



BG Series

CLOSE-COUPLED SELF-PRIMING CENTRIFUGAL PUMPS EQUIPPED WITH
IE2, IE3 MOTORS (REG. (EU) 2019/1781)

ErP 2009/125/EC

**Close-coupled
self-priming
centrifugal
pumps with
built-in ejector
system**

MARKET SECTORS

CIVIL, AGRICULTURAL, INDUSTRIAL.

APPLICATIONS

- Water distribution.
- Pressure boosting.
- Irrigation.
- Washing.
- Rain water collection.
- Industrial washing machines and commercial dishwashers.

BG Series



SPECIFICATIONS

PUMP

- **Delivery** up to 4,2 m³/h
- **Head** up to 53 m
- Maximum working **pressure**: 8 bar (PN 8).
- **Maximum total lift**: 8 m.
- Temperature of **pumped liquid**: -10°C to +40°C.
- Maximum **ambient temperature**: +40°C.
- **Motor power**: from 0,4 kW to 1,1 kW.

MOTOR

- Asynchronous, squirrel cage rotor, enclosed construction in aluminum casing, external ventilation.
- **Protection**: IP55.
- Class 155 (F) **insulation**.
- Performances according to EN 60034-1.
- Maximum ambient **temperature**: 40°C.
- **Standard voltage**:
 - **Single-phase** version:
220-240 V 50 Hz, 2 poles with built-in automatic reset overload protection.
 - **Three-phase** version:
220-240/380-415 V 50 Hz;
overload protection to be provided by the user.

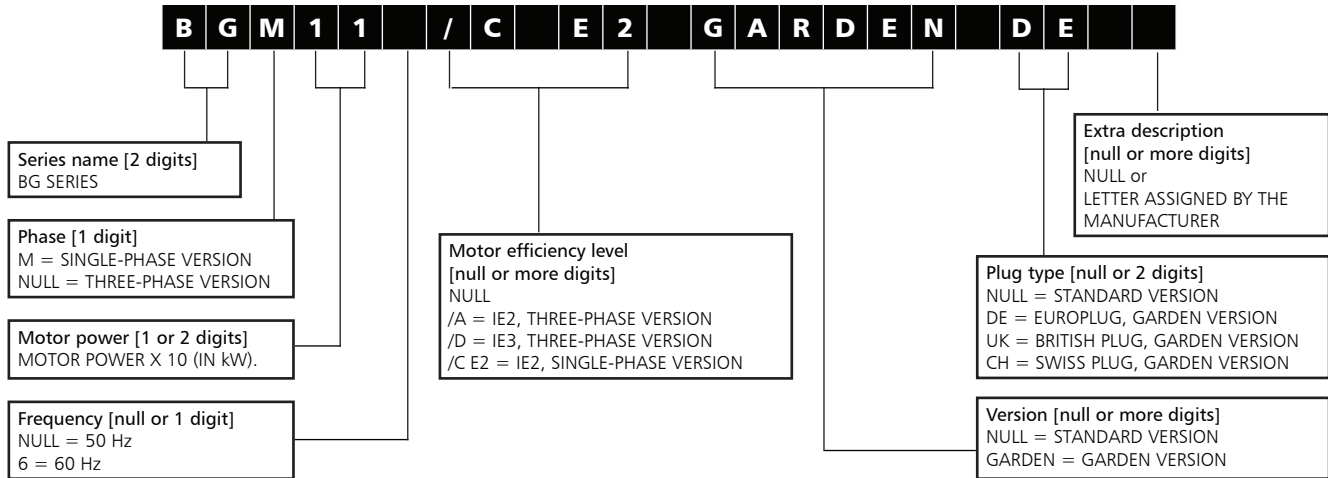
CONSTRUCTION FEATURES

- Close-coupled self-priming centrifugal pumps with built-in ejector system, designed to remain primed even in the presence of water-dissolved gases.
- The extensive use of pressed stainless steel ensures a high-performance, durable and lightweight pump.

ADDITIONAL OFFERING

- "Garden" version available with handle, cable with plug and terminal box with built-in switch.

BG SERIES IDENTIFICATION CODE



EXAMPLES:

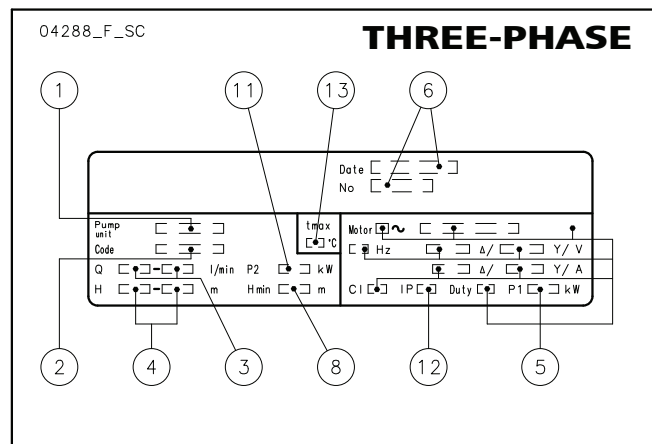
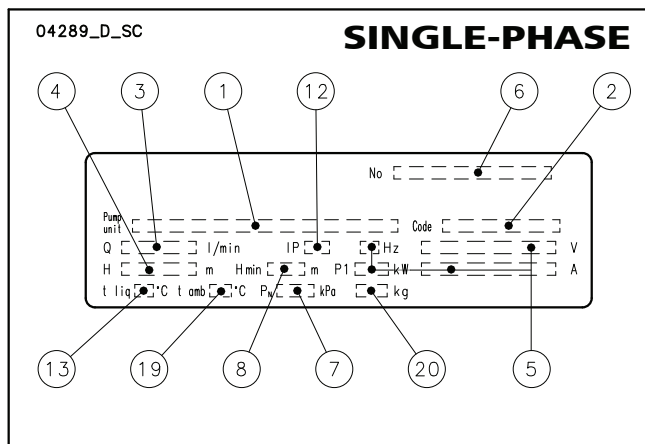
BG5/A

BG SERIES electric pump, three-phase, motor power 0,55 kW, IE2 motor efficiency, 50 Hz.

BGM3/C E2 GARDEN DE 220-240 50

BG SERIES electric pump, single-phase, motor power 0,55 kW, IE2 motor efficiency, 50 Hz, GARDEN version with cable and European plug (DE).

RATING PLATE



LEGEND

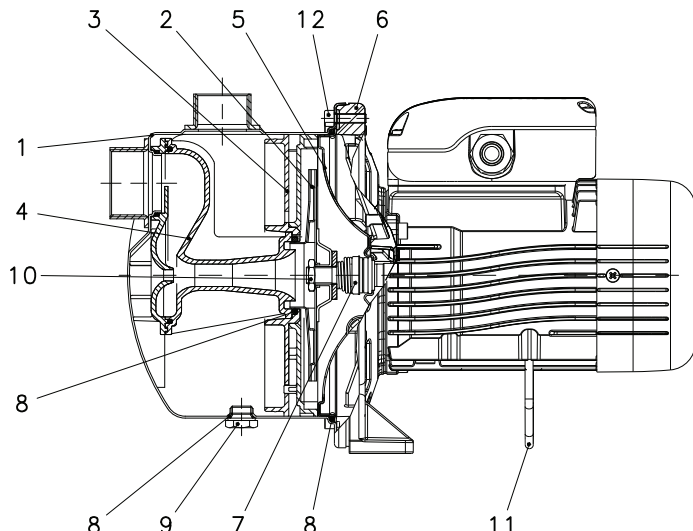
- 1 - Electric pump unit type
- 2 - Electric pump unit code
- 3 - Flow range
- 4 - Head range
- 5 - Electrical data
- 6 - Serial number (data + order number)
- 8 - Minimum head (EN 60335-2-41)

- 11 - Rated power
- 12 - Protection degree
- 13 - Maximum operating liquid temperature
- 19 - Maximum operating ambient temperature
- 20 - Weight

BG SERIES

LIST OF MODELS AND TABLE OF MATERIALS

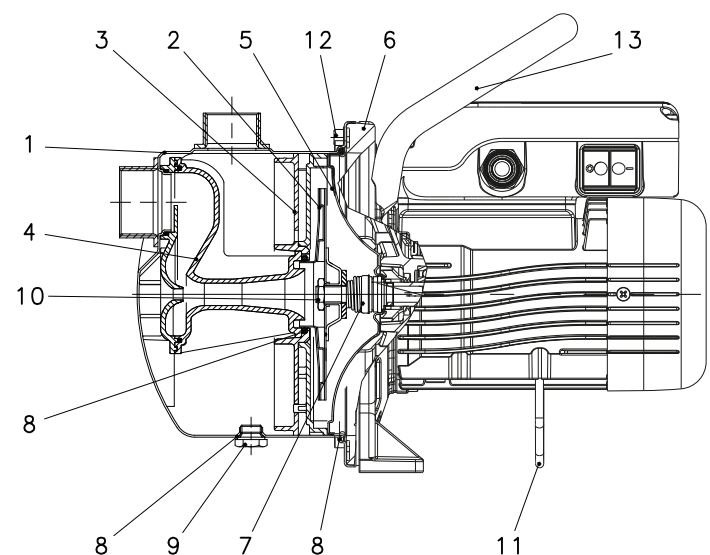
01341_B_DS



VERSIONS

BGM3/C
BGM5/C
BGM7/C
BGM11/C
BG3/A
BG5/A
BG7/D
BG9/D
BG11/D

bg-en_b_mo



VERSIONS

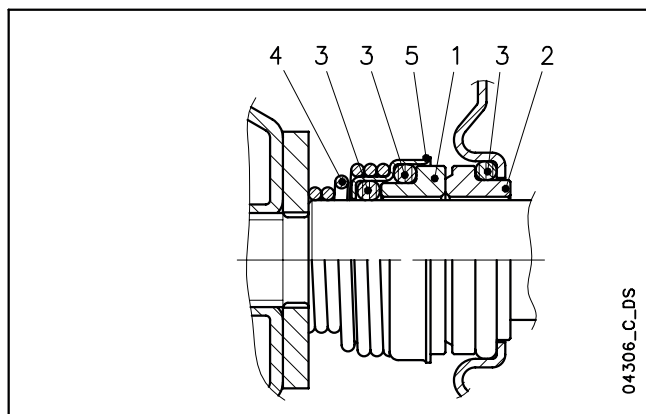
BGM3/C .. GARDEN
BGM5/C .. GARDEN
BGM7/C .. GARDEN
BGM11/C .. GARDEN

bgm-garden-en_b_mo

REF. N.	PART	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
2	Impeller	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
3	Diffuser	Technopolymer (PA66+GF30)		
4	Ejector	Technopolymer (PA66+GF30)		
5	Seal housing	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
6	Adapter	Aluminium	EN 1706-AC-AISI8Cu3 (Fe) (AC46200)	-
7	Mechanical seal	Ceramic / Carbon / EPDM (standard version)		
8	Elastomers	EPDM (standard version)		
9	Fill/drain plugs	Nickel-plated brass	EN 12164 CuZn39Pb3 (CW614N)	
10	Impeller lock nut	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
11	Support foot	Galvanized steel		
12	Pump body fastening nuts and bolts	Galvanized steel		
13	Handle (only for BGM garden)	Painted steel		
14	Switch (only for BGM garden)			
15	Power cable (only for BGM garden)	H07RN-F 3G1 (2 m) with europlug as standard		

BG SERIES MECHANICAL SEAL

Mechanical seal with mounting dimensions according to EN12756 (ex DIN 24960) and ISO 3069.



LIST OF MATERIALS

POSITION 1 - 2	POSITION 3	POSITION 4 - 5
B ₃ : Carbon graphite	E ₂ : EPDM	G : AISI 316
V : Ceramica	V : FPM	

bg_ten-mec-en_b_tm

SEAL TYPES

TYPE	POSITION					TEMPERATURE (°C)
	1 ROTATING ASSEMBLY	2 FIXED ASSEMBLY	3 ELASTOMERS	4 SPRINGS	5 OTHER COMPONENTS	
STANDARD MECHANICAL SEAL						
VB ₃ E ₂ GG	V	B ₃	E ₂	G	G	-10 +110
OTHER TYPES OF MECHANICAL SEAL						
VB ₃ VGG	V	B ₃	V	G	G	-10 +110 *

* for hot water: max 80°C

bg_tipi-ten-mec-en_b_tc

NOTE: The maximum temperature for BG series is **+40°C**.

BG SERIES MOTORS (ErP 2009/125/EC)

- Short-circuit squirrel-cage motor, enclosed construction with external ventilation (TEFC).
- **IP55** protection degree.
- Insulation class **155 (F)**.
- Electrical performances according to EN 60034-1.
- Supplied **single-phase** surface motors with **IE2** efficiency level
- Supplied **three-phase** surface motors with **IE2** efficiency level (power < 0,75 kW) or **IE3** efficiency level (power ≥ 0,75 kW) as standard according to EN 60034-30:2009 and EN 60034-30-1:2014.
- Metric cable gland according to EN 50262.
- **Single-phase** version:
0,55 to 1,1 kW (2-pole)
220-240 V 50 Hz
Built-in automatic reset overload protection
Maximum ambient temperature: 40 °C.
- **Three-phase** version:
0,4 to 1,1 kW (2-pole)
220-240/380-415 V 50 Hz
Overload protection to be provided by the user.
Maximum ambient temperature: 40 °C.

From 1 July 2023 in accordance with the **Regulations (EU) 2019/1781 and (EU) 2021/341**, the three-phase 50 Hz, 60 Hz or 50/60 Hz **surface motors** with **power outputs ranging from 0,12 to 0,749 kW** must have a minimum level **IE2** efficiency; the ones with power outputs ranging **from 0,75 to 74,9 kW** must have a minimum level of **IE3** efficiency. The single-phase **surface motors** with **power outputs ranging from 0,12 kW** must have a minimum level **IE2** efficiency.

The following tables also contain the mandatory information pursuant to Annex I, section 2, of the aforementioned Regulations.

SINGLE-PHASE MOTORS AT 50 Hz, 2 POLES

P _N kW	MOTOR TYPE	IEC SIZE	Construction Design	INPUT CURRENT I _n (A) 220-240 V	CAPACITOR		DATA FOR 230 V 50 Hz VOLTAGE							Operating conditions *		
					μF	V	min ⁻¹	I _s / I _n	η %	cosφ	T _n Nm	T _s /T _n	T _m /T _n	Altitude A.S.L. m	T. amb min/max °C	ATEX
0,55	SM71BG/1055	71	SPECIAL	3,33-3,19	16	450	2810	4,16	74,1	0,99	1,87	0,69	2,13	≤ 1000	-15 / 40	No
0,75	SM80BG/1075	80		4,38-4,27	25	450	2865	5,11	77,4	0,97	2,50	0,40	2,26			
0,8	SM80BG/1085	80		4,71-4,52	25	450	2850	4,79	77,8	0,97	2,68	0,37	2,11			
1,1	SM80BG/1115	80		6,26-5,93	30	450	2860	4,78	79,6	0,98	3,67	0,50	2,14			

* Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

bg-motm_2p50-en_c_te

BG SERIES THREE-PHASE MOTORS AT 50 Hz, 2 POLES

P _N kW	Manufacturer		IEC SIZE	Construction Design	N. of Poles	f _N Hz	Data for 400 V / 50 Hz Voltage				
	Xylem Service Italia Srl Reg. No. 07520560967 Montecchio Maggiore Vicenza - Italia						cosφ	I _s / I _N	T _N Nm	T _s /T _N	T _m /T _n
	Model										
0,40	SM63BG/304		63	SPECIAL	2	50	0,64	4,35	1,37	4,14	3,13
0,55	SM71BG/305		71				0,74	5,97	1,85	3,74	3,56
0,75	SM80BG/307 PE		80				0,78	7,38	2,48	3,57	3,75
1,1	SM80BG/311 PE		80				0,79	8,31	3,63	3,95	3,95

P _N kW	Voltage U _N V											n _N min ⁻¹	Operating conditions *		
	Δ			Y			Δ			Y			Altitude Above Sea Level (m)	T. amb min/max °C	ATEX
	220 V	230 V	240 V	380 V	400 V	415 V	380 V	400 V	415 V	660 V	690 V				
	I _N (A)														
0,40	2,03	2,18	2,32	1,17	1,26	1,34	-	-	-	-	-	2745 ÷ 2800	≤ 1000	-15 / 40	No
0,55	2,46	2,49	2,56	1,42	1,44	1,48	-	-	-	-	-	2835 ÷ 2865			
0,75	2,96	2,94	2,96	1,71	1,70	1,71	1,70	1,69	1,70	0,98	0,98	2875 ÷ 2895			
1,1	4,19	4,14	4,16	2,42	2,39	2,40	2,41	2,38	2,38	1,39	1,37	2870 ÷ 2900			

P _N kW	Δ 220 V Y 380 V			Δ 230 V Y 400 V			Δ 240 V Y 415 V			Δ 380 V Y 660 V			Δ 400 V Y 690 V			Δ 415 V			IE
	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	
	0,40	70,4	73,2	68,9	70,4	70,3	64,5	70,4	67,2	60,2	-	-	-	-	-	-	-	-	
0,55	74,1	74,2	70,4	74,1	73,6	68,8	74,1	72,7	67,1	-	-	-	-	-	-	-	-	-	3
0,75	82,5	83,1	81,3	82,8	82,7	80,1	82,6	82,0	78,9	82,5	82,0	78,9	82,5	82,0	78,9	82,5	82,0	78,9	3
1,1	84,0	84,7	83,4	84,4	84,5	82,5	84,3	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4	3

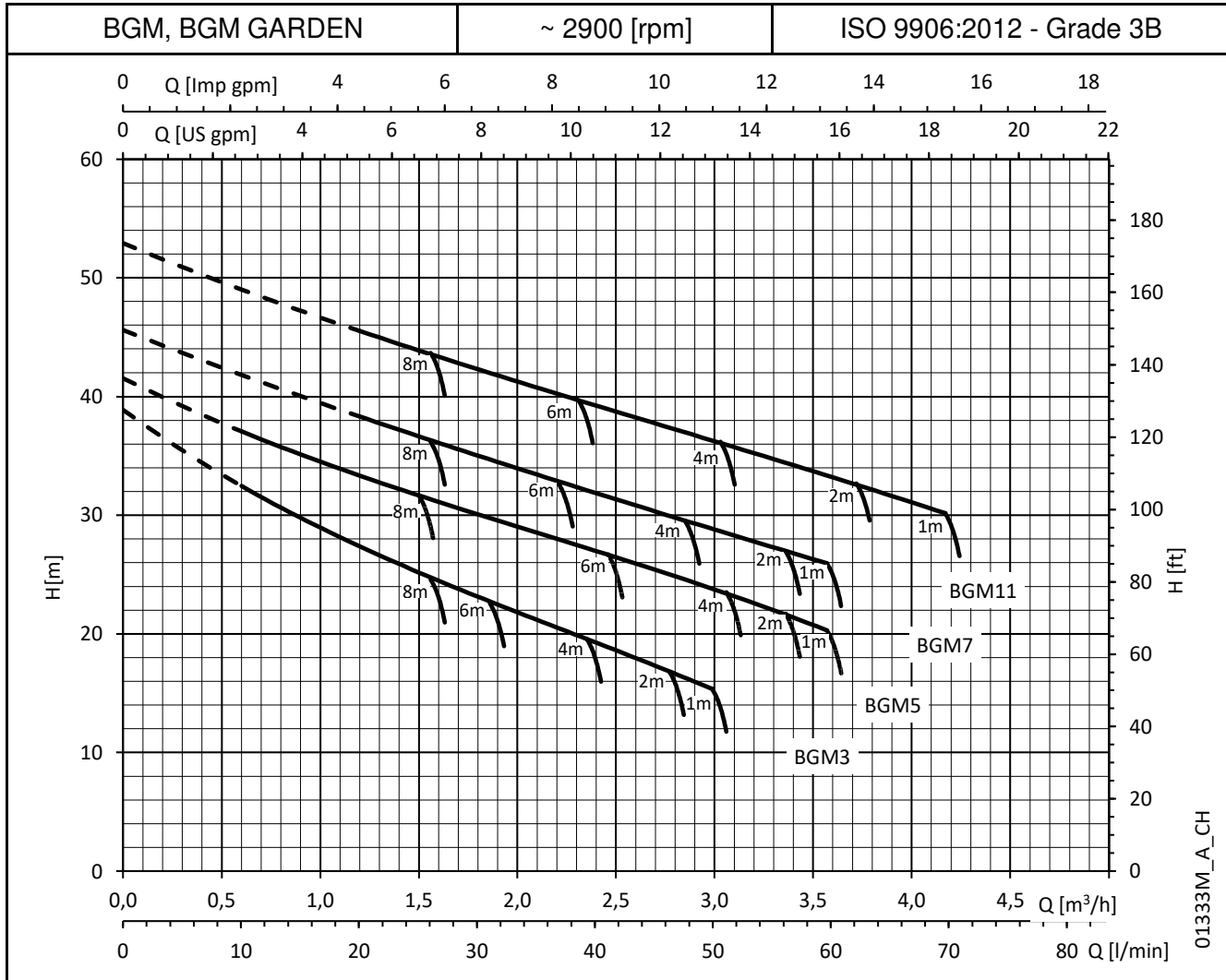
* Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

bg-IE3-mott-2p50-en_b_te

BG SERIES PUMPS (ErP 2009/125/EC)

In accordance with **Article 1(2)(d) of Regulation (EU) No 547/2012**, self-priming pumps are currently **excluded** from ecodesign requirements for water pumps.

BGM, BGM..GARDEN SERIES OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



Maximum delivery depends on geodetic suction lift with clean pipe (1 1/4" and 8 m) and a clean 1 1/4" foot valve.

TABLE OF PERFORMANCES AT 50 Hz, 2 POLES

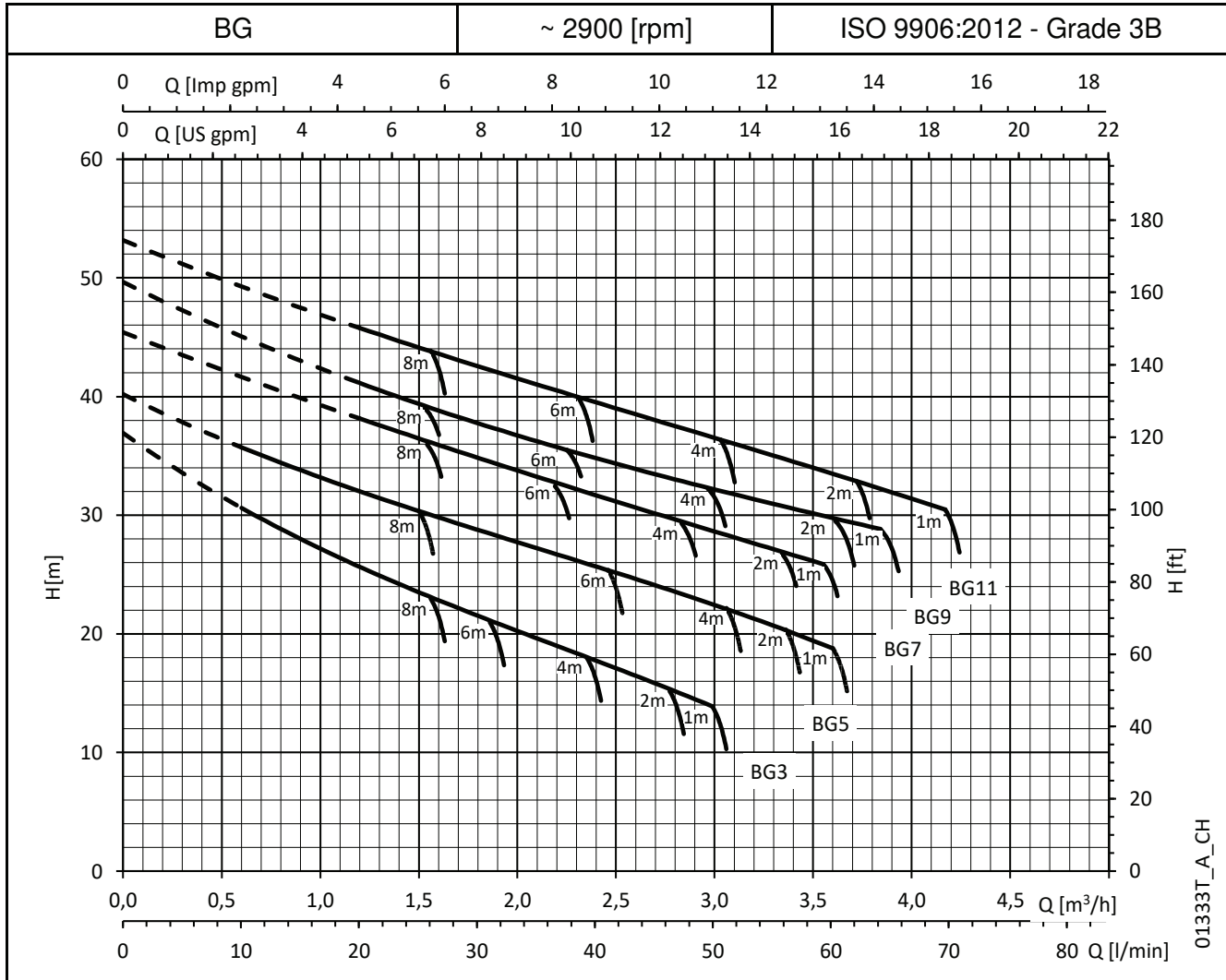
PUMP TYPE BGM	VERSIONE	MOTOR		ELECTRIC PUMP			Q = DELIVERY									
		P _N kW	TYPE	* P1 kW	* I 220-240 V A	CAPACITOR μF / 450 V	l/min 0	10	17,5	25	32,5	40	47,5	55	62,5	70
BGM..GARDEN							m3/h 0	0,6	1,1	1,5	2,0	2,4	2,9	3,3	3,8	4,2
BGM3	1 ~	0,55	SM71BG/1055	0,67	2,87	16	38,9	32,5	28,5	25,2	22,1	19,2	16,3			
BGM5		0,75	SM80BG/1075	0,85	3,79	25	41,5	37,1	34,2	31,7	29,3	27,0	24,6	22,0		
BGM7		0,8	SM80BG/1085	1,04	4,63	25	45,6			36,6	34,2	31,8	29,5	27,3		
BGM11		1,1	SM80BG/1115	1,34	5,92	30	52,9			43,9	41,5	39,2	37,0	34,7	32,4	30,0

Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

bgm-2p50-en_a_th

* Maximum value in specified range: P1 = input power; I = input current.

BG SERIES OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



Maximum delivery depends on geodetic suction lift with clean pipe (1 1/4" and 8 m) and a clean 1 1/4" foot valve.

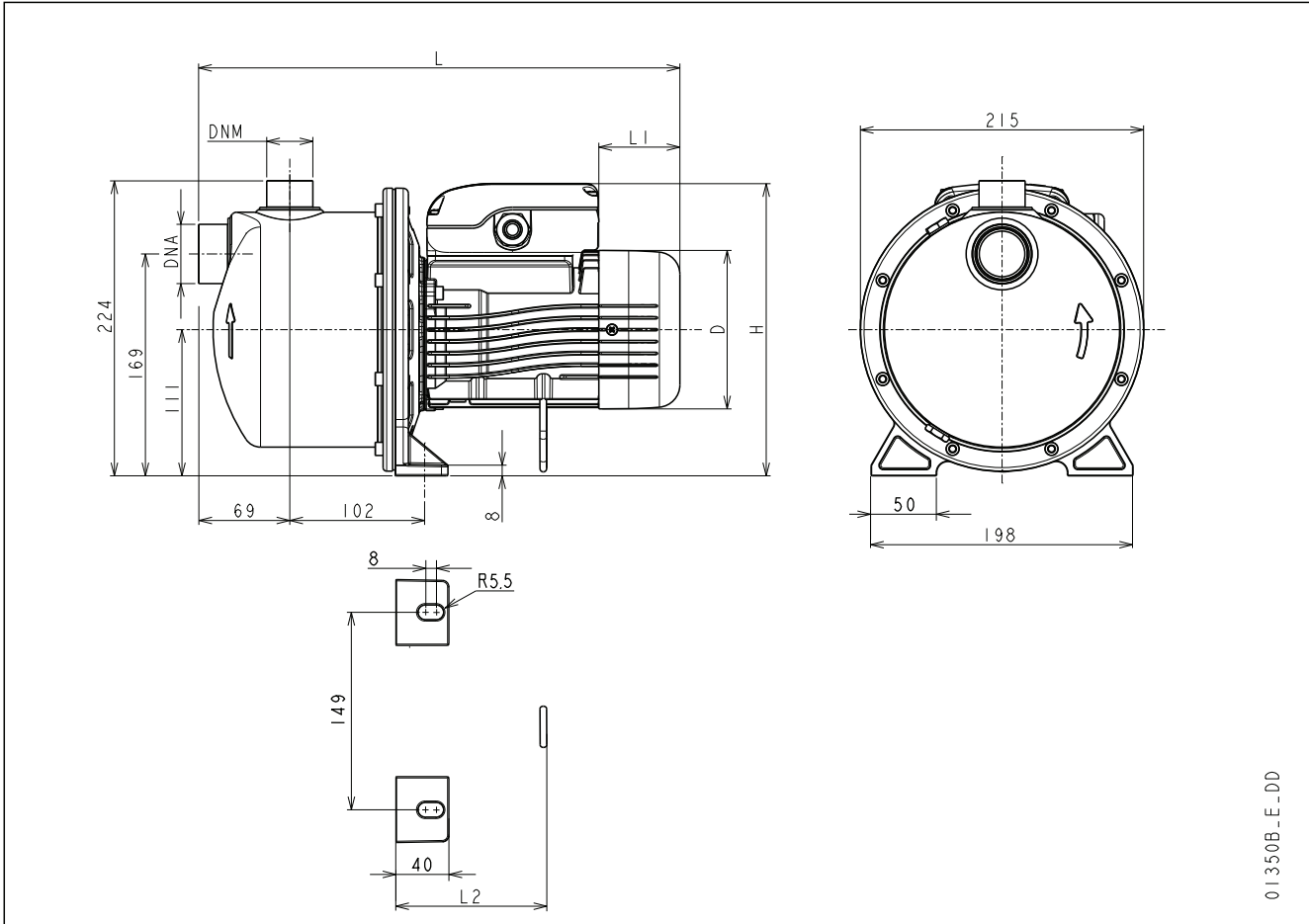
TABLE OF PERFORMANCES AT 50 Hz, 2 POLES

PUMP TYPE	VERSIONE	MOTOR		ELECTRIC PUMP			Q = DELIVERY									
		P _N kW	TYPE	* P1 kW	220-240 V A	* I 380-415 V A	l/min 0	10	17,5	25	32,5	40	47,5	55	62,5	70
							H = TOTAL HEAD IN METRES OF COLUMN OF WATER									
BG3	3 ~	0,4	SM63BG/304	0,68	2,56	1,48	36,9	30,6	26,8	23,5	20,6	17,7	14,8			
BG5		0,55	SM71BG/305	0,81	2,74	1,58	40,2	35,7	32,9	30,3	28,0	25,7	23,3	20,7		
BG7		0,75	SM80BG/307PE	1,02	3,17	1,83	45,4			36,5	34,0	31,7	29,4	27,1		
BG9		0,9	SM80BG/311PE	1,11	3,78	2,18	49,6			39,4	37,0	34,8	32,8	30,9	29,2	
BG11		1,1	SM80BG/311PE	1,30	4,16	2,40	53,2			44,1	41,8	39,5	37,3	35,0	32,7	30,3

Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

bg-2p50-en_b_th

* Maximum value in specified range: P1 = input power; I = input current.

**BG SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES**


01350B-E-DD

PUMP TYPE	DIMENSIONS (mm)					DNA	DNM	WEIGHT kg
	D	L	L1	L2	H			
BGM3/C	140	380	76	117	232	Rp 1¼	Rp 1	11,0
BGM5/C	156	425	69	150	248	Rp 1¼	Rp 1	12,0
BGM7/C	156	425	69	150	248	Rp 1¼	Rp 1	12,0
BGM11/C	156	425	69	150	248	Rp 1¼	Rp 1	14,0
BG3/A	120	366	62	115	222	Rp 1¼	Rp 1	9,0
BG5/A	140	380	76	117	232	Rp 1¼	Rp 1	11,0
BG7/D	155	425	114	150	240	Rp 1¼	Rp 1	15,0
BG9/D	155	425	114	150	240	Rp 1¼	Rp 1	17,0
BG11/D	155	425	114	150	240	Rp 1¼	Rp 1	17,0

Directive 2009/125/EC of the European Union

The **Directive 2005/32/EC** on energy-using products (**EuP**) and the subsequent **Directive 2009/125/EC** on energy-related products (**ErP**) established the ecodesign requirements for products to reduce their energy consumption and consequently their environmental impact.

These requirements apply to products placed and used in the European Economic Area (European Union plus Iceland, Liechtenstein and Norway) as a stand-alone unit or as integrated parts in other products.

The following tables show the Regulations that define the requirements for Lowara products.

- Some types of **pump**, used for pumping clean water:

Regulations	From	Target
(EU) N. 547/2012	1 January 2015	MEI ≥ 0,4

- **Circulators** with a rated hydraulic output power of between 1 and 2500 W, designed for use in heating systems or in secondary circuits of cooling distribution systems:

Regulations	From	Target
(EC) N. 641/2009, (EU) N. 622/2012 and (EU) 2019/1781	1 August 2015	EEl < 0,23

- **Three-phase motors** with frequency 50 or 60 or 50/60 Hz and voltages between 50 and 1000 V (S1 and D.O.L.):

Regulations	From	Target
(EU) 2019/1781 and 2021/341	1 July 2023	IE2 : motors with a rated output ≥ 0,12 and ≤ 0,749 kW IE3 : motors with a rated output ≥ 0,75 and ≤ 74,9 kW IE4 : motors with a rated output ≥ 75 and ≤ 200 kW IE3 : motors with a rated output ≥ 201 and ≤ 1000 kW

- **Single-phase motors** with frequency 50 or 60 or 50/60 Hz and voltages between 50 and 1000 V (S1 and D.O.L.):

Regulations	From	Target
(EU) 2019/1781 and 2021/341	1 July 2023	IE2 : motors with a rated output ≥ 0,12

- **Variable speed drives** with three-phase input and rated output power from 0,12 kW up to 1000 kW, rated for operating with motor included in the same regulations:

Regulations	From	Target
(EU) 2019/1781 and 2021/341	1 July 2021	IE2