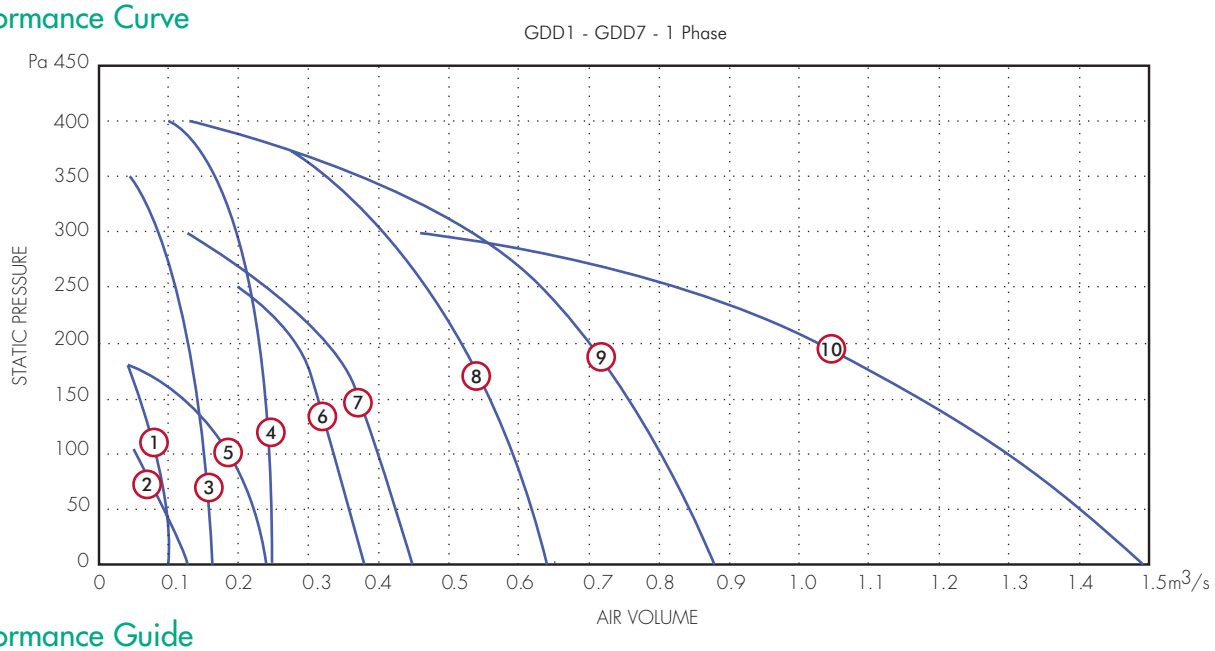
Galaxy™ In-Line Direct Drive Twin Fans (GDD)

Performance Curve



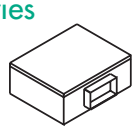
Performance Guide

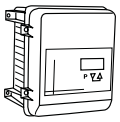
Duct Size		Stock		Curve	m³/s at Pa										Motor	S.C.	F.L.C.	dBA
W x H	Phase	Ref No.	r.p.m.	Ref.	0	50	75	100	150	200	250	300	350	400	kW	Amps	Amps	@ 3m
175 x 100	1	GDD1X	1650	1	0.099	0.092	0.087	0.081	0.055	0.018					0.75	1.4	0.35	44
225 x 150	1	GDD2	1350	2	0.126	0.094	0.075	0.053							0.17	1.6	1.11	30
225 x 150	1	GDD2X	1700	3	0.162	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	GDD2XH	2050	4	0.249	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	GDD3	1400	5	0.243	0.217	0.201	0.181	0.12						0.28	2.5	1.2	37
350 x 200	1	GDD4S	1050	6	0.376	0.355	0.345	0.333	0.31	0.279	0.197				0.42	3.8	1.8	42
350 x 200	1	GDD4	1250	7	0.443	0.418	0.411	0.392	0.367	0.329	0.232	0.117			0.42	3.8	1.8	44
400 x 325	1	GDD5	1400	8	0.637	0.615	0.604	0.59	0.555	0.512	0.464	0.402	0.328	0.164	1.32	13	6.2	46
450 x 350	1	GDD6	1400	9	0.88	0.84	0.824	0.804	0.755	0.698	0.63	0.53	0.38	0.125	1.42	13	6.2	55
650 x 400	1	GDD7	900	10	1.488	1.405	1.35	1.3	1.175	1.03	0.83	0.46			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
GDD1X	Inlet/Outlet	76	73	69	60	61	59	55	50	49
GDD1X	Breakout									44
GDD2	Inlet/Outlet	52	62	54	47	48	44	40	34	35
GDD2	Breakout									30
GDD2X	Inlet/Outlet	79	77	69	63	64	63	59	55	52
GDD2X	Breakout									47
GDD2XH	Inlet/Outlet	89	87	79	73	74	73	69	65	62
GDD2XH	Breakout									57
GDD3	Inlet/Outlet	61	63	57	53	56	55	47	39	42
GDD3	Breakout									37
GDD4S	Inlet/Outlet	65	68	64	59	60	57	54	49	47
GDD4S	Breakout									42
GDD4	Inlet/Outlet	67	70	66	61	62	59	56	51	49
GDD4	Breakout									44
GDD5	Inlet/Outlet	72	73	67	66	67	66	62	58	54
GDD5	Breakout									46
GDD6	Inlet/Outlet	77	83	80	74	77	74	72	66	63
GDD6	Breakout									55
GDD7	Inlet/Outlet	75	79	71	76	76	74	72	66	63
GDD7	Breakout									55

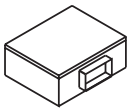
Accessories

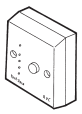


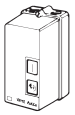


Standard Unit Stock Ref. No.	Insulated Unit Stock Ref. No.	*eDemand Controller: Voltage Control Stock Ref.	*eDemand Controller: 1/3 Phase Inverter Stock Ref.	*eDemand Controller: 3 Phase Inverter Stock Ref.	**ITC Man./Auto Changeover controller Stock Ref. No.	**ITC-DS 12/24hr Auto Changeover controller Stock Ref. No.
GDD1X	GDDI1X	444164	-	-	10314200	10314210
GDD2	GDDI2	444164	-	-	10314200	10314210
GDD2X	GDDI2X	444164	-	-	10314200	10314210
GDD2XH	GDDI2XH	444164	-	-	10314200	10314210
GDD3	GDDI3	444164	-	-	10314200	10314210
GDD4S	GDDI4S	444164	-	-	10314200	10314210
GDD4	GDDI4S	444164	-	-	10314200	10314210
GDD5	GDDI5	444165	-	-	10314200	10314210
GDD6	GDDI6	444165	-	-	10314200	10314210
GDD7	GDDI7	444165	-	-	10314200	10314210

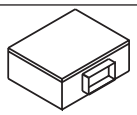
* For full range of speed controller options, see Accessories & Controllers Section **Not suitable for use with eDemand controllers. For compatible changeover panel, see Accessories and Controllers Section

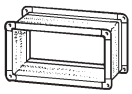


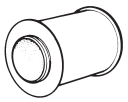


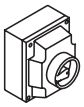


Standard Unit Stock Ref. No.	Insulated Unit Stock Ref. No.	RVC ELV remote visual controller Stock Ref. No.	RSC remote setback controller Stock Ref. No.	Auto Transformer Stock Ref. No.	DOL Starter & Overload Stock Ref. No.	Mounting Bracket Stock Ref. No.
GDD1X	GDDI1X	10314220	10314230A	10314103	444744 + 444697	GDD1MB
GDD2	GDDI2	10314220	10314230A	10314103	444744 + 444700	GDD2MB
GDD2X	GDDI2X	10314220	10314230A	10314103	444744 + 444699	GDD2MB
GDD2XH	GDDI2XH	10314220	10314230A	10314103	444744 + 444700	GDD2MB
GDD3	GDDI3	10314220	10314230A	10314103	444744 + 444700	GDD3MB
GDD4S	GDDI4S	10314220	10314230A	10314105	444744 + 444701	GDD4MB
GDD4	GDDI4S	10314220	10314230A	10314105	444744 + 444701	GDD4MB
GDD5	GDDI5	10314220	10314230A	10314107	444744 + 444704	GDD5MB
GDD6	GDDI6	10314220	10314230A	10314107	444744 + 444704	GDD6MB
GDD7	GDDI7	10314220	10314230A	10314113	444744 + 444705	GDD7MB









Standard Unit Stock Ref.	Insulated Unit Stock Ref.	Flexible connections Stock Ref. No.	Vibration Mounts Stock Ref. No.	Weatherproof treatment Stock Ref. No.	Duct Attenuator: 600mm Stock Ref.	Duct Attenuator: 900mm Stock Ref.	Duct Attenuator: 1200mm Stock Ref.	IP65 Isolator (Factory fitted) Stock Ref.
GDD1X	GDDI1X	GDD1FC	10523033	ECP	10535150	10536150	-	71ISOL4
GDD2	GDDI2	GDD2FC	10523033	ECP	10535250	10536250	10537250	71ISOL4
GDD2X	GDDI2X	GDD2FC	10523033	ECP	10535250	10536250	10537250	71ISOL4
GDD2XH	GDDI2XH	GDD2FC	10523033	ECP	10535250	10536250	10537250	71ISOL4
GDD3	GDDI3	GDD3FC	10523033	ECP	10535250	10536250	10537250	71ISOL4
GDD4S	GDDI4S	GDD4FC	10523033	ECP	GDS4-600	GDS4-900	GDS4-1200	71ISOL4
GDD4	GDDI4S	GDD4FC	10523033	ECP	GDS4-600	GDS4-900	GDS4-1200	71ISOL4
GDD5	GDDI5	GDD5FC	10523033	ECP	GDS5-600	GDS5-900	GDS5-1200	71ISOL4
GDD6	GDDI6	GDD6FC	10523033	ECP	GDS6-600	GDS6-900	GDS6-1200	71ISOL4
GDD7	GDDI7	GDD7FC	10523033	ECP	GDS7-600	GDS7-900	GDS7-1200	71ISOL4

NOTE: *Inlet silencers shown for GDD1X to GDD3 are circular due to the small inlet sizes - a transformation piece will be required - supplied by others.

Vent-Axia Galaxy™ In-Line Belt Driven Twin Fans (GDB)

Features and Benefits

- **In-line, Belt Driven, compact centrifugal twin fan.**
- **High Quality Heavy Gauge Galvanised Steel Casing.**
- **Optional IP65 Service Isolator**
- **Motor Insulation Class F.**
- **Maximum operating temperature 40°C.**
- **Manufacture controlled to BS EN ISO 9001.**
- **Performance tested to BS 848 Part 1 & 2.**

The GDB Galaxy In-line Belt Driven, Twin fan range represents the latest development from Vent-Axia in high performance, run and standby twin fan. 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 Heavy Gauge Galvanised Steel fitted with inlet and outlet discharge spigots. Individual gravity return shutters are fitted as standard to prevent air re-circulation through the standby or the system during shut down periods. Galaxy Duct Mounting Belt Driven Twin Fans are suitable for horizontal mounting only. Assembly controlled to BS EN ISO 9001.

To meet COSHH requirements, double pole service isolator switches are available. With access to the fan section via an easily removable access panel from the top of the unit, for cleaning and maintenance during shut down periods.
The Galaxy range is available in four models with extract performance ranging from 0.02m³/s up to 2.5m³/s (720m³/h to 9000m³/h), with pressure characteristics of up 400Pa.

Fan/Motor Assembly

Galaxy GDB belt driven fans are double inlet double width, forward curved centrifugal fans belt driven by totally enclosed fan ventilated, wound to suit 220-240V/1/50HZ or 380-415V/1/50Hz electrical supply. Protected to IP54, against dust and water jets complying with BS EN 60529:1992. Motor insulation Class F as a minimum, suitable for operating temperatures up to +40°C. Both the fans and motors are mounted on a steel frame, with anti-vibration mounts between the frame and casing and a flexible connection between the fan scroll and fan plate, minimising vibration. All belt driven Galaxy units are supplied with metric pulleys to ISO 4183 and wedge belts to ISO 4184 and DIN 7753.

Electrical

All Motors are available in either single phase 220-240V 50 Hz capacitor start and run or three phase 380V-415V 50Hz.

Sounds Levels

Fan sound levels are measured in a reverberant chamber in accordance with BS848 Part 2 1985. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 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 9001:1994.

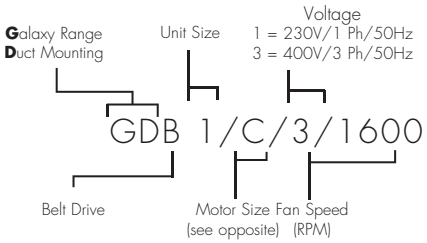
Selection Procedure

Plot your specified duty on the above graphs. Select motor size and fan speed required. The full Stock Ref. No. for your unit will comprise of the unit size, motor rating, supply and fan speed.

MOTOR SIZES:

0.37 kW	=	C
0.55 kW	=	D
0.75 kW	=	E
1.10 kW	=	F
1.50 kW	=	G
2.20 kW	=	H
3.00 kW	=	J
4.00 kW	=	K

Typical Stock Ref. No.:



Example:
Duty required = 0.35m³/s @ 150Pa
Unit Size = GDB1
Supply = 3Ø

From above graph (GDB1):
Speed=1600rpm

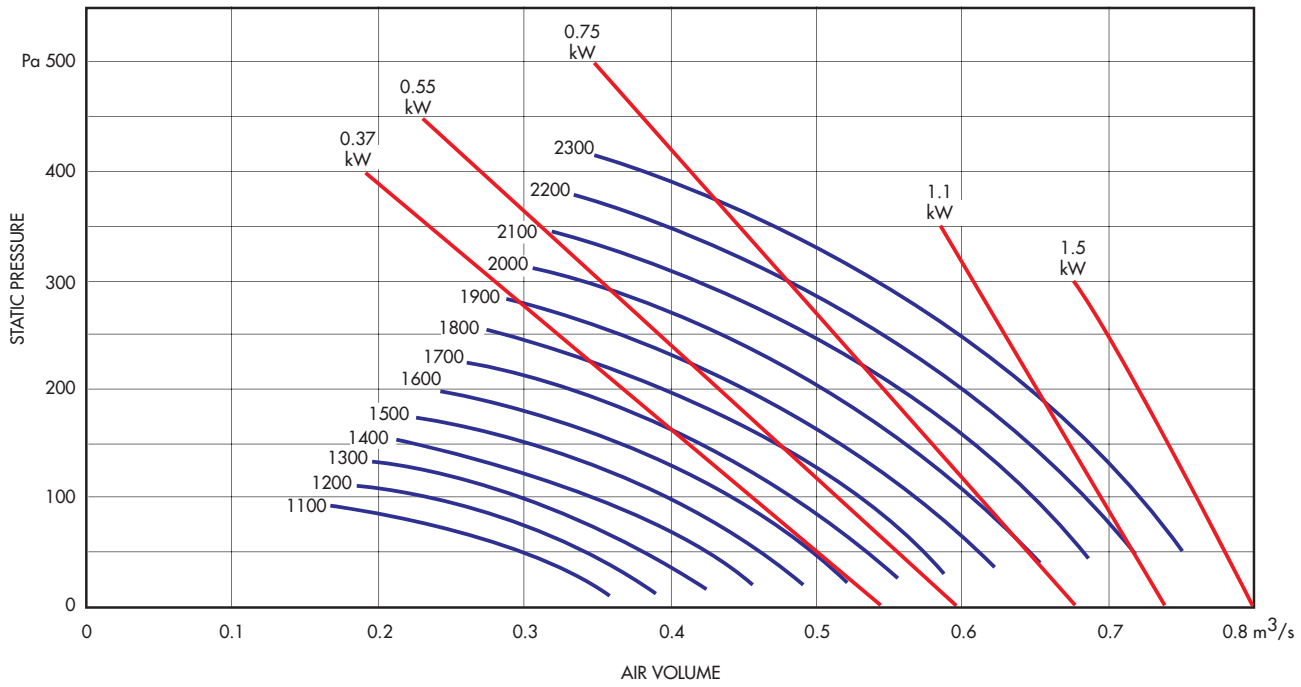
Motor=0.37kW

Stock Ref. No. will be: GDB1/C/3/1600

T: 0844 856 0591

Performance Curve

GDB1



Sound Power Level Spectra dB (re 10^{-12} Watts)

Unit Size	Fan Speed. r.p.m	Sound Power dBW	Induct Sound Power Levels dBW @ Octave Band Mid Frequency Hz 63	125	250	500	1k	2k	4k	8k	Sound Pressure dBA @ 3m
GDB1	1200	71	64	66	65	65	64	61	58	52	50
GDB1	1300	73	66	68	67	67	66	63	60	54	52
GDB1	1400	75	68	70	69	69	68	65	62	56	54
GDB1	1500	76	69	71	70	70	69	66	63	57	55
GDB1	1600	78	71	73	72	72	71	68	65	59	57
GDB1	1700	79	72	74	73	73	72	69	66	60	58
GDB1	1800	80	73	75	74	74	73	70	67	61	59
GDB1	1900	82	75	77	76	76	75	72	69	63	61
GDB1	2000	84	77	79	78	78	77	74	71	65	63
GDB1	2100	86	79	81	80	80	79	76	73	67	65
GDB1	2200	88	81	83	82	82	81	78	75	69	67
GDB1	2300	90	83	85	84	84	83	80	77	71	69

The sound power level shown for each speed is a typical figure for that speed. A variation dependant on the operating point on the curve may apply.