

Galaxy™ Roof Mounting Direct Driven Twin Fans (GRD)

Features and Benefits

- **Direct Drive Twin Fan (Run & standby)**
- **Backward Curved Centrifugal Impellers**
- **Operating temperatures up to 40°C**
- **Performance range up to 2.72m³/s**
- **Static Pressure Development up to 500pa**
- **Speed Controllable**
- **Quality assured to BS EN ISO 9001**
- **Performance listed to BS 848 Part 1**

The GRD Galaxy Roof Mounting, Direct Driven, Twin fan range represents the latest development from Vent-Axia in high performance, run and standby twin fans. Designed to be controlled in-conjunction with Vent-Axia Trakmaster twin fan controller range, the total package offers the end user flexibility when interfaced with or without a (BMS) Building Management Systems, such as: manual selection; 12/24hr auto changeover ensuring the extended life of the fan and motor; night setback during low levels of occupancy for energy management control during 24hr extraction.

The unit casing is manufactured from mill finished aluminium fitted with a discharge aluminium weather Louvre with bird mesh as standard, ensuring suitability for exposed external environments. Assembly is controlled to BS EN ISO 9001. Optional acoustic lined casing is available.

Individual gravity return shutters are fitted as

standard to prevent air re-circulation through the standby fan or the system during shut down periods. The Galaxy Roof Twin Fans are suitable for horizontal mounting. When installed on a shallow pitch roof (max 20°) a special upstand will be needed to compensate for the angular difference – manufactured by others.



Top view with access panel removed

To meet COSHH requirements, double pole service isolator switches are fitted and pre-wired to the fans and mounted to the outer casing to reduce installation time and cost. Access to the fan section is via an easily removed top access panel for cleaning and maintenance during shut down periods.

The Galaxy range has ten models with extract performance ranging from 0.056m³/s up to 1.339m³/s (201m³/h to 4820m³/h), with pressure characteristics of up 400Pa. All models are supplied with inlet spigots on the underside of the unit casing and a discharge anodised aluminium weather louvre.

Motor/Impellers

Galaxy features motors and DIDW forward curved centrifugal impeller assembly specifically chosen for performance. The

assembly is dynamically balanced to ISO 1940 Grade G.6.3. Ball bearings are greased for life. Insulation is Class 'B' (from -15°C to + 40°C).

Electrical

All Motors are single phase 220-240V/ 50Hz. The isolator is supplied with all models with PG11 entry protected against dust and water jets from any angle for external use. All motors are fitted with Standard Thermal Overload Protection (S.T.O.P.) motor protection by means of a thermal contact switch incorporated in the windings to prevent motor damage by overloading/overheating.

Performance

GRD fan performance is tested in accordance with Test BS 848 Part 1.

Sound Levels

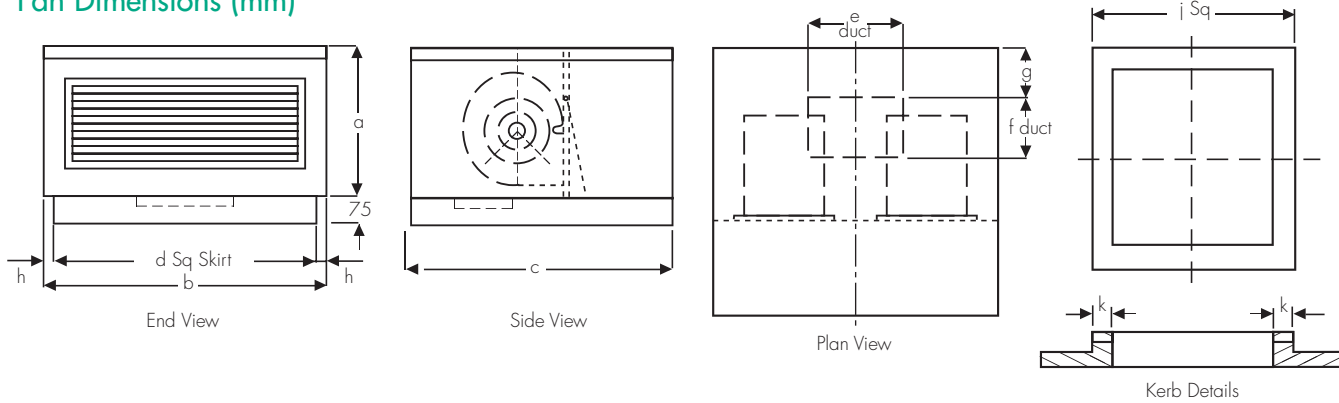
Sound levels are measured in a reverberant chamber in accordance with BS 848 Part 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa (20 micro-Pascal). The inlet and outlet sound power level spectra figures are dB with a reference of 10^{-12} Watts (1 pico-watt). To ensure minimum noise levels during speed control, an auto transformer speed control is recommended.

Quality Assurance

Design and manufacture are in accordance with the standard for quality management system BS EN ISO 9001.



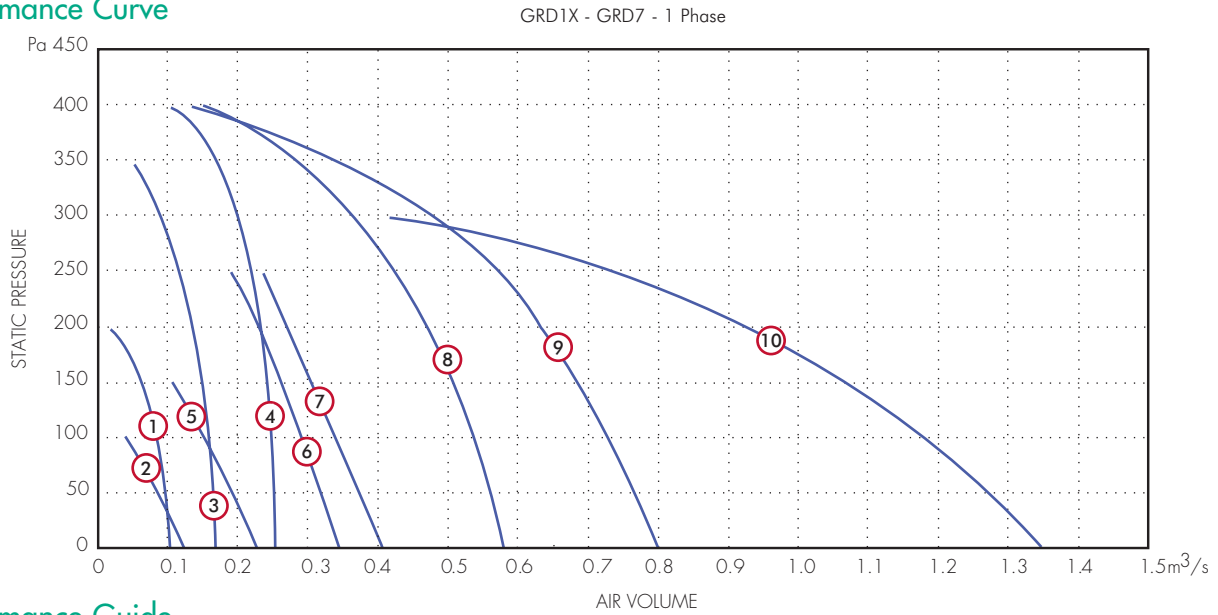
Fan Dimensions (mm)



Unit	a	b	c	d	e	f	g	h	j	k	Weight Kg
GRD1X	250	670	500	500	150	100	150	85	490	75	11
GRD2	340	750	700	700	225	150	150	25	690	75	22
GRD2X	340	750	700	700	225	150	150	25	690	75	22
GRD2XH	340	750	700	700	225	150	150	25	690	75	22
GRD3	390	750	700	700	250	150	150	25	690	75	21
GRD4S	450	850	800	800	300	200	150	25	790	75	32
GRD4	450	850	800	800	300	200	150	25	790	75	32
GRD5	550	1000	950	950	500	250	150	25	940	75	55
GRD6	550	1050	1050	1050	600	300	150	-	1040	75	61
GRD7	650	1250	1150	1150	750	350	150	50	1140	75	65

Galaxy™ In-Line Direct Driven Twin Fans (GRD)

Performance Curve



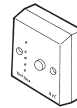
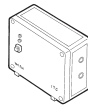
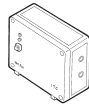
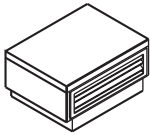
Performance Guide

Duct Size W x H	Phase	Stock Ref.	r.p.m.	m³/s at Pa										Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m		
				0	25	50	75	100	150	200	250	300	350					400	
150 x 100	1	GRD1X	1650	0.099	0.095	0.092	0.087	0.081	0.055	0.018						0.075	1.4	0.35	44
225 x 150	1	GRD2	1350	0.116	0.099	0.085	0.064	0.037								0.17	1.6	1.11	30
225 x 150	1	GRD2X	1700	0.162	0.16	0.158	0.155	0.151	0.141	0.128	0.108	0.086	0.045			0.175	3.2	0.77	47
225 x 150	1	GRD2XH	2050	0.249	0.248	0.246	0.243	0.24	0.236	0.223	0.212	0.195	0.169	0.1		0.3	6	1.31	57
250 x 150	1	GRD3	1400	0.218	0.203	0.186	0.169	0.15	0.1							0.28	2.5	1.2	37
300 x 200	1	GRD4S	1050	0.341	0.326	0.311	0.297	0.283	0.255	0.228	0.19					0.42	3.8	1.8	42
300x 200	1	GRD4	1250	0.401	0.384	0.366	0.35	0.333	0.3	0.268	0.231					0.42	3.8	1.8	44
500 x 250	1	GRD5	1400	0.573	0.563	0.554	0.544	0.53	0.5	0.467	0.422	0.365	0.285	0.148		1.32	13	6.2	46
600 x 300	1	GRD6	1400	0.792	0.774	0.756	0.742	0.724	0.68	0.628	0.567	0.477	0.342	0.113		1.42	13	6.2	55
750 x 350	1	GRD7	900	1.339	1.305	1.265	1.215	1.17	1.058	0.927	0.747	0.414				1.6	13	8	55

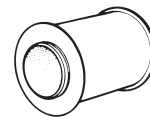
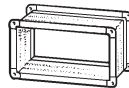
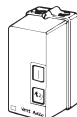
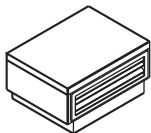
Sound Power Level Spectra dB (re 10⁻¹² Watts)

Model.		63	125	250	500	1k	2k	4k	8k	dBA @3m
GRD1X	Inlet/Outlet	76	73	69	60	61	59	55	50	49
GRD1X	Breakout									44
GRD2	Inlet/Outlet	52	62	54	47	48	44	40	34	35
GRD2	Breakout									30
GRD2X	Inlet/Outlet	79	77	69	63	64	63	59	55	52
GRD2X	Breakout									47
GRD2XH	Inlet/Outlet	89	87	79	73	74	73	69	65	62
GRD2XH	Breakout									57
GRD3	Inlet/Outlet	61	63	57	53	56	55	47	39	42
GRD3	Breakout									37
GRD4S	Inlet/Outlet	65	68	64	59	60	57	54	49	47
GRD4S	Breakout									42
GRD4	Inlet/Outlet	67	70	66	61	62	59	56	51	49
GRD4	Breakout									44
GRD5	Inlet/Outlet	72	73	67	66	67	66	62	58	54
GRD5	Breakout									46
GRD6	Inlet/Outlet	77	83	80	74	77	74	72	66	63
GRD6	Breakout									55
GRD7	Inlet/Outlet	75	79	71	76	76	74	72	66	63
GRD7	Breakout									55

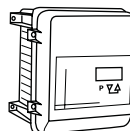
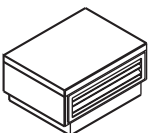
Accessories



Standard Unit	Insulated Unit	**ITC Man./Auto Changeover controller	**ITC-DS 12/24hr Auto Changeover controller	RVC ELV remote visual controller	RSC remote setback controller	Auto Transformer
Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
GRD1X	GRDI1X	10314200	10314210	10314220	10314230A	10314103
GRD2	GRDI2	10314200	10314210	10314220	10314230A	10314103
GRD2X	GRDI2X	10314200	10314210	10314220	10314230A	10314103
GRD2XH	GRDI2XH	10314200	10314210	10314220	10314230A	10314103
GRD3	GRDI3	10314200	10314210	10314220	10314230A	10314103
GRD4S	GRDI4S	10314200	10314210	10314220	10314230A	10314105
GRD4	GRDI4S	10314200	10314210	10314220	10314230A	10314105
GRD5	GRDI5	10314200	10314210	10314220	10314230A	10314107
GRD6	GRDI6	10314200	10314210	10314220	10314230A	10314107
GRD7	GRDI7	10314200	10314210	10314220	10314230A	10314113



Standard Unit	Insulated Unit	DOL Starter & Overload	Flexible connection	Duct Attenuator		
Unit	Unit	Stock Ref. No.	Stock Ref. No.	600mm Stock Ref. No.	900mm Stock Ref. No.	1200mm Stock Ref. No.
GRD1X	GRDI1X	444744 + 444697	GRD1FC	10535150	10536150	-
GRD2	GRDI2	444744 + 444700	GRD2FC	10535250	10536250	10537250
GRD2X	GRDI2X	444744 + 444699	GRD2FC	10535250	10536250	10537250
GRD2XH	GRDI2XH	444744 + 444700	GRD2FC	10535250	10536250	10537250
GRD3	GRDI3	444744 + 444700	GRD3FC	10535250	10536250	10537250
GRD4S	GRDI4S	444744 + 444701	GRD4FC	GRS4-600	GRS4-900	GRS4-1200
GRD4	GRDI4S	444744 + 444701	GRD4FC	GRS4-600	GRS4-900	GRS4-1200
GRD5	GRDI5	444744 + 444704	GRD5FC	GRS5-600	GRS5-900	GRS5-1200
GRD6	GRDI6	444744 + 444704	GRD6FC	GRS6-600	GRS6-900	GRS6-1200
GRD7	GRDI7	444744 + 444705	GRD7FC	GRS7-600	GRS7-900	GRS7-1200



Standard Unit	Insulated Unit	End Inlet	*eDemand Controller		
			Voltage Control Stock Ref.	1/3 Phase Inverter Stock Ref.	3 Phase Inverter Stock Ref.
GRD1X	GRDI1X	E1	444164	-	-
GRD2	GRDI2	E1	444164	-	-
GRD2X	GRDI2X	E1	444164	-	-
GRD2XH	GRDI2XH	E1	444164	-	-
GRD3	GRDI3	E1	444164	-	-
GRD4S	GRDI4S	E1	444164	-	-
GRD4	GRDI4S	E1	444164	-	-
GRD5	GRDI5	E1	444165	-	-
GRD6	GRDI6	E1	444165	-	-
GRD7	GRDI7	E1	444165	-	-

* For full range of speed controller options, see Accessories & Controllers Section

**Not suitable for use with eDemand controllers. For compatible changeover panel, see Accessories and Controllers Section

NOTE: For end Inlet please add E1 to the end of the stock Ref number

NOTE: Inlet silencers shown for GRD1X to GRD3 are circular due to the small inlet sizes - a transformation piece will be required - supplied by others.