

Gemini Roof Mounting Twin Fans (G2B)

Features and Benefits

- High performance roof mounting twin fans
- 12/24 hr run and standby facility
- Cowl and base moulded from glass fibre reinforced polyester
- Motors protected to IP44
- Motor insulation Class 'B'
- Maximum operating temperature 40°C
- Standard Thermal Overload Protection
- Manufacture controlled to BS EN ISO 9001
- Performance tested to BS 848 Part 1

Roof Mounting Centrifugal Twin Fans have been specially developed for high-pressure ducted systems, designed around an aerodynamically shaped roof cowl, offering maximum performance, reliability and minimum noise levels. G2B roof cowl assemblies are moulded from glass fibre reinforced polyester, which offers high impact resistance and provides a rigid profile against strong winds and is resistant to UV light, delivered on-site ready assembled for quick and easy installation.

Standard colour **BS00A05**, alternative B.S colours available on request. Suitable for flat or inclined roofs (max. angle 30°). Designed for kerb or purlin mounting.

Designed and developed to provide one of the most powerful roof mounting twins on the market, available in six sizes, with extract performances ranging from 0.113m³/s up to 2.085m³/s (406m³/h to 7506m³/h), with pressure characteristics of up to 350Pa.

Motors

The Centrifugal Roof Twin fans feature two proven external rotor motors and backward curved impellers selected for performance and non-overloading characteristics. The assembly is dynamically balanced to **VDI 2060**. The motors in this range are protected to **IP44** according to **BS EN 60529**. Ball bearings are greased for life and are designed to run at any angle. Insulation is **Class 'B'** (from -30°C to +40°C). Manufacture is controlled to **BS EN ISO 9001** standards.

Electrical

Single phase 220-240V Hz. Capacitor start and run. Three phase 380-415V 50Hz.

Performance

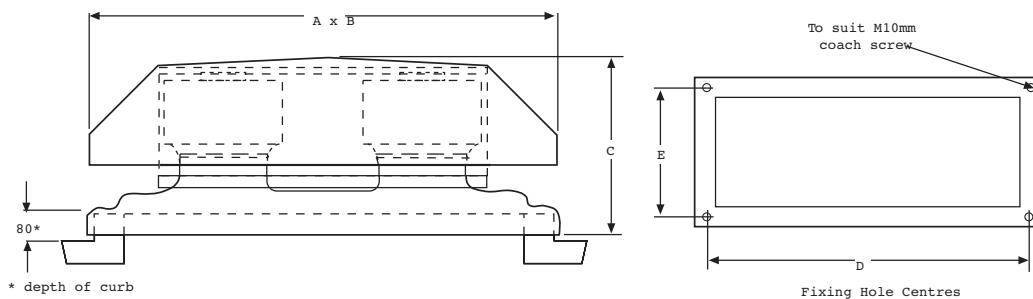
The fan performance, is in accordance with tests to **BS 848** Part 1.

Sound Levels

Fan 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 sound power level spectra figures are dB with a reference level of 10^{-12} Watts (1 pico-watt). To ensure minimum noise levels during speed control, an auto transformer speed control is recommended.



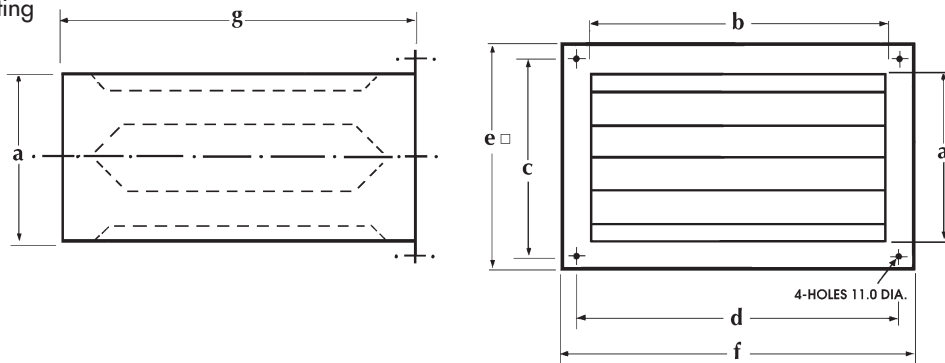
Fan Dimensions (mm)



Unit Code	A	B	C	D	E	Inside Curb	Outside Curb
200	800	470	280	700	370	325 x 650	425 x 750
300	975	550	350	875	450	400 x 825	500 x 925
350/400	1210	675	440	1000	500	400 x 900	600 x 1100
450/500	1430	830	540	1200	600	500 x 1100	700 x 1300

Accessories Dimensions (mm)

Purlin Box Mounting



Stock Ref.	a	b	c	d	e	f	g	Weight kg approx.
DSG2B20	315	645	370	700	425	750	600	15
DSG2B30	395	815	450	875	500	925	900	20
DSG2B35/40	390	890	500	1000	600	1100	900	40
DSG2B35/50	495	1085	600	1200	700	1300	900	59

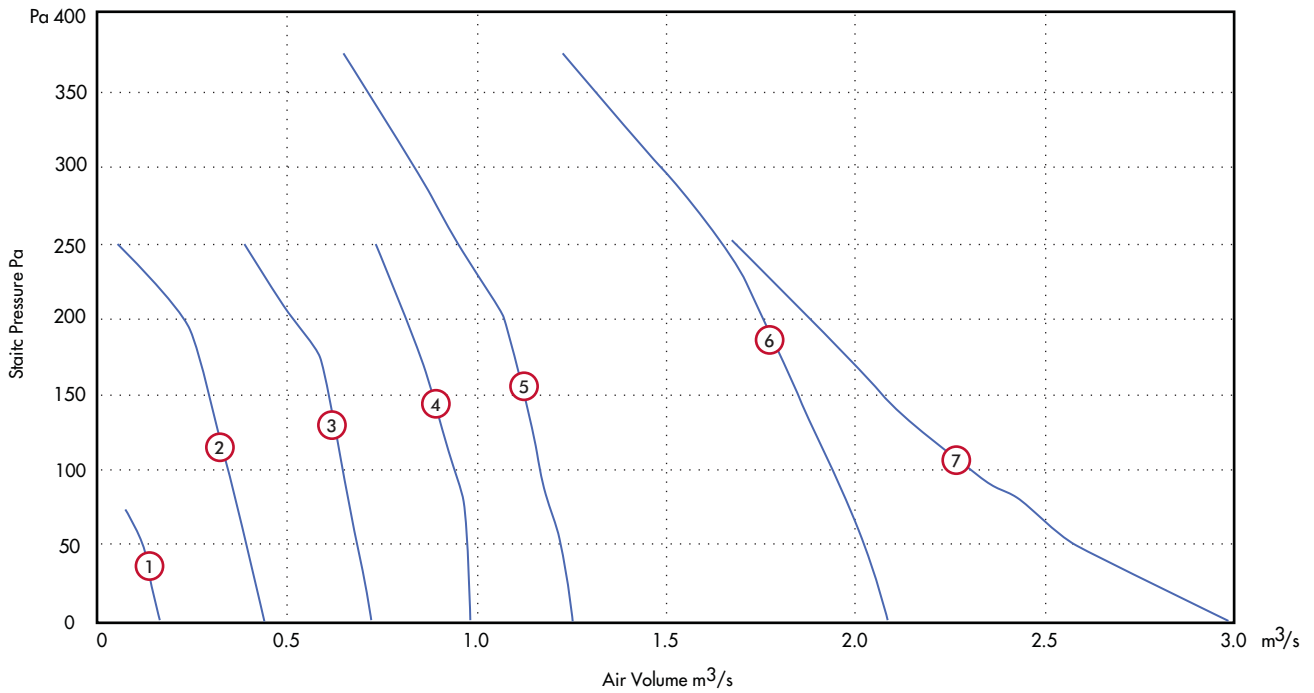
G2B Attenuator Insertion Losses

Stock Ref.	Length	63	125	250	500	1k	2k	4k	8k
DSG2B20	600	-1	-3	-8	-19	-32	-36	-24	-17
DSG2B30	900	-1	-2	-7	-17	-26	-27	-20	-16
DSG2B35/40	900	-1	-2	-5	-11	-18	-18	-12	-6
DSG2B45/50	900	-1	-3	-7	-12	-18	-18	-12	-6

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Performance Curve

GRB200 - G2B500 - 2 & 4 Pole - 1 & 3 Phase



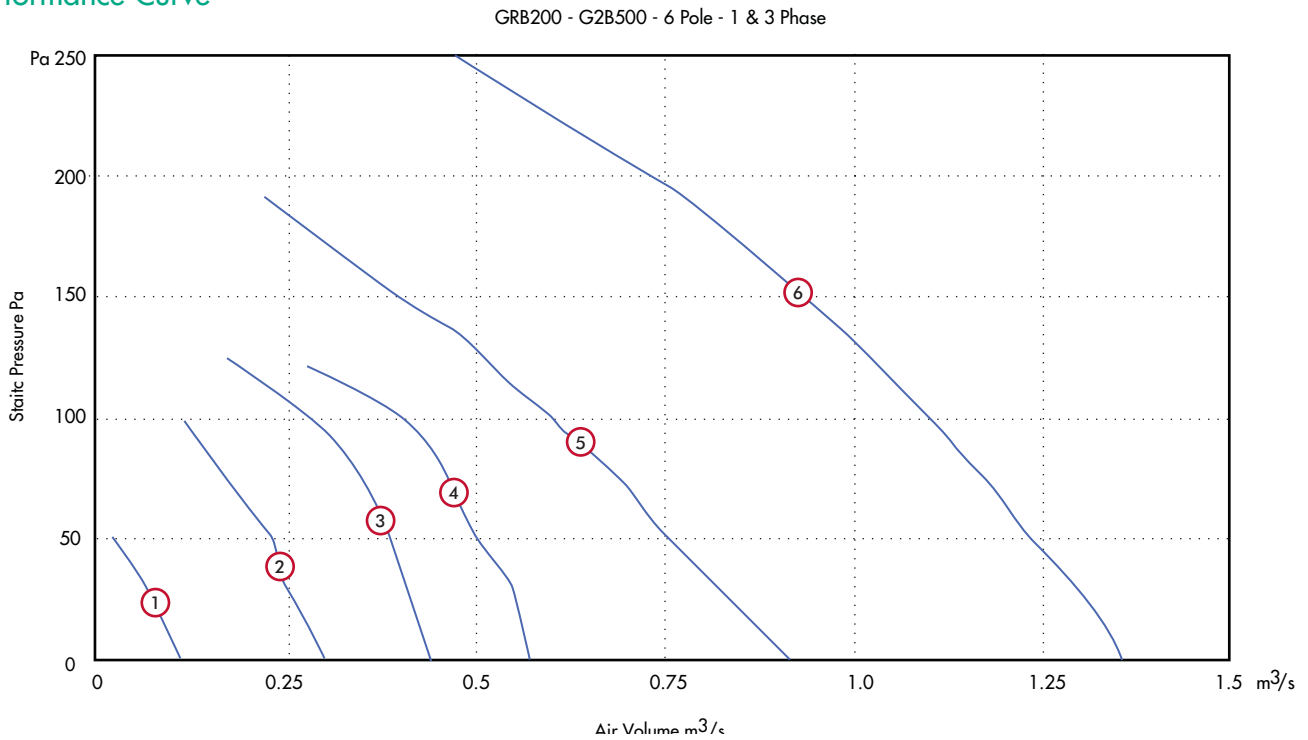
Performance Guide

Dia	Motor Phase	Stock Pole	Stock Ref.	Curve r.p.m.	Curve Ref.	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				
200	1	2	G2B200/2/1	2400	7	0.296	0.279	0.267	0.256	0.243	0.218	0.198	0.166			0.21	2.6	0.9	61
200	1	4	G2B200/4/1	1300	1	0.161	0.142	0.114	0.076							0.07	1	0.44	43
300	1	4	G2B300/4/1	1300	2	0.44	0.417	0.394	0.37	0.345	0.283	0.225	0.045			0.17	1.5	0.9	53
350	1	4	G2B350/4/1	1370	3	0.723	0.709	0.684	0.667	0.642	0.59	0.508	0.38			0.31	3.7	1.35	58
400	1	4	G2B400/4/1	1340	4	0.985	0.982	0.965	0.952	0.935	0.887	0.811	0.73			0.52	5	2.2	58
400	3	4	G2B400/4/3	1340	4	0.985	0.982	0.965	0.952	0.935	0.887	0.811	0.73			0.46	2.9	0.85	58
58450	1	4	G2B450/4/1	1230	5	1.251	1.237	1.223	1.195	1.168	1.112	1.054	0.95	0.841	0.708	0.74	7	3.2	62
450	3	4	G2B450/4/3	1230	5	1.251	1.237	1.223	1.195	1.168	1.112	1.054	0.95	0.841	0.708	0.69	3.4	1.3	62
500	1	4	G2B500/4/1	1320	6	2.085	2.069	2.026	1.995	1.938	1.757	1.698	1.596	1.466	1.316	1.3	15	5.7	67
500	3	4	G2B500/4/3	1320	6	2.085	2.069	2.026	1.995	1.938	1.757	1.698	1.596	1.466	1.316	1.25	9.2	2.3	67

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

Unit	Pole		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
G2B200	2	Inlet/Outlet	69	75	80	78	76	74	73	66	61
G2B200	4	Inlet/Outlet	62	64	63	61	58	56	53	43	43
G2B300	4	Inlet/Outlet	65	71	72	71	67	67	60	47	53
G2B350	4	Inlet/Outlet	65	84	79	77	73	70	65	58	58
G2B400	4	Inlet/Outlet	67	81	82	75	72	70	65	57	58
G2B450	4	Inlet/Outlet	74	86	85	80	76	74	69	62	62
G2B500	4	Inlet/Outlet	76	95	88	86	81	76	76	71	67

Performance Curve



Performance Guide

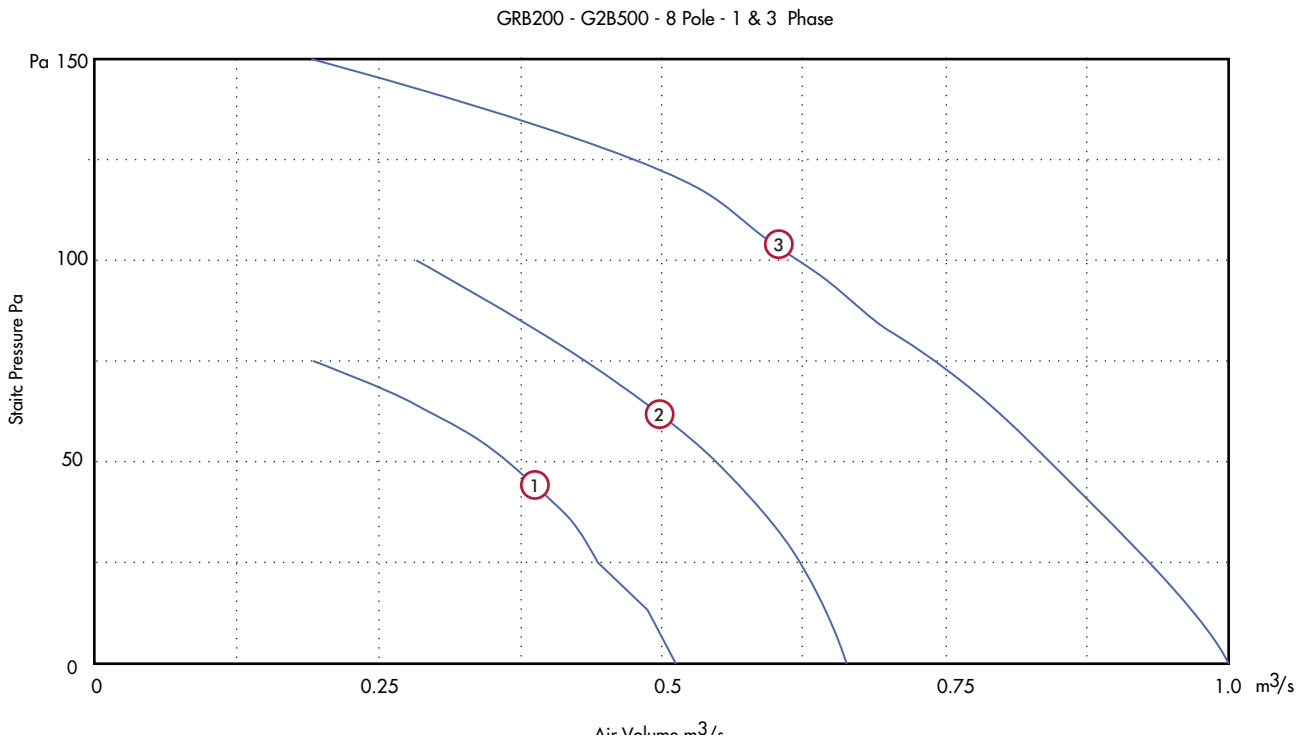
Dia	Motor Phase	Stock Pole	Stock Ref.	Stock r.p.m.	Curve Ref.	m³/s at Pa						Motor kW	S.C Amps	F.L.C Amps	dBA @ 3m		
						0	25	50	75	100	150					200	250
200	1	6	G2B200/6/1	1300	1	0.113	0.073	0.027	-	-	-	-	-	0.15	1.4	0.62	34
300	1	6	G2B300/6/1	900	2	0.3	0.269	0.231	0.184	0.111	-	-	-	0.08	0.7	0.39	45
350	1	6	G2B350/6/1	900	3	0.445	0.42	0.389	0.351	0.285	-	-	-	0.12	1.1	0.54	44
400	1	6	G2B400/6/1	880	4	0.574	0.556	0.506	0.461	0.406	-	-	-	0.17	1.6	0.8	47
400	3	6	G2B400/6/3	880	4	0.574	0.556	0.506	0.461	0.406	-	-	-	0.16	1.05	0.36	47
450	1	6	G2B450/6/1	840	5	0.937	0.83	0.76	0.69	0.608	0.408	-	-	0.3	2	1.5	51
450	3	6	G2B450/6/3	840	5	0.937	0.83	0.76	0.69	0.608	0.408	-	-	0.26	1.1	0.49	51
500	1	6	G2B500/6/1	850	6	1.364	1.32	1.23	1.178	1.09	0.94	0.072	0.475	0.45	4.2	2.2	55
500	3	6	G2B500/6/3	850	6	1.364	1.32	1.23	1.178	1.09	0.94	0.072	0.475	0.39	1.75	0.81	55

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

Unit	Pole		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
G2B200	6	Inlet/Outlet	55	54	52	53	49	46	39	28	34
G2B300	6	Inlet/Outlet	57	60	63	65	59	59	43	41	45
G2B350	6	Inlet/Outlet	63	65	64	61	61	56	50	45	44
G2B400	6	Inlet/Outlet	66	70	71	63	61	59	51	43	47
G2B450	6	Inlet/Outlet	77	73	74	67	66	64	56	48	51
G2B500	6	Inlet/Outlet	76	82	77	73	70	65	59	53	55

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Performance Curve



Performance Guide

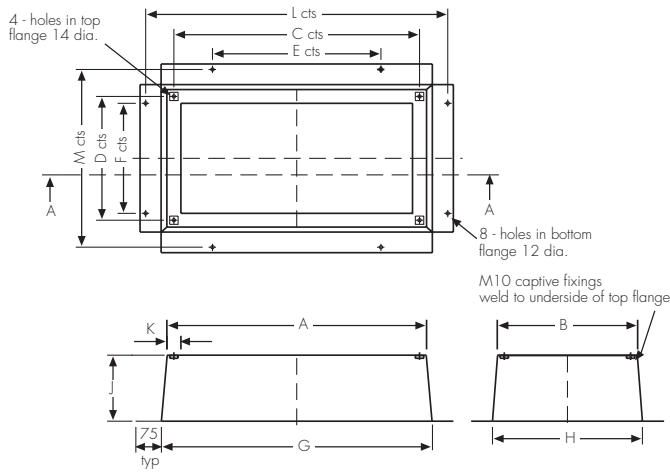
Dia	Motor Phase	Stock Pole	Stock Ref.	Curve r.p.m.	Curve Ref.	m³/s at Pa					Motor kW	S.C Amps	F.L.C Amps	dBA @ 3m	
						0	25	50	75	100					150
400	1	8	G2B400/8/1	655	①	0.509	0.444	0.361	0.19			0.13	1	0.68	39
400	3	8	G2B400/8/3	655	①	0.509	0.444	0.361	0.19			0.09	0.5	0.26	39
450	1	8	G2B450/8/1	600	②	0.66	0.62	0.52	0.427	0.285		0.15	1	0.63	44
450	3	8	G2B450/8/3	600	②	0.66	0.62	0.52	0.427	0.285		0.12	0.55	0.27	44
500	1	8	G2B500/8/1	640	③	0.999	0.931	0.84	0.736	0.617	0.19	0.23	2.05	1.15	47
500	3	8	G2B500/8/3	640	③	0.999	0.931	0.84	0.736	0.617	0.19	0.18	1	0.41	47

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

Unit	Pole		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
G2B400	8	Inlet/Outlet	64	60	60	55	55	51	42	33	39
G2B450	8	Inlet/Outlet	70	67	65	60	60	57	49	41	44
G2B500	8	Inlet/Outlet	69	73	69	64	62	56	50	42	47

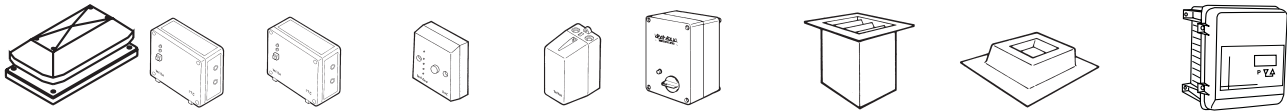
Accessories Dimensions (mm)

Purlin Box Mounting



Unit Code	A	B	C	D	E	F	G	H	J	K	L	M
200	740	410	700	370	600	320	740	410	240	50	852	522
300	925	500	875	450	775	400	964	534	240	50	1087	662
350	1070	570	1000	500	920	470	1120	620	250	70	1230	732
400	1070	570	1000	500	920	470	1120	620	250	70	1230	732
450	1270	670	1200	600	1120	570	1320	720	250	70	1430	832
500	1270	670	1200	600	1120	570	1320	720	250	70	1430	832

Accessories



Stock Ref.	**ITC Man./Auto		**ITC-DS 12/24hr		RVC ELV	RSC Remote	Roof Attenuator		*eDemand Controller		
	Changeover	Auto Changeover	Remote Visual	Setback	Auto	600mm	900mm	Purlin Box	Voltage	1/3 Phase	3 Phase
	Controller	Controller	Controller	Controller	Transformer	Stock Ref.	Stock Ref.	Stock Ref.	Control	Inverter	Inverter
Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
G2B200/2/1	10314200	10314210	10314220	10314230A	10313103	DSG2B20	-	G2B/A2 00	444164	-	-
G2B200/4/1	10314200	10314210	10314220	10314230A	10313103	DSG2B20	-	G2B/A200	444164	-	-
G2B300/4/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B30	G2B/A300	444164	-	-
G2B350/4/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B35/40	GB/A350/400	444164	-	-
G2B400/4/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B35/40	G2B/A350/400	444164	-	-
G2B400/4/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B35/40	G2B/A350/400	444166	444177	444172
G2B450/4/1	10314200	10314210	10314220	10314230A	10314105	-	DSG2B45/50	G2B/A450/500	444164	-	-
G2B450/4/3	10314200	10314210	10314220	10314230A	10314304	-	DSG2B45/50	G2B/A450/500	444166	444177	444172
G2B500/4/1	10314200	10314210	10314220	10314230A	10314107	-	DSG2B45/50	G2B/A450/500	444165	-	-
G2B500/4/3	10314200	10314210	10314220	10314230A	10314304	-	DSG2B45/50	G2B/A450/500	444166	444177	444173
G2B200/6/1	10314200	10314210	10314220	10314230A	-	DSG2B20	-	G2B/A200	444164	-	-
G2B300/6/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B30	G2B/A300	444164	-	-
G2B350/6/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B35/40	G2B/A350/400	444164	-	-
G2B400/6/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B35/40	G2B/A350/400	444164	-	-
G2B400/6/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B35/40	G2B/A350/400	444166	444177	444172
G2B450/6/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B45/50	G2B/A450/500	444164	-	-
G2B450/6/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B45/50	G2B/A450/500	444166	444177	444172
G2B500/6/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B45/50	G2B/A450/500	444164	-	-
G2B500/6/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B45/50	G2B/A450/500	444166	444177	444172
G2B400/8/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B35/40	G2B/A350/400	444164	-	-
G2B400/8/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B35/40	G2B/A350/400	444166	444177	444172
G2B450/8/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B45/50	G2B/A450/500	444164	-	-
G2B450/8/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B45/50	G2B/A450/500	444166	444177	444172
G2B500/8/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B45/50	G2B/A450/500	444164	-	-
G2B500/8/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B45/50	G2B/A450/500	444166	444177	444172

* 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