



BG Series

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

ErP 2009/125/EC

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 table shows the Regulations that define the requirements for Lowara products::

Product	Regulations	From	Target
Pumps*	(EU) N. 547/2012	1 January 2015	MEI $\geq 0,4$
Circulators**	(EC) N. 641/2009, (EU) N. 622/2012 e (EU) 2019/1781	1 August 2015	EEI $< 0,23$
Electric motors	(EU) 2019/1781 e 2021/341	1 July 2021	IE2 : three-phase motors with a rated output $\geq 0,12$ and $< 0,749$ kW IE3 : three-phase motors with a rated output $\geq 0,75$ and < 1000 kW
Variable speed drives (VSD)***	(EU) 2019/1781 e 2021/341	1 July 2021	IE2

* some types of pump, used for pumping clean water.

** 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.

*** 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.

From 1 July 2023 it will be introduced additional requirements.

At present, self-priming water pumps are not included in the scope of application of Regulation (EU) No. 547/2012.

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BG Series

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

BG Series

MARKET SECTORS

CIVIL, AGRICULTURAL, INDUSTRIAL.

APPLICATIONS

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

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 0,37 kW to 1,1 kW.

MOTOR

- Asynchronous, squirrel cage rotor, enclosed construction in aluminium 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

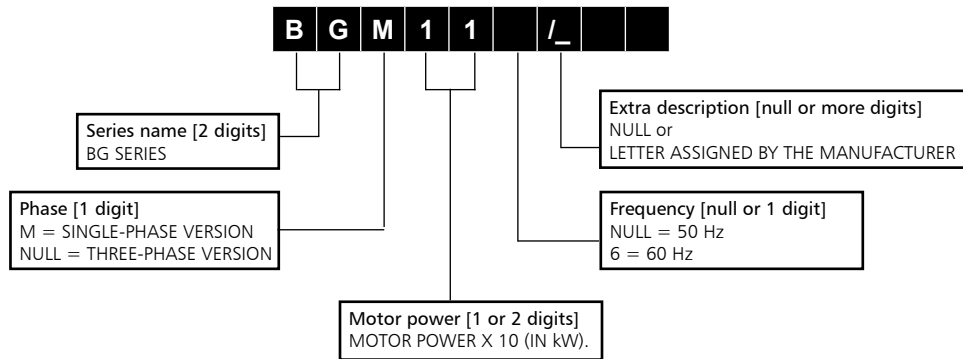
- Close-coupled self-priming centrifugal pumps with built-in ejector system, designed to remain primed even in the presence of water-dissolved gases.
- The extensive use of pressed stainless steel ensures a high-performance, durable and lightweight pump.

**ADDITIONAL
OFFERING**

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



BG SERIES IDENTIFICATION CODE

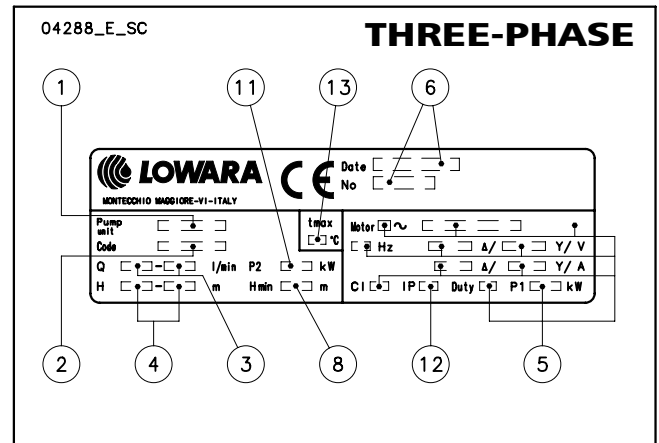
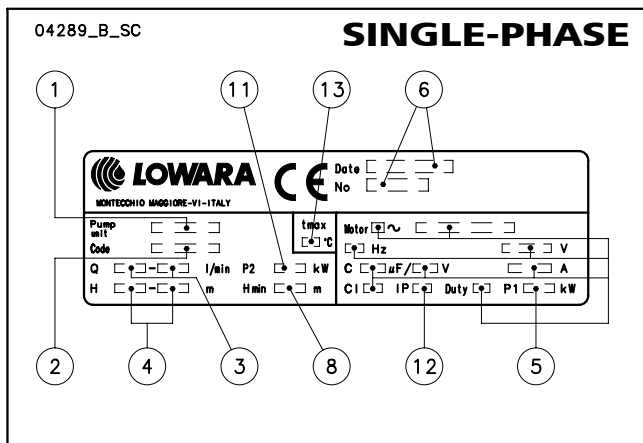


EXAMPLE :

BGM11/A

BG SERIES electric pump, single-phase, motor power 1,1 kW, 50 Hz

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 (uses as EN 60335-2-41)

BG SERIES

LIST OF MODELS AND TABLE OF MATERIALS

01341_B_DS

A detailed cross-sectional technical drawing of a pump assembly. The drawing shows the internal mechanical components, including the pump chamber, impeller, and various seals and bearings. Numbered callouts (1-12) point to specific parts: 1 points to the front housing, 2 to the impeller, 3 to the front housing flange, 4 to the front housing seal, 5 to the impeller seal, 6 to the rear housing, 7 to the rear housing seal, 8 to the rear housing flange, 9 to the rear housing seal, 10 to the pump chamber, 11 to the pump shaft, and 12 to the pump shaft seal.

VERSIONS

BGM3/A
BGM5/A
BGM7/A
BGM9/A
BGM11/A
BG3/A
BG5/A
BG7/A
BG9/A
BG11/A

bg-en_a_mo

A detailed cross-sectional technical drawing of a pump assembly with a garden handle. The drawing shows the internal mechanical components, including the pump chamber, impeller, and various seals and bearings. Numbered callouts (1-13) point to specific parts: 1 points to the front housing, 2 to the impeller, 3 to the front housing flange, 4 to the front housing seal, 5 to the impeller seal, 6 to the rear housing, 7 to the rear housing seal, 8 to the rear housing flange, 9 to the rear housing seal, 10 to the pump chamber, 11 to the pump shaft, 12 to the pump shaft seal, and 13 to the garden handle.

VERSIONS

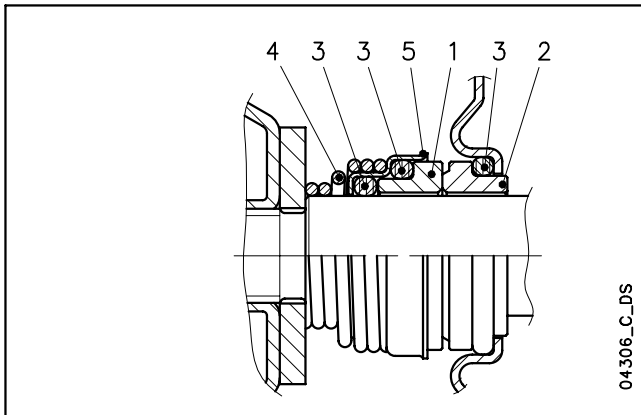
BGM3/A .. GARDEN
BGM5/A .. GARDEN
BGM7/A .. GARDEN
BGM9/A .. GARDEN
BGM11/A .. GARDEN

bgm-garden-en_a_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 for BGM garden model			

BG SERIES MECHANICAL SEAL

Tenuta meccanica con dimensioni di montaggio secondo EN12756 (ex DIN 24960) e 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

BG SERIES MOTORS (ErP 2009/125/EC)

- Supplied three-phase surface motors with IE2 efficiency level for power < 0,75 kW, IE3 efficiency level for power ≥ 0,75 kW as standard according to EN 60034-30:2009 and EN 60034-30-1:2014.
- Electrical performances according to EN 60034-1.
- Insulation class **155 (F)**.
- **IP 55** protection degree.
- Metric cable gland according to EN 50262.
- Standard voltage:
 - **Single-phase** version: 220-240 V 50 Hz (incorporated automatic-reset overload protection).
 - **Three-phase** version: 220-240/380-415 V 50 Hz (overload protection to be provided by the user).

From 1 July 2021 in accordance with the **Regulations (EU) 2019/1781 and 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 and 1000 kW** must have a minimum level of **IE3** efficiency.

From 1 July 2023, it will be introduced additional requirements.

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	CAPACITOR		DATA FOR 230 V 50 Hz VOLTAGE								Operating conditions *		
				In (A)										Altitude	T. amb	ATEX	
				220-240 V	μF	V	min ⁻¹	Is / In	η %	cosφ	Tn	Ts/Tn	Tm/Tn	A.S.L.	min/max		
0,40	SM63BG/1045	63	SPECIAL	2,79-2,85	14	450	2745	2,64	65,1	0,96	1,39	0,68	1,63	1000 VI	-15 / 40	No	
0,55	SM71BG/1055	71		3,76-3,99	16	450	2820	3,72	68,9	0,91	1,86	0,61	2,00				
0,75	SM71BG/1075	71		4,90-4,85	20	450	2765	3,42	70,1	0,96	2,59	0,58	1,75				
0,95	SM71BG/1095	71		6,25-5,89	25	450	2740	3,39	71,1	0,98	3,31	0,58	1,66				
1,10	SM80BG/1115	80		6,88-6,65	30	450	2800	3,89	74,7	0,96	3,75	0,46	1,72				

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

bg-motm-2p50-en_b_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
1,5	SM80BG/315 PE	80				0,80	8,80	4,96	4,31	4,10
2,2	PLM90BG/322 E3	90				0,80	8,77	7,28	3,72	3,70
3,0	PLM90BG/330 E3	90				0,79	7,81	9,93	4,26	3,94

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
	Δ			Y			Δ			Y							
	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)												2745 ÷ 2800 2835 ÷ 2865 2875 ÷ 2895 2870 ÷ 2900 2870 ÷ 2895 2880 ÷ 2900 2865 ÷ 2895	≤ 1000	-15 / 40	No		
0,40	2,03	2,18	2,32	1,17	1,26	1,34	-	-	-	-	-						
0,55	2,46	2,49	2,56	1,42	1,44	1,48	-	-	-	-	-						
0,75	2,96	2,94	2,96	1,71	1,70	1,71	1,70	1,69	1,70	0,98	0,98						
1,1	4,19	4,14	4,16	2,42	2,39	2,40	2,41	2,38	2,38	1,39	1,37						
1,5	5,56	5,49	5,51	3,21	3,17	3,18	3,21	3,18	3,19	1,85	1,84						
2,2	7,97	7,90	7,98	4,60	4,56	4,61	4,57	4,54	4,57	2,64	2,62						
3,0	11,0	11,0	11,2	6,35	6,33	6,44	6,29	6,27	6,34	3,63	3,62						

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	-	-	-	-	-	-	-	-	-	2
0,55	74,1	74,2	70,4	74,1	73,6	68,8	74,1	72,7	67,1	-	-	-	-	-	-	-	-	-	
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	
1,5	85,6	86,5	85,8	85,9	86,4	84,9	86,0	86,0	84,0	85,6	86,0	84,0	85,6	86,0	84,0	85,6	86,0	84,0	
2,2	86,5	87,4	86,8	86,4	86,9	85,7	86,6	86,7	85,0	86,4	86,7	85,0	86,4	86,7	85,0	86,4	86,7	85,0	
3,0	87,2	88,5	88,3	87,5	88,2	87,5	87,5	87,8	86,4	87,2	87,8	86,4	87,2	87,8	86,4	87,2	87,8	86,4	

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

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BG SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

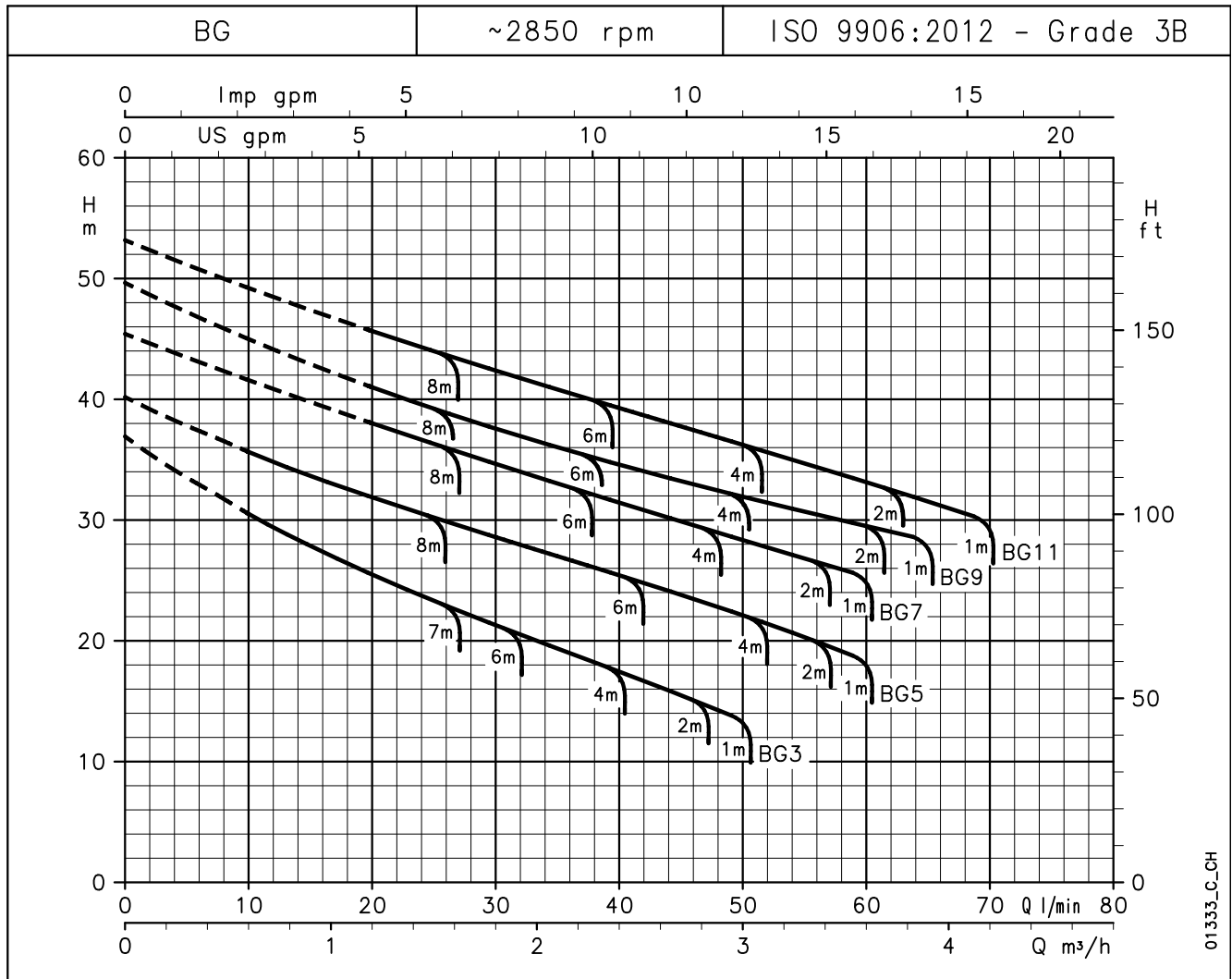


TABLE OF HYDRAULIC PERFORMANCES AT 50 Hz, 2 POLES

PUMP TYPE	RATED POWER		Q = DELIVERY									
			l/min	0	10	20	30	40	50	60	65	70
			m³/h	0	0,6	1,2	1,8	2,4	3	3,6	3,9	4,2
	kW	HP	H = TOTAL HEAD METRES COLUMN OF WATER									
BG(M)3	0,37	0,5	36,9	30,6	25,6	21,5	17,7	13,8				
BG(M)5	0,55	0,75	40,2	35,7	32,0	28,8	25,7	22,4	18,8			
BG(M)7	0,75	1	45,4		38,1	34,8	31,7	28,6	25,6			
BG(M)9	0,9	1,2	49,6		41,1	37,7	34,8	32,2	29,8	28,6		
BG(M)11	1,1	1,5	53,2		45,8	42,5	39,5	36,5	33,5	31,9	30,3	

Maximum delivery depends on geodetic suction lift with clean 8 m pipe and 1¼" foot valve.

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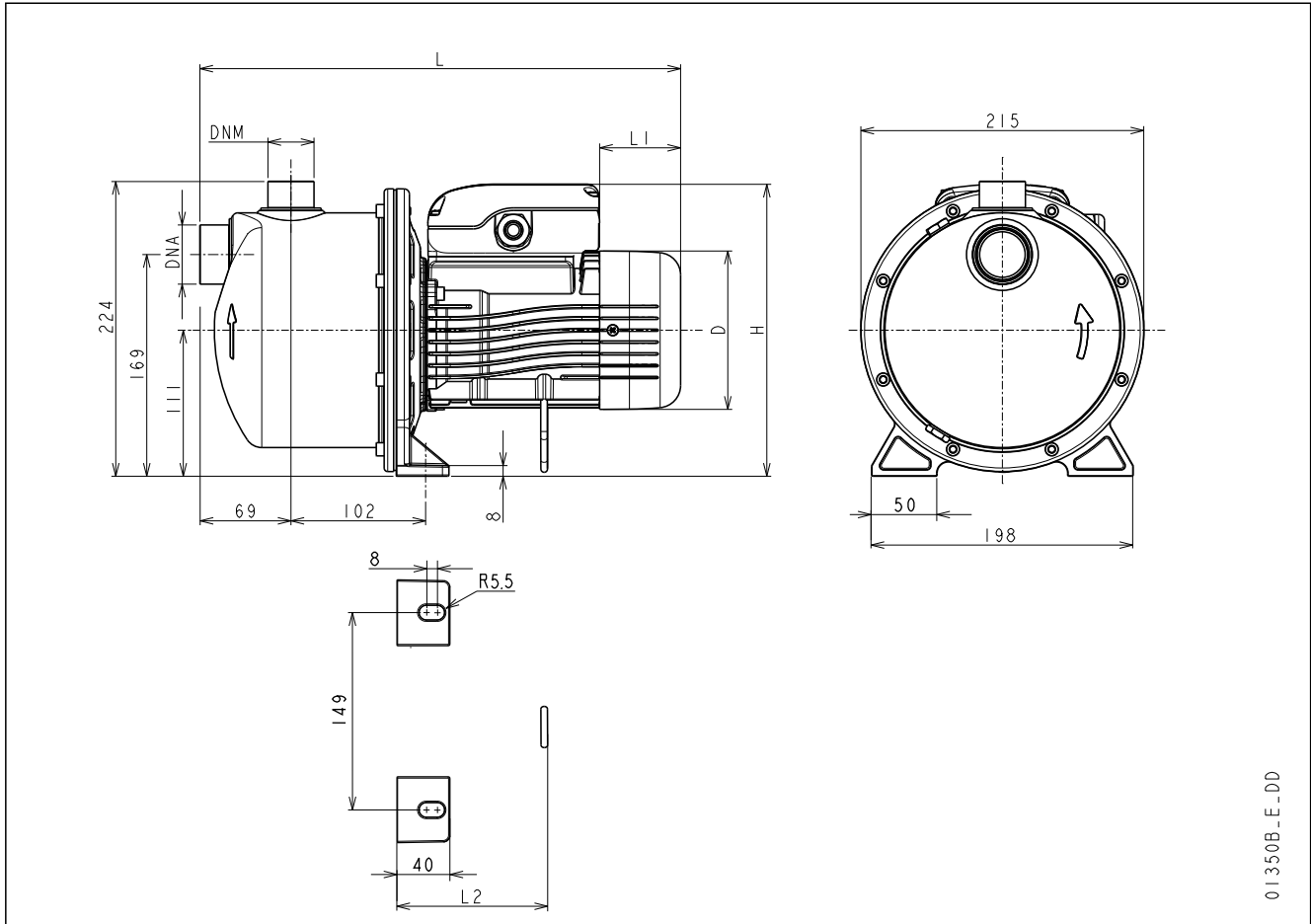
These performances are valid for liquids with density $\rho = 1,0 \text{ kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{s}$.

PUMP TYPE	MOTOR TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR	PUMP TYPE	MOTOR TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
1 ~		kW	220-240 V	μF / 450 V	3 ~		kW	220-240 V	380-415 V
BGM3	SM63BG/1045	0,67	2,96	14	BG3	SM63BG/304	0,68	2,56	1,48
BGM5	SM71BG/1055	0,91	4,33	16	BG5	SM71BG/305	0,81	2,74	1,58
BGM7	SM71BG/1075	1,11	5,00	20	BG7	SM80BG/307PE	1,02	3,17	1,83
BGM9	SM71BG/1095	1,24	5,54	25	BG9	SM80BG/311PE	1,11	3,78	2,18
BGM11	SM80BG/1115	1,43	6,47	30	BG11	SM80BG/311PE	1,30	4,16	2,40

*Maximum value in specified range.

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BG SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES

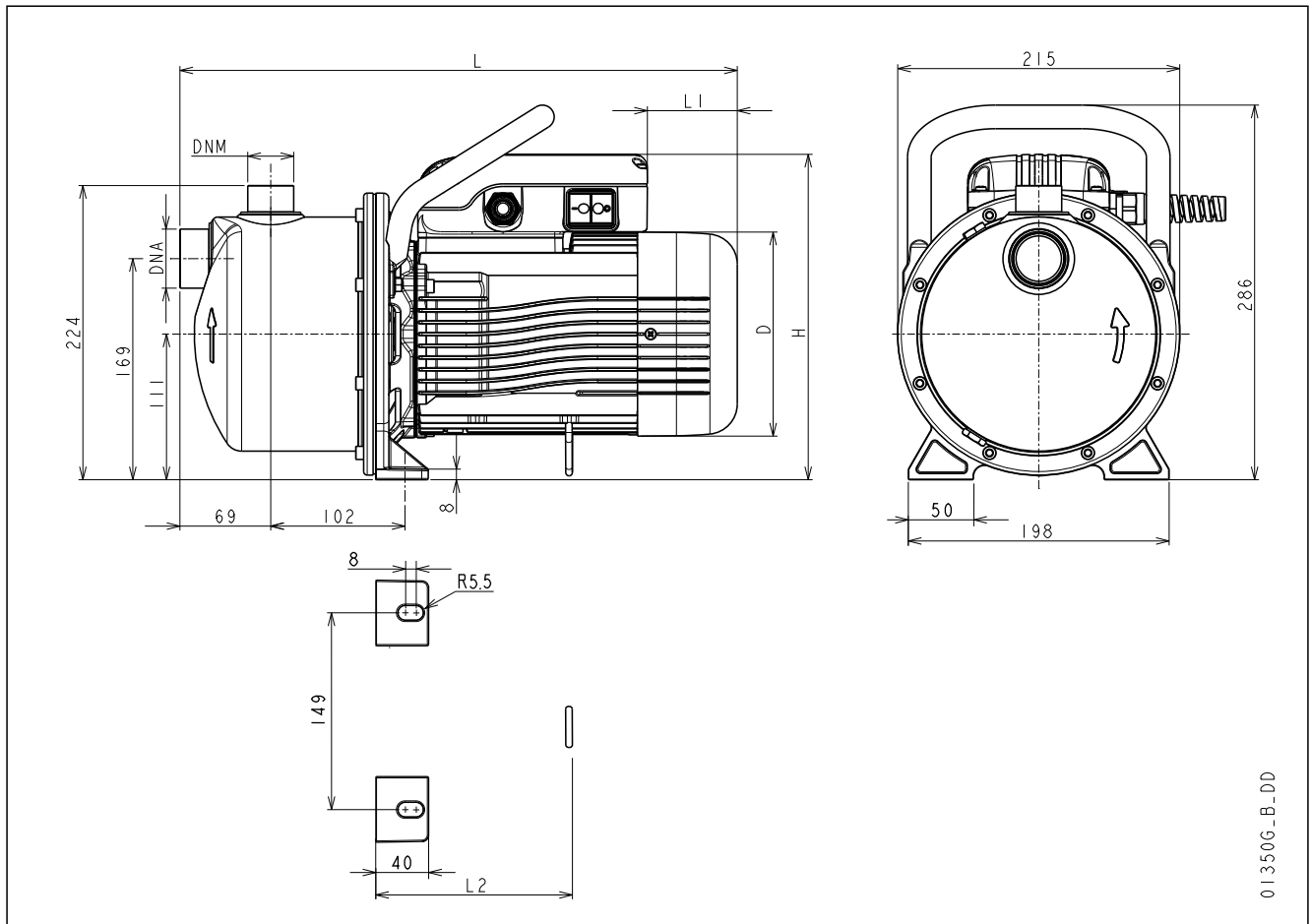


PUMP TYPE	DIMENSIONS (mm)					DNA	DNM	WEIGHT kg
	D	L	L1	L2	H			
BGM3/A	120	366	62	115	222	Rp 1 1/4	Rp 1	9
BGM5/A	140	380	76	117	232	Rp 1 1/4	Rp 1	11
BGM7/A	140	380	76	150	232	Rp 1 1/4	Rp 1	12
BGM9/A	140	380	31	150	241	Rp 1 1/4	Rp 1	12
BGM11/A	156	425	69	150	248	Rp 1 1/4	Rp 1	15
BG3/A	120	366	62	115	222	Rp 1 1/4	Rp 1	9
BG5/A	140	380	76	117	232	Rp 1 1/4	Rp 1	11
BG7/D	155	425	114	150	240	Rp 1 1/4	Rp 1	15
BG9/D	155	425	114	150	240	Rp 1 1/4	Rp 1	17
BG11/D	155	425	114	150	240	Rp 1 1/4	Rp 1	17

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BG SERIES

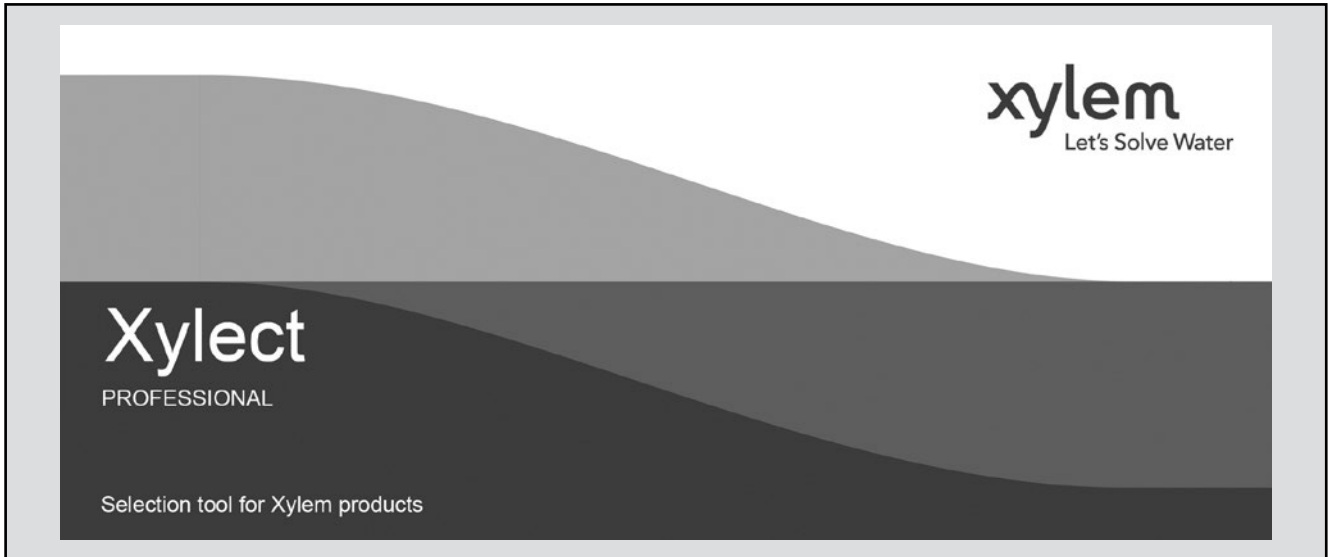
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



PUMP TYPE	DIMENSIONS (mm)					DNA	DNM	WEIGHT kg
	D	L	L1	L2	H			
BGM3/A .. GARDEN	120	366	17	115	231	Rp 1¼	Rp 1	10,5
BGM5/A .. GARDEN	140	380	31	117	241	Rp 1¼	Rp 1	11,5
BGM7/A .. GARDEN	140	380	31	117	241	Rp 1¼	Rp 1	13,5
BGM9/A .. GARDEN	140	380	31	117	241	Rp 1¼	Rp 1	15,5
BGM11/A .. GARDEN	156	425	69	150	248	Rp 1¼	Rp 1	20,0

bg-gard-2p50-en_b_td

FURTHER PRODUCT SELECTION AND DOCUMENTATION Xylect



Xylect is pump solution selection software with an extensive online database of product information across the entire Lowara range of pumps and related products, with multiple search options and helpful project management facilities. The system holds up-to-date product information on thousands of products and accessories.

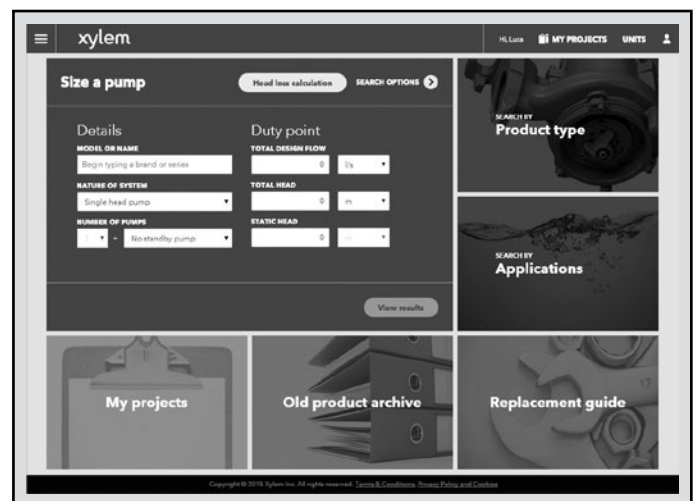
The possibility to search by applications and the detailed information output given makes it easy to make the optimal selection without having detailed knowledge about the Lowara products.

The search can be made by:

- Application
- Product type
- Duty point

Xylect gives a detailed output:

- List with search results
- Performance curves (flow, head, power, efficiency, NPSH)
- Motor data
- Dimensional drawings
- Options
- Data sheet printouts
- Document downloads incl dxf files



The search by application guides users not familiar with the product range to the right choice.

FURTHER PRODUCT SELECTION AND DOCUMENTATION Xylect



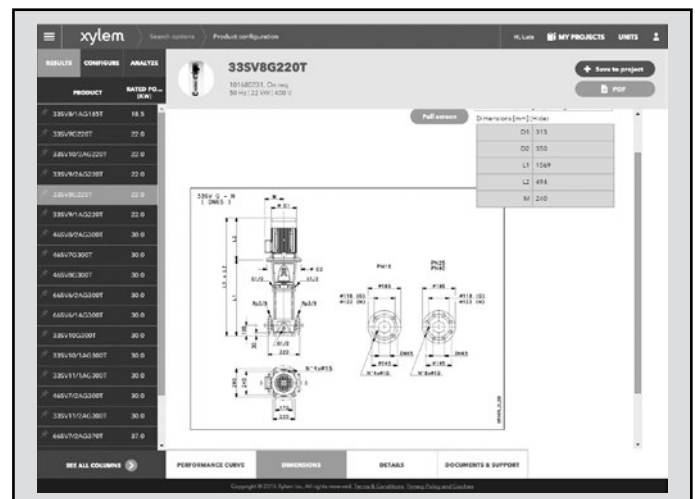
The detailed output makes it easy to select the optimal pump from the given alternatives.

The best way to work with Xylect is to create a personal account. This makes it possible to:

- Set own standard units
- Create and save projects
- Share projects with other Xylect users

Every registered user has a proper space, where all projects are saved.

For more information about Xylect please contact our sales network or visit www.xylect.com.



Dimensional drawings appear on the screen and can be downloaded in dxf format.

Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

For more information on how Xylem can help you, go to www.xylem.com/uk



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