

Submersible Electric Pumps for drainage of clean and slightly dirty water

Drainage pumps with up to 22 metres head and up to 280 l/min (16,8 m³/h) delivery. This range consists of three pumps with up to 0,75 kW rated power.

DN Series



APPLICATIONS

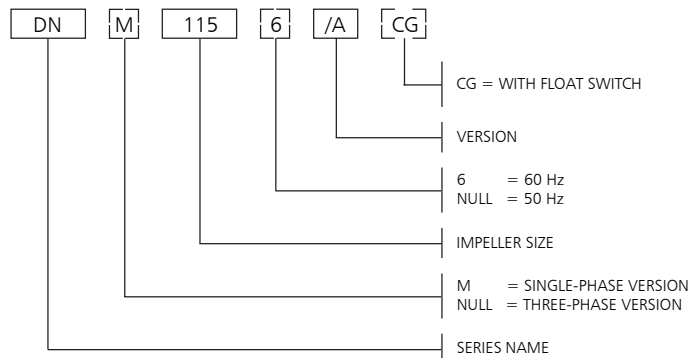
- Draining of flooded excavations and marshy ground.
- Irrigation from rainwater reservoirs, ditches, ponds and watercourses.

SPECIFICATIONS

- **Maximum liquid temperature:**
 - **50°C** with fully submerged pump.
 - **25°C** with partially submerged pump.
- Open **impeller** with **abrasion-resistant** rubber coating.
- **Mechanical seal** protected by **sand labyrinth**.

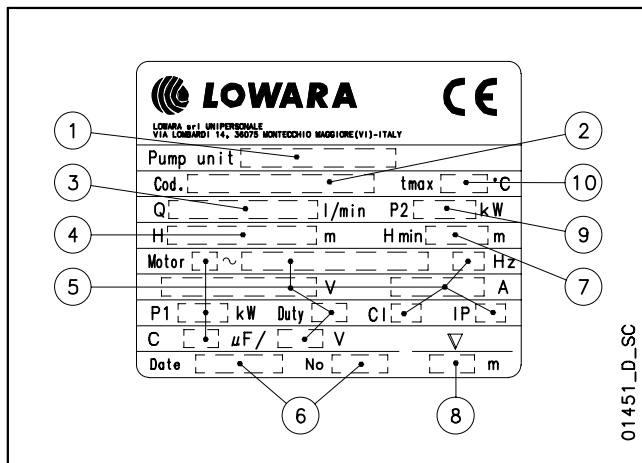
- Maximum dimension of **suspended solids: 5 mm.**
- **Motor** in a dielectric non-toxic **oil bath**, which ensures the lubrication of the ball bearings and a more efficient cooling.
- **Power cord: H07RN-F.**
 - single-phase: with plug.
 - three-phase: without plug.
- **Insulation class 155°C (F).**
- **IPX8 protection.**
- **Maximum immersion depth: 5 m.**
- **Versions:**
 - Single-phase: 220-240V, 50Hz 2 poles.
 - Three-phase: 220-240V, 50Hz 2 poles. 380-415V, 50Hz 2 poles.
- **The single-phase versions** feature:
 - **capacitor** housed in a box on the power cord + 1,5 m. power cord with plug.
 - **thermal overload protection** to stop pump supply in case of overheating.
- CG versions (single-phase with pre-assembled float switch), 60 Hz single-phase and three-phase versions, versions with various power cord lengths and various plugs are available on request.

DN SERIES IDENTIFICATION CODE



EXAMPLE : DNM 115/A
DN Series Electric pump, impeller size 115,
50 Hz version, single-phase, /A version.

SINGLE-PHASE RATING PLATE



1 - Electric pump type

2 - Code

3 - Delivery range

4 - Head range

5 - Motor type

6 - Date of manufacture and serial number

7 - Minimum head

8 - Maximum immersion depth

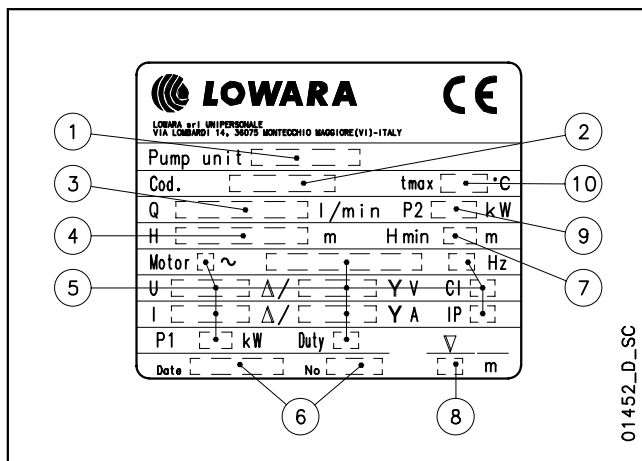
9 - Rated output

10 - Maximum liquid temperature

LEGEND

- 1 - Electric pump type
- 2 - Code
- 3 - Delivery range
- 4 - Head range
- 5 - Motor type
- 6 - Date of manufacture and serial number
- 7 - Minimum head
- 8 - Maximum immersion depth
- 9 - Rated output
- 10 - Maximum liquid temperature

THREE-PHASE RATING PLATE



1 - Electric pump type

2 - Code

3 - Delivery range

4 - Head range

5 - Motor type

6 - Date of manufacture and serial number

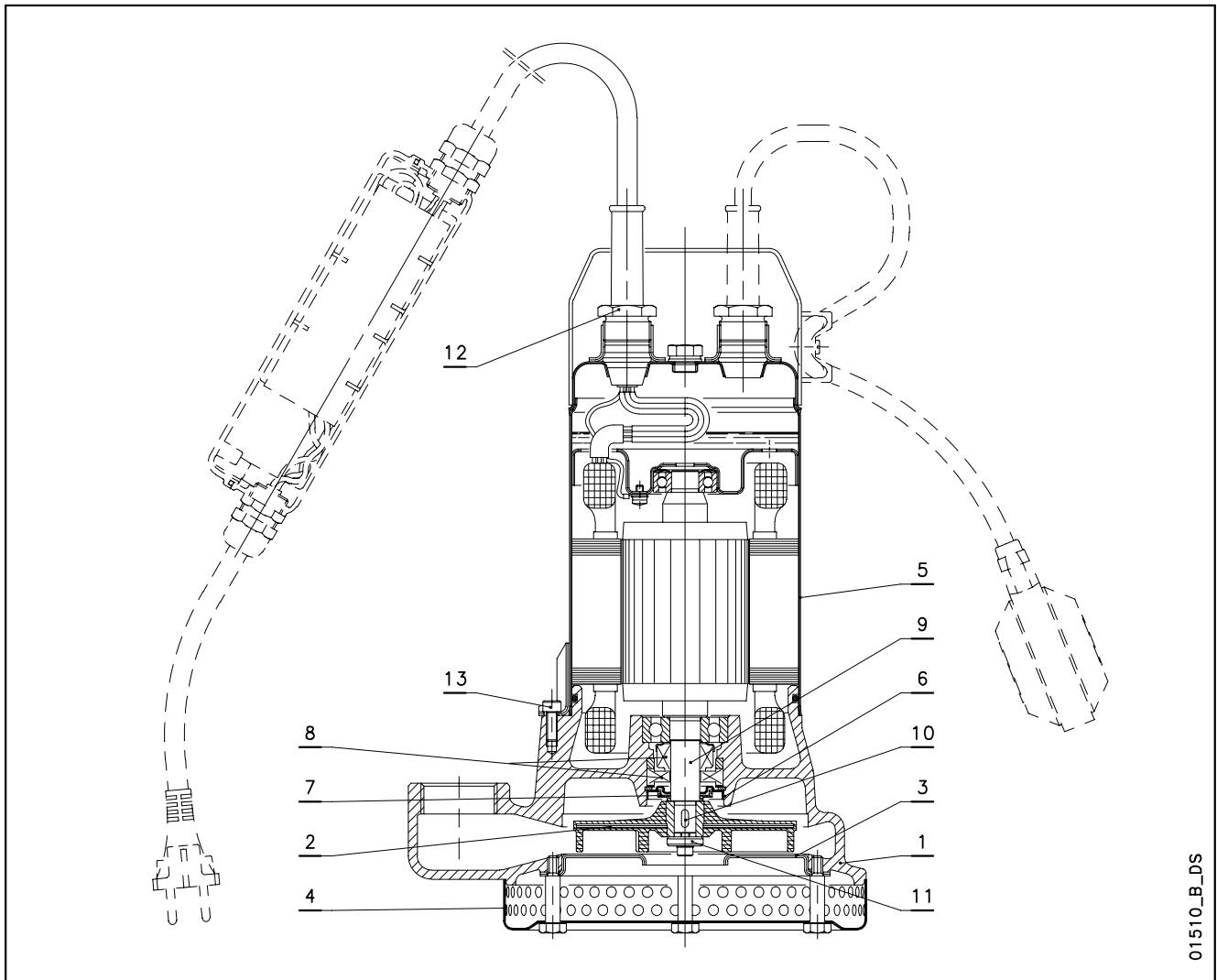
7 - Minimum head

8 - Maximum immersion depth

9 - Rated output

10 - Maximum liquid temperature

DN SERIES LIST OF MODELS AND TABLE OF MATERIALS

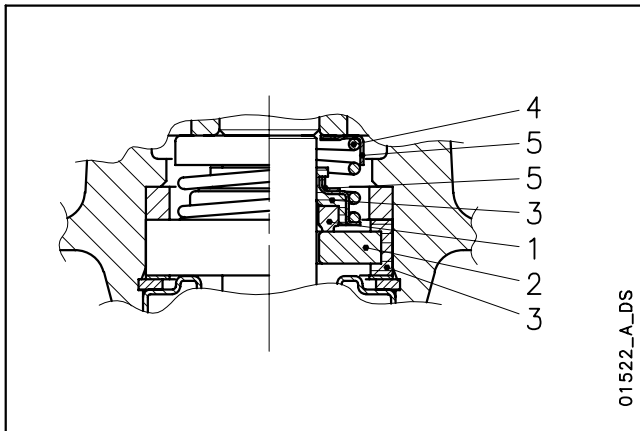


01510_B_DS

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Cast iron	EN 1561-GJL-200(JL1030)	ASTM Class 25
2	Impeller	Steel + Nitrile Rubber XNBR		
3	Wearing flange	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
4	Suction strainer	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
5	Motor casing	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
6	Labyrinth cover	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
7	Labyrinth insert	NBR (standard version)		
8	Mechanical seal	Carbon / Ceramic Alumina / NBR (standard version)		
9	Shaft end	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
10	Key	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
11	Washer	Stainless steel		AISI 303
12	Cable gland	Brass		
13	Screws	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304

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DN SERIES MECHANICAL SEAL



LIST OF MATERIALS

POSITION 1 - 2	POSITION 3	POSITION 4 - 5
B : Carbon	P : NBR	F : AISI 304
V : Ceramic Alumina		

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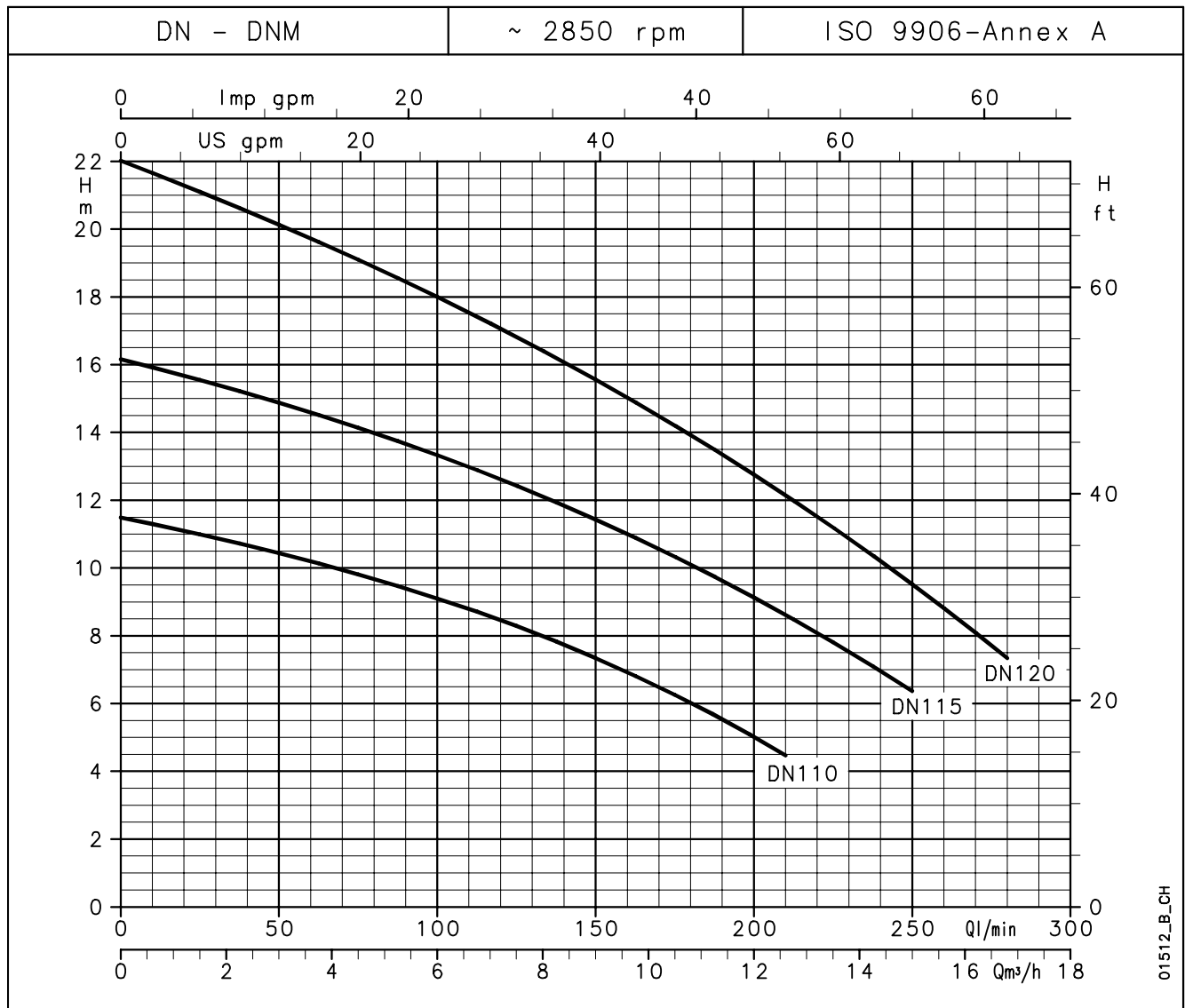
SEAL TYPES

TYPE	POSITION					TEMPERATURE (°C)
	1	2	3	4	5	
	ROTATING ASSEMBLY	FIXED ASSEMBLY	ELASTOMERS	SPRINGS	OTHER COMPONENTS	
STANDARD MECHANICAL SEAL						
BVPFF	B	V	P	F	F	0 + 50

dn-dl-dlv_tipi-ten-mec-en_b_tc

DN SERIES

OPERATING CHARACTERISTICS AT 50 Hz



HYDRAULIC PERFORMANCE TABLE

PUMP TYPE	RATED POWER		Q = DELIVERY											
			l/min	0	25	50	75	100	125	150	175	210	225	250
	m³/h	0	1,5	3	4,5	6	7,5	9	10,5	12,6	13,5	15	16,8	
	H = TOTAL HEAD METRES COLUMN OF WATER													
DN(M) 110	0,6	0,8	11,5	11,0	10,4	9,8	9,1	8,3	7,3	6,3	4,5			
DN(M) 115	0,6	0,8	16,2	15,6	14,9	14,1	13,3	12,4	11,4	10,3	8,6	7,8	6,4	
DN(M) 120	0,75	1	22,0	21,1	20,1	19,1	18,0	16,8	15,6	14,2	12,1	11,2	9,5	7,3

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

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ELECTRICAL DATA TABLE

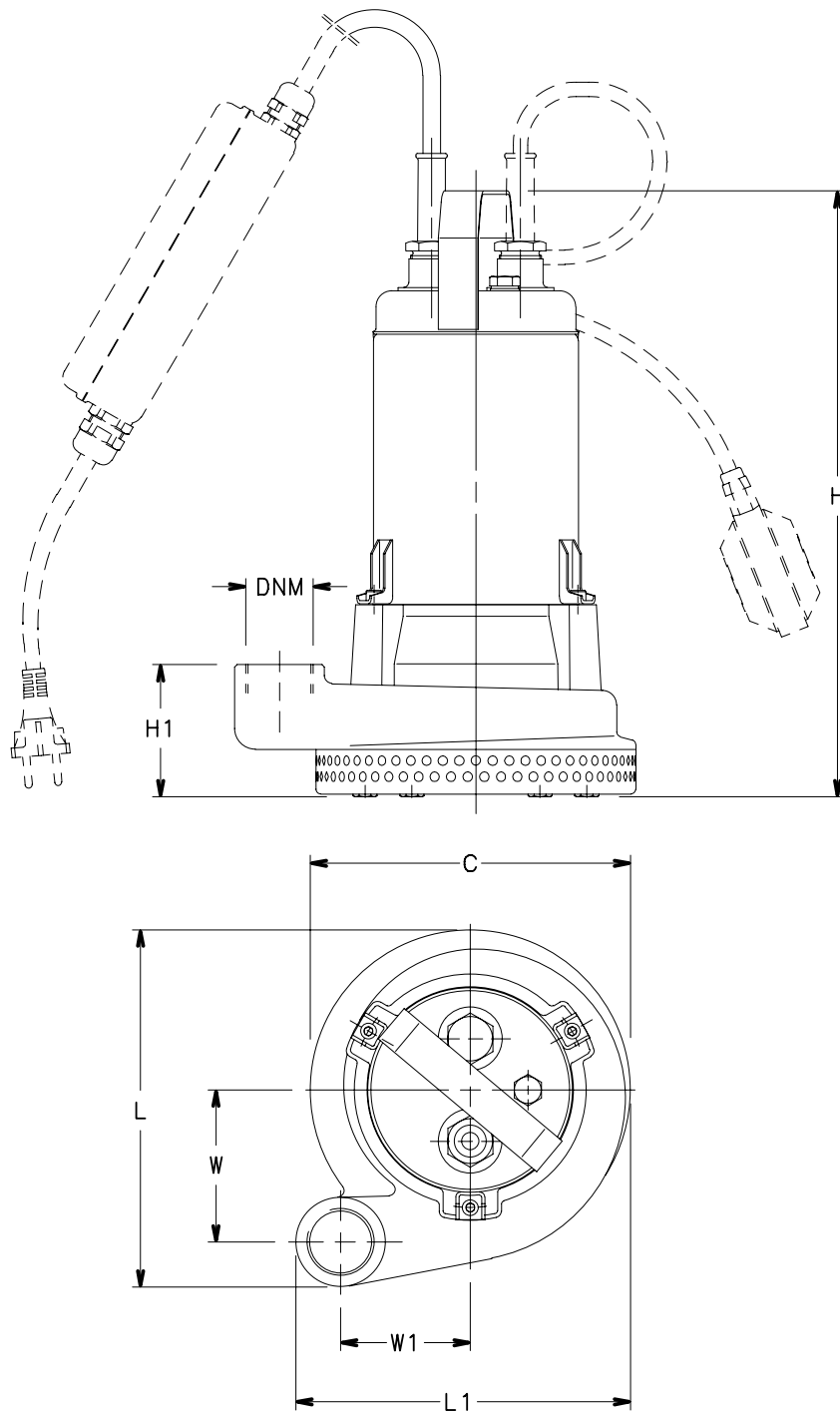
PUMP TYPE	ABSORBED POWER*	ABSORBED CURRENT*	CAPACITOR
SINGLE-PHASE			
	kW	220-240 V A	$\mu\text{F} / 450 \text{ V}$
DNM 110	0,68	3,56	25
DNM 115	0,90	4,28	25
DNM 120	1,03	4,77	25

PUMP TYPE	ABSORBED POWER*	ABSORBED CURRENT*	ABSORBED CURRENT*
THREE-PHASE			
	kW	220-240 V A	380-415 V A
DN 110	0,66	3,46	2,00
DN 115	0,93	3,81	2,20
DN 120	1,09	4,05	2,34

*Maximum values within operating range.

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DN SERIES DIMENSIONS AND WEIGHTS



01511_E_DD

PUMP TYPE	DIMENSIONS (mm)							DNM	WEIGHT kg
	C	H	H1	L	L1	W	W1		
DNM110-DN110	Ø 200	380	81	223	209	95	81	Rp 1 1/4	18,5
DNM115-DN115	Ø 200	380	81	223	209	95	81	Rp 1 1/4	18,5
DNM120-DN120	Ø 200	380	81	223	209	95	81	Rp 1 1/4	19,5

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