.1	300	21	36PA
SA	GB58S	5,800	400	1.50	24.6	12.1	483	33	58PA
SA	GB96S	9,600	662	0.93	15.2	12.1	800	55	96PA
SA	GB144S	14,400	993	0.62	10.1	12.1	1,200	83	144PA
SA	GB186S	18,600	1,282	0.49	8.0	12.1	1,550	107	186PA
DA	GB33D	5,700	393	15.60	255	15.1	2,400	165	33PA + PS
DA	GB66D	9,000	620	8.0	131	15.1	2,400	165	66PA + PS
DA	GB118D	14,200	980	4.50	73.7	15.1	2,400	165	118PA+ PS
DA	GB186D	21,000	1,448	3.00	49.2	15.1	2,400	165	186PA + PS
2S DA	GB7/33D*	5,700	393	35.8	586	60.1	510	35	33PA + 4.7PS
2S DA	GB15/66D*	9,000	620	17.59	288	60.1	545	37	66PA + 4.4PS
2S DA	GB33/118D*	14,200	980	7.80	128	50.1	685	47	118PA + 3.5PS
2S DA	GB66/186D*	21,000	1,448	4.00	65.5	40.1	857	59	186PA + 2.8PS

PA = Air Drive Pressure    PS = Gas Supply Pressure    SA = Single Acting    DA = Double Acting    2S DA = 2-Stage Double Acting

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## Typical performance chart

Type	Model	Example No.1						Example No.2					
		Inlet Pressure		Outlet Pressure		Flow		Inlet Pressure		Outlet Pressure		Flow	
		PSI	Bar	PSI	Bar	SCFM	N Ltr/m	PSI	Bar	PSI	Bar	SCFM	N Ltr/m
SA	GB4S	50	3.4	300	21	2.25	64	100	6.9	300	21	5.17	146
SA	GB15S	300	21	1,000	69	4.70	133	600	41	1,000	69	9.72	275
SA	GB36S	500	34	2,500	172	2.32	65.7	1,000	69	2,500	172	5.34	151
SA	GB58S	1,000	69	4,000	276	3.10	87.8	2,000	138	4,000	276	6.81	192
SA	GB96S	1,000	69	6,000	414	2.35	66.6	2,000	138	6,000	414	5.32	150
SA	GB144S	1,200	83	10,000	690	1.26	35.7	2,400	165	10,000	690	3.06	86.7
SA	GB186S	1,200	83	12,000	828	1.07	30.3	2,400	165	12,000	828	2.76	78.2
DA	GB33D	500	35	2,000	138	14.2	402	1,000	70	2,000	140	31.3	886
DA	GB66D	500	35	4,000	276	5.86	166	2,000	140	4,000	276	31.5	892
DA	GB118D	1,000	69	6,000	410	9.01	255	2,000	138	6,000	410	20.4	577
DA	GB186D	1,000	69	10,000	690	4.82	136	2,500	172	10,000	690	16.4	464
2S DA	GB7/33D*	80	5.5	2,400	165	4.15	117	120	8.3	2,400	165	6.94	196
2S DA	GB15/66D*	145	10	4,000	275	4.33	122	200	14	4,000	275	6.38	180
2S DA	GB33/118D*	250	17	10,000	690	2.58	73.1	500	35	10,000	690	5.76	163
2S DA	GB66/186D*	500	35	15,000	1035	3.45	97.7	1,000	69	15,000	1035	7.52	213

The above stated flow rates are approximate and assume that a 100 PSI (7 Bar) air supply is available at 56 SCFM (1600 N Ltr/min) for the 'S' models and 120 SCFM (3400 N Ltr/min) for the 'D' models

Models marked with an asterisk are Two Stage models, capable of boosting to a higher compression ratio. To achieve this they have inter-connected gas pistons of different diameters which allows them to boost the gas supply by the area ratio of the two pistons and provide the high pressure piston with an interstage pressure. If the outlet pressure for these models is greater than the maximum supply pressure multiplied by the area ratio of the 2 gas pistons, Interstage stall may occur. To avoid this, the gas inlet supply pressure would need to be reduced.