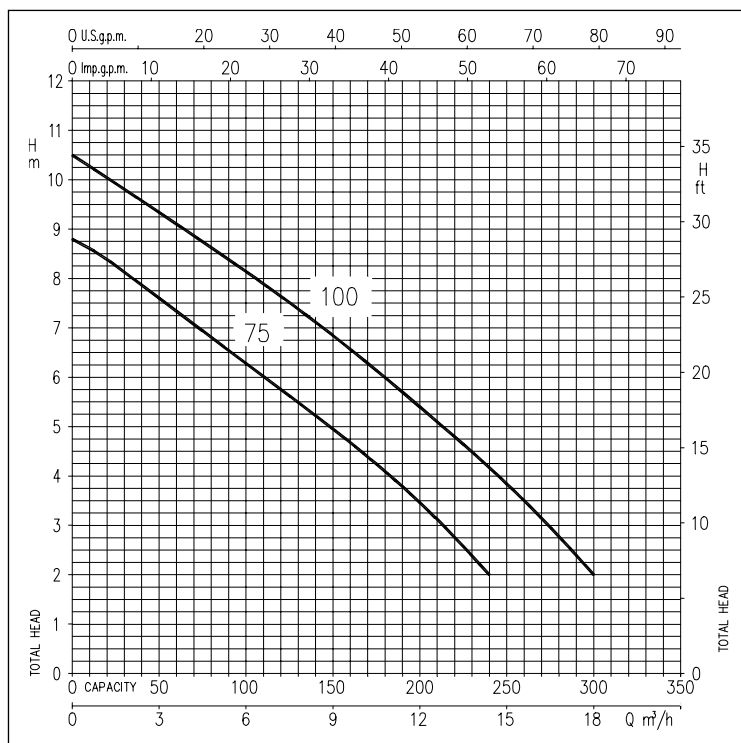


## SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER

in AISI 304 stainless steel



### PERFORMANCE CURVES (per ISO 9906 Annex A)



Submersible electric pumps for loaded water in AISI 304 stainless steel.

### APPLICATIONS

- Handling water containing suspended solids / filaments
- Draining infiltration water
- Handling drainage water (domestic services)
- Draining cesspits and draining into the sewers

### TECHNICAL FEATURES

- Fitted with 5 m power cable, type H07 RN-F (on request 10 m cable H07 RN-F)
- Available with/without float switch

### TECHNICAL DATA

- Maximum submersion: 7 m
- Maximum fluid temperature: 50°C
- Maximum solid dimensions: 35 mm
- 2 pole self-ventilating asynchronous motors
- Insulation class F
- Protection rating IPX8
- Single phase voltage 230V ±10% 50Hz  
three-phase voltage 400V ±10%, 50Hz
- Permanently active condenser and integrated automatic re-arming thermal cutout for the single phase motor
- Protection must be supplied by the user for the three-phase version
- Delivery connection: G1½

### MATERIALS

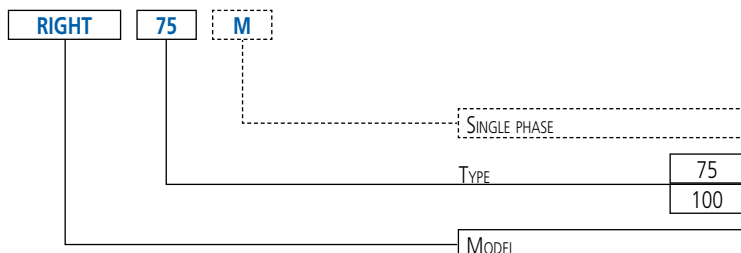
- Pump body, impeller, motor cover, gasket disk and motor casing in AISI 304 stainless steel
- Shaft made of AISI 303 stainless steel (part in contact with liquid)
- Double mechanical seal with oil chamber:
  - upper seal in Carbon/Ceramic/NBR (motor side)
  - lower seal in SiC/SiC/NBR (pump side)

### SPECIAL VERSIONS

- MA version with float switch
- Version with 10 m cable

For accessories and electrical enclosures, see page 151 onwards

### IDENTIFICATION CODE



# RIGHT

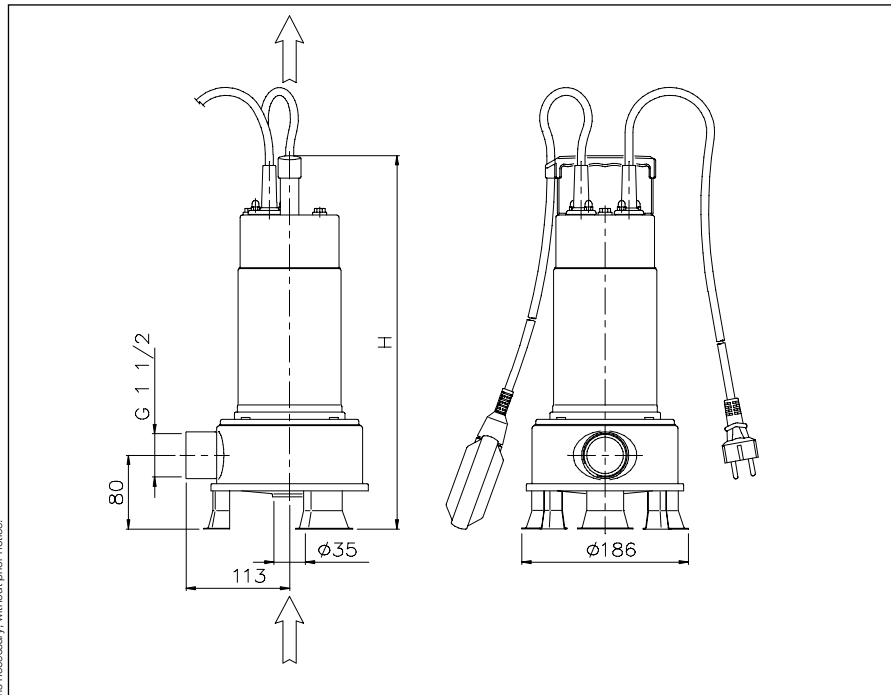
## SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER

in AISI 304 stainless steel

### PERFORMANCE TABLE

Model		P <sub>1</sub>		Capacitor		Abs. Curr. [A]		Q=Flow rate							
Single phase 230V	Three phase 400V	[HP]	[kW]	μF	Vc	1~	3~	l/min	40	80	120	160	200	240	300
								m <sup>3</sup> /h	2	4.8	7.2	9.6	12	14.4	18
								H=Head [m]							
RIGHT 75 M	RIGHT 75	0.75	0.55	20	450	4.8	2.1	7.8	6.8	5.7	4.7	3.4	2.0	-	-
RIGHT 100 M	RIGHT 100	1	0.75	31.5	450	5.7	2.6	9.5	8.6	7.6	6.6	5.4	4.2	2.0	-

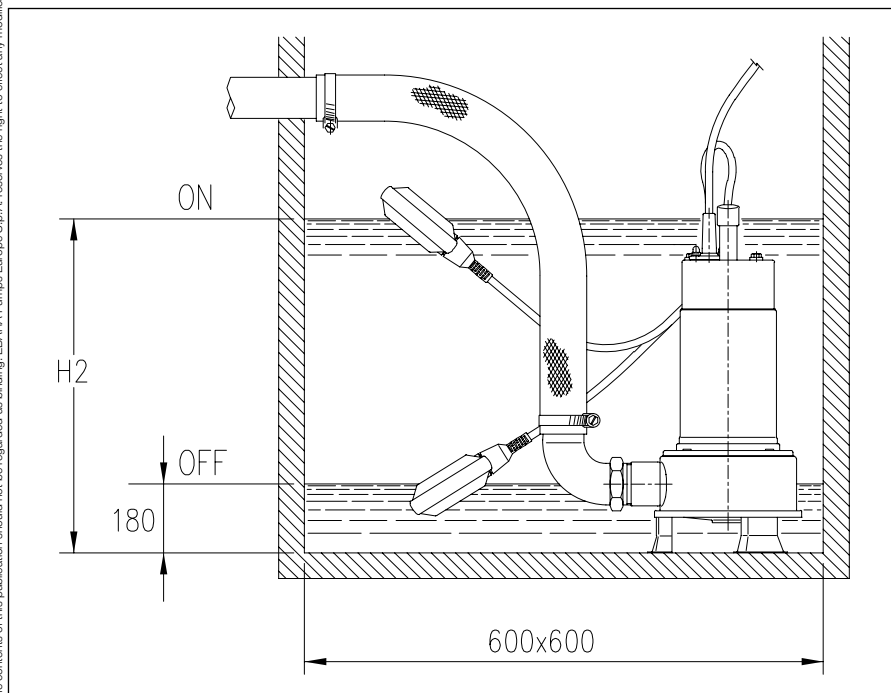
### DIMENSIONS



### DIMENSIONS CHART

Model	Dimensions [mm]		Weight [kg]
	H	H2	
RIGHT 75	405	410	10.0
RIGHT 100	430	430	11.5

### INSTALLATION

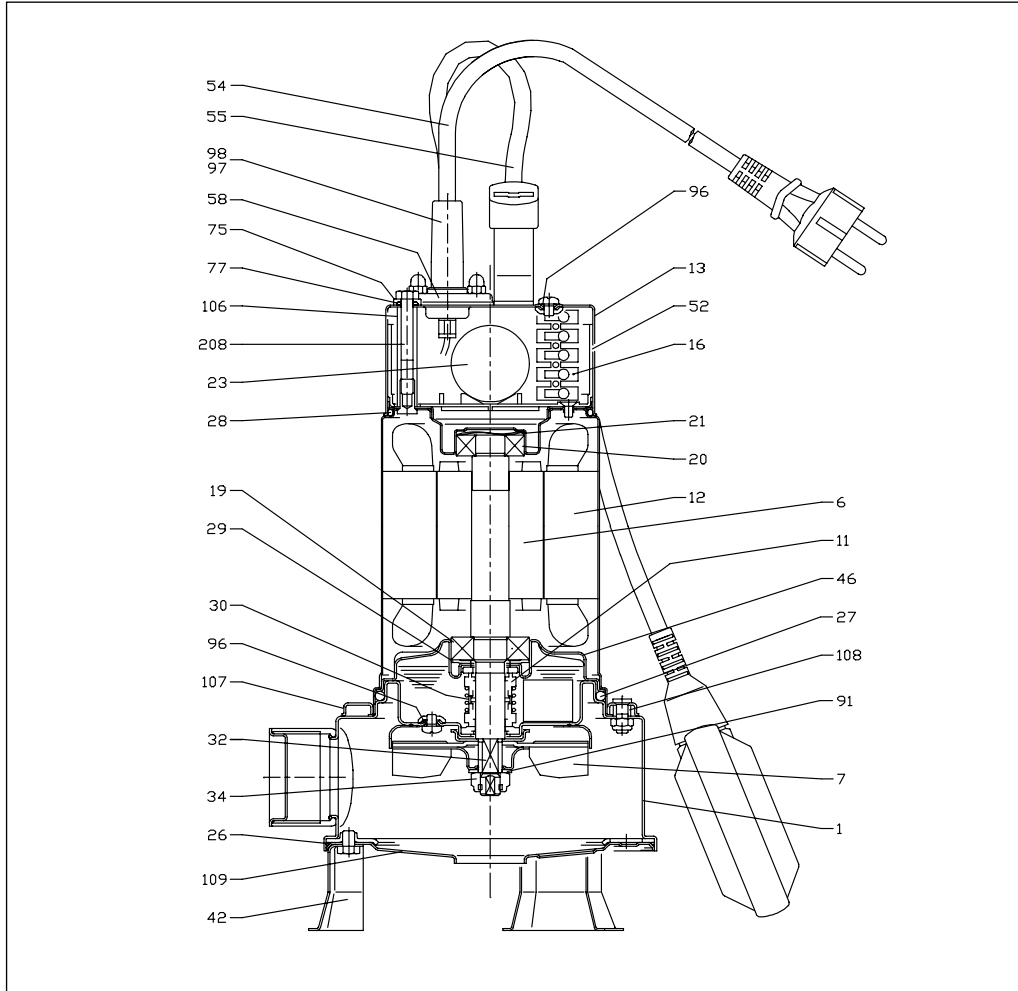


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## SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER

in AISI 304 stainless steel

### SECTIONAL VIEW



### DIMENSIONS CHART

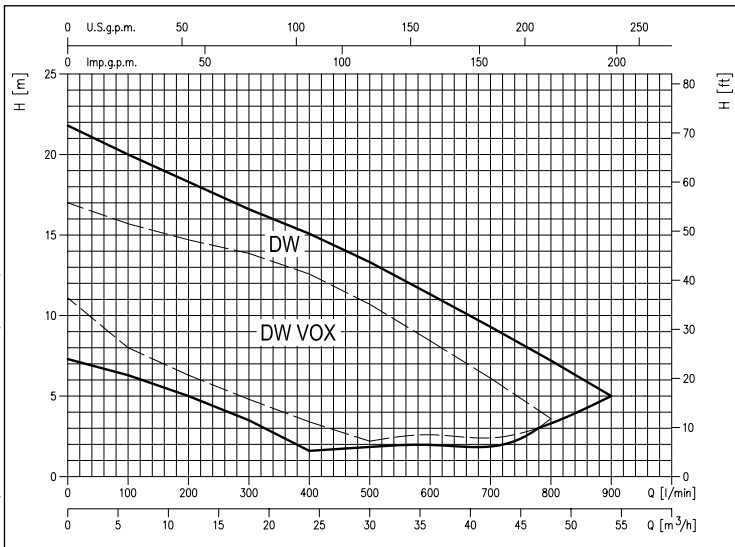
Ref.	Name	Material	Ref.	Name	Material
1	Pump body	AISI 304 stainless steel	42	Foot	AISI 304 stainless steel
6	Shaft with rotor	AISI 303 stainless steel	46	Lower bearing mount	AISI 304 stainless steel
7	Impeller	AISI 304 stainless steel	52	Capacitor housing	PA66 reinforced with glass fibre
11	Mechanical seal	Ceramic/Carbon/NBR	54	Cable	-
12	Motor casing	-	55	Float switch	-
13	Cover	AISI 304 stainless steel	58	Cable clamp	AISI 304 stainless steel
16	Box	-	75	Washer	AISI 303 stainless steel
19	Lower bearing	-	77	O-ring	NBR
20	Upper bearing	-	91	Washer	AISI 304 stainless steel
21	Compensation ring	AISI 304 stainless steel	96	O-ring	NBR
23	Capacitor	-	97	Cable gland	NBR
26	O-ring	NBR	98	Cable gland	NBR
27	O-ring	NBR	106	Spacer	AISI 304 stainless steel
28	O-ring	NBR	107	Mounting flange	AISI 304 stainless steel
29	Washer	AISI 304 stainless steel	108	Gasket	NBR
30	Spacer for mechanical seal	Brass	109	Suction side cover	AISI 304 stainless steel
32	Key	AISI 304 stainless steel	208	Bolt	AISI 304 stainless steel
34	Nut	AISI 303 stainless steel	-	-	-

# DW - DW VOX

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER in AISI 304 stainless steel



### PERFORMANCE RANGE (per ISO 9906 Annex A)



Submersible electric pumps in AISI 304 stainless steel for foul waste water.

### APPLICATIONS

- Evacuation of civil and industrial waste water
- Drying wells and excavations
- Draining underground areas
- Handling fluids containing suspended solids / filaments
- Draining infiltration water
- Handling foul waste water (domestic services)
- Draining cesspits

### TECHNICAL FEATURES

- Fitted with 10 m power cable, type H07 RN-F (single phase), type FG50K (three-phase)
- Available with/without float switch
- Equipped with single-channel or vortex impeller (VOX) and flanged (F)

### TECHNICAL DATA

- Maximum submersion: 7 m
- Maximum fluid temperature: 40°C
- Maximum solid dimensions: 50 mm
- 2 pole self-ventilating asynchronous motors
- Insulation class F
- Protection rating IPX8
- Single phase voltage 230V ±10%, 50Hz, three-phase voltage 400V ±10%, 50Hz
- Permanently active condenser and integrated automatic re-arming thermal cutout for the single phase motor
- Protection must be supplied by the user for the three-phase version
- Threaded version: suction ø 50, delivery G2
- Flanged version: delivery ø 50 DN 50

### MATERIALS

- Pump body, impeller, motor cover, gasket disk and motor casing in AISI 304 stainless steel
- Shaft made of AISI 303 stainless steel
- Double mechanical seal with oil chamber:
  - upper seal in Carbon/Ceramic/NBR (motor side)
  - lower seal in SiC/SiC/NBR (pump side)
- Spacer in G20 cast iron (DW-DW VOX 300 only)

### SPECIAL VERSIONS

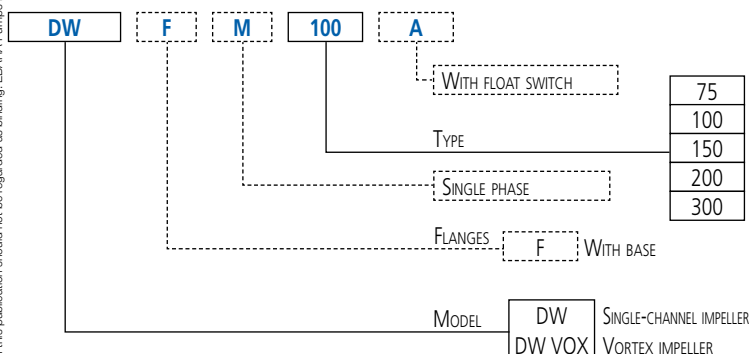
- VOX version (VORTEX impeller)

### ACCESSORIES (on request)

- Cast iron DW lowering device kit - threaded 2"
- Steel DW lowering device kit - threaded 2"
- Steel DW lowering device kit - flanged DN50

For accessories and electrical enclosures, see page 151 onwards

### IDENTIFICATION CODE

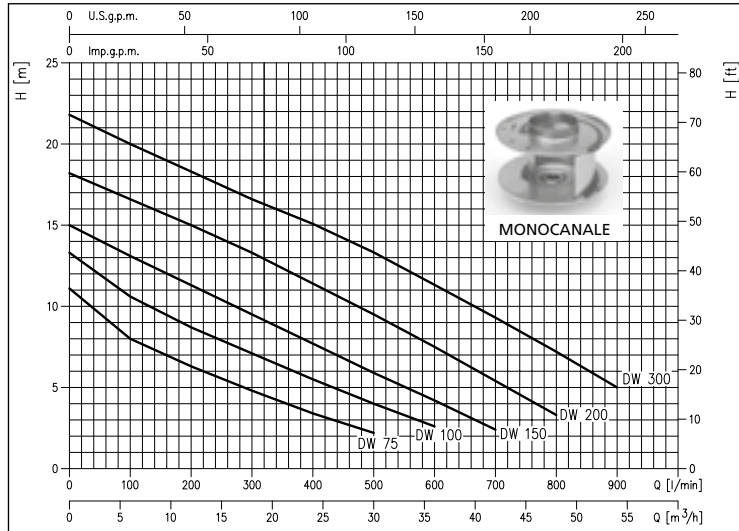


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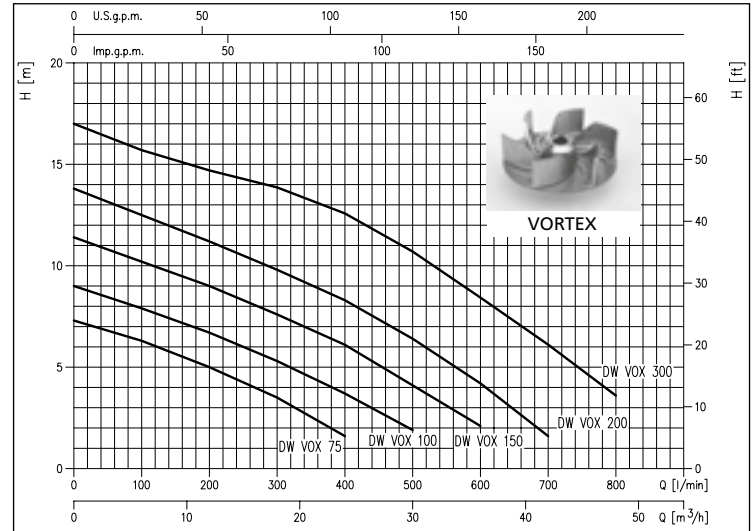
# DW - DW VOX

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER**  
in AISI 304 stainless steel

**PERFORMANCE CURVES DW** (per ISO 9906 Annex A)



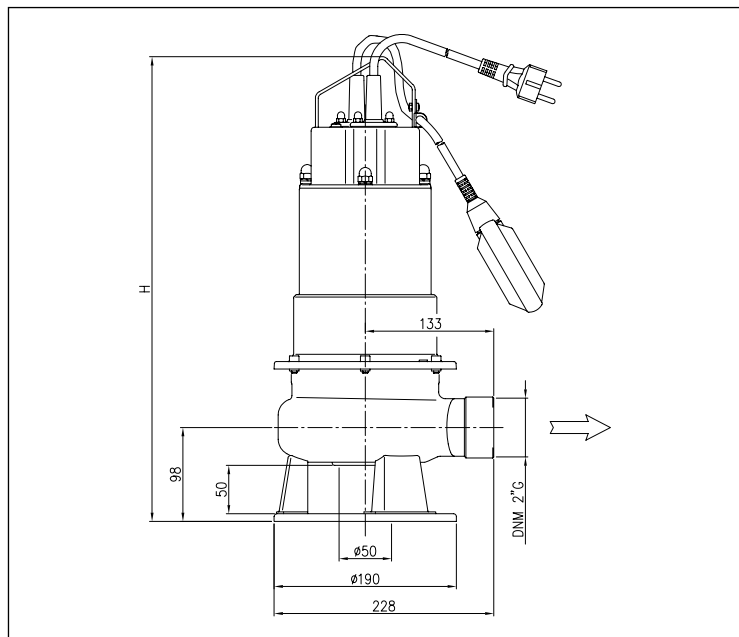
**PERFORMANCE CURVES DW VOX** (per ISO 9906 Annex A)



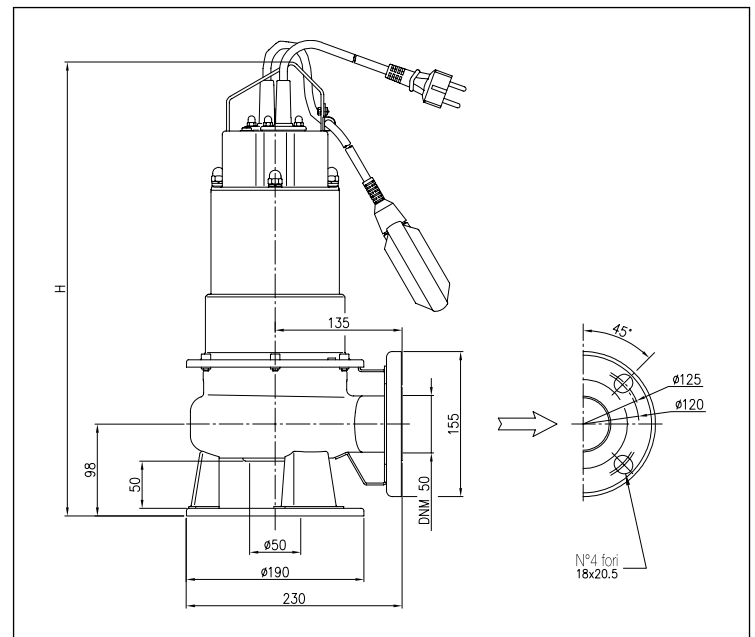
**PERFORMANCE TABLE**

Model		P <sub>2</sub>		Capacitor		Abs. Curr. [A]		Q=Flow rate										
Single phase 230V	Three phase 400V	[HP]	[kW]	µF	Vc	1~	3~	l/min m³/h	100	200	300	400		500	600	700	800	900
									6	12	18	24	30	36	42	48	54	
								H=Head [m]										
DW 75 M	DW 75	0.75	0.55	20	450	3.9	1.5	8.0	6.3	4.8	3.4	2.2	-	-	-	-	-	-
DW 100 M	DW 100	1	0.75	25	450	5.9	2.1	10.6	8.7	7.1	5.5	4.0	2.6	-	-	-	-	-
DW 150 M	DW 150	1.5	1.1	31.5	450	7.3	2.8	13.1	11.3	9.5	7.7	5.9	4.2	2.4	-	-	-	-
	DW 200	2	1.5	-	-	-	3.6	16.6	15.0	13.3	11.4	9.5	7.5	5.4	3.3	-	-	-
	DW 300	3	2.2	-	-	-	5	20.0	18.3	16.6	15.1	13.3	11.3	9.3	7.2	5.0	-	-
DW VOX 75 M	DW VOX 75	0.75	0.55	20	450	3.9	1.4	6.3	5.0	3.5	1.6	-	-	-	-	-	-	-
DW VOX 100 M	DW VOX 100	1	0.75	25	450	5.8	2.1	7.9	6.7	5.3	3.7	1.9	-	-	-	-	-	-
DW VOX 150 M	DW VOX 150	1.5	1.1	31.5	450	7.3	2.8	10.2	9.0	7.6	6.1	4.1	2.1	-	-	-	-	-
	DW VOX 200	2	1.5	-	-	-	3.3	12.5	11.2	9.8	8.3	6.4	4.2	1.6	-	-	-	-
	DW VOX 300	3	2.2	-	-	-	4.4	15.7	14.7	13.9	12.6	10.7	8.4	6.1	3.6	-	-	-

**DIMENSIONS DW - DW VOX**



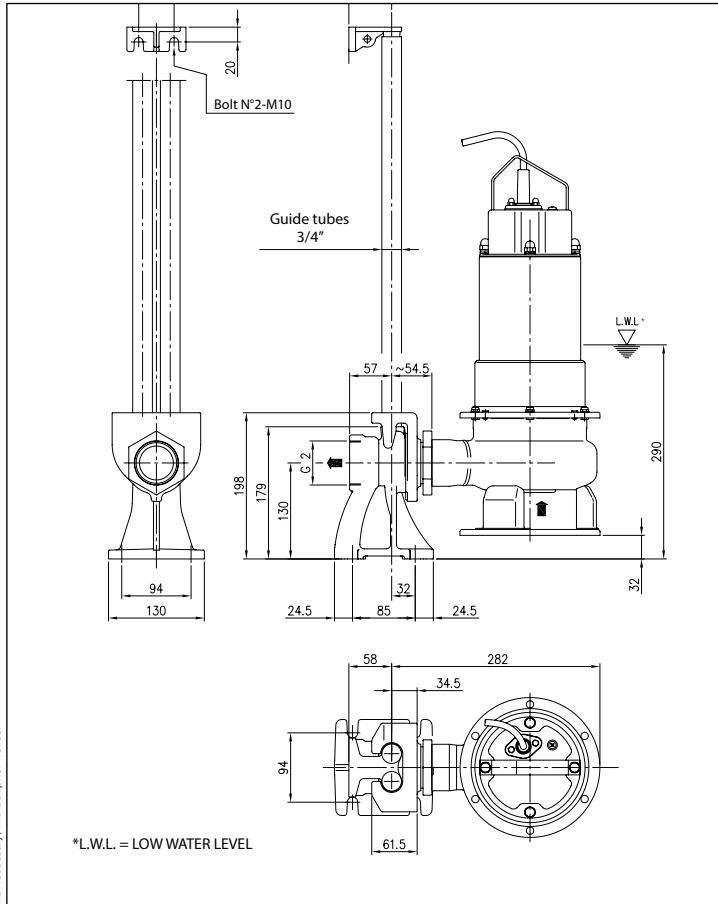
**DIMENSIONS DWF - DWF VOX**



# DW - DW VOX

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER**  
in AISI 304 stainless steel

## DIMENSIONS MOUNTING KIT DW-DW VOX

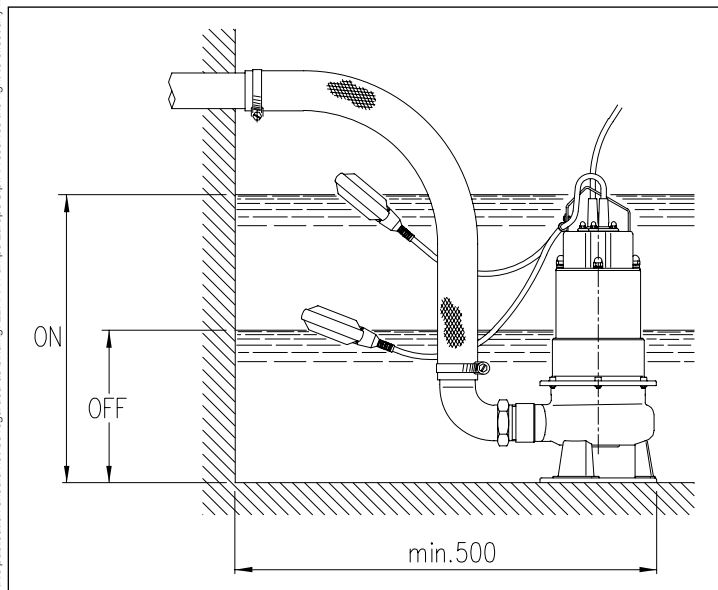


## DIMENSIONS CHART

Model		Dimensions [mm]		Weight [kg]	
		1~	3~	1~	3~
DW 75	DW VOX 75	486	486	16	15.4
DW 100	DW VOX 100	516	486	18	16.8
DW 150	DW VOX 150	516	516	19.4	18.6
DW 200	DW VOX 200	-	516	-	20
DW 300	DW VOX 300	-	546	-	25.8

Model		Dimensions [mm]		Weight [kg]	
		1~	3~	1~	3~
DWF 75	DW VOXF 75	486	486	16.8 (16.4)	16.2 (16)
DWF 100	DW VOXF 100	516	486	18.8 (18.4)	17.6 (17.2)
DWF 150	DW VOXF 150	516	516	20.2 (19.8)	19.4 (18.9)
DWF 200	DW VOXF 200	-	516	-	20.8 (20.4)
DWF 300	DW VOXF 300	-	546	-	26.6 (26.2)

## INSTALLATION



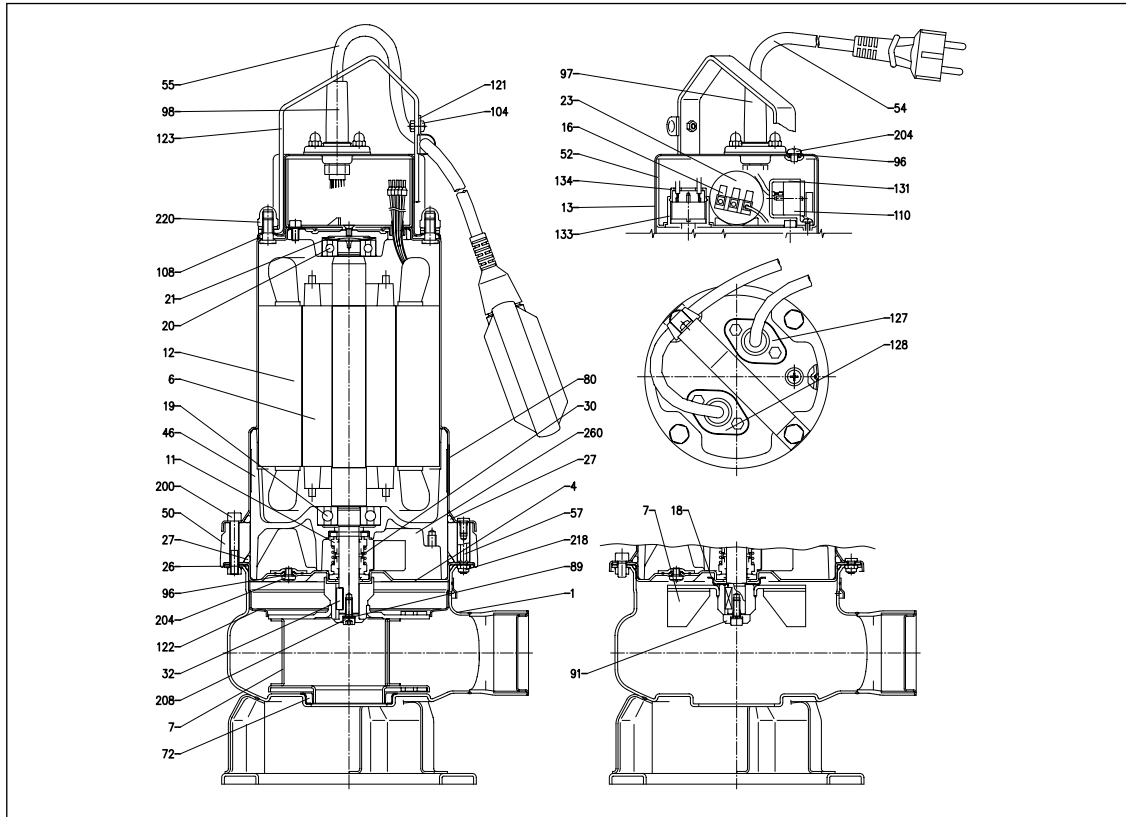
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# DW - DW VOX

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER

in AISI 304 stainless steel

### SECTIONAL VIEW



### MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
1	Pump body	AISI 304 stainless steel	57	Spacer [3]	AISI 304 stainless steel
4	Gasket disk	AISI 304 stainless steel	72	Clearance ring [5]	NBR
6	Rotor shaft	AISI 303 stainless steel	89	Washer	AISI 304 stainless steel
7	Impeller	AISI 304 stainless steel	91	Washer [1]	AISI 304 stainless steel
11	Pump side mechanical seal	SiC/SiC/NBR	96	O-ring	NBR
11	Motor side mechanical seal	Carbon/Ceramic/NBR	97	Power cable	NBR
12	Casing	-	98	Float cable gland [4]	NBR
13	Motor cover	AISI 304 stainless steel	104	Float cable gland [4]	NBR
16	Terminal block	-	108	Motor cover gasket	NBR
18	Seal protection [1]	AISI 304 stainless steel	110	Motor protection device [2]	-
19	Pump side bearing	-	121	Float switch mount [4]	AISI 304 stainless steel
20	Motor side bearing	-	122	Impeller protector ring [6]	AISI 304 stainless steel
21	Compensator ring	C70 steel	123	Lifting hook	AISI 304 stainless steel
23	Condenser [2]	-	127	Cable connector	AISI 304 stainless steel
26	O-ring	NBR	128	Connector [4]	AISI 304 stainless steel
27	O-ring	NBR	131	Motor cutout mount [7]	PA66 reinforced with glass fibre
27	O-ring [3]	NBR	133	Motor cutout sensor mount [7]	Aluminium
30	Mechanical seal spacer	Brass	134	Motor cutout sensor mount cover [7]	PA6
32	Key	AISI 304 stainless steel	200	Bolt	Steel A2 UNI 7323
46	Bearing mount	G20	204	Bolt	Steel A2 UNI 7323
50	Spacer [3]	G20	208	Bolt	Steel A2 UNI 7323
52	Capacitor housing	PA66 reinforced with glass fibre	218	Nut	Steel A2 UNI 7323
54	Power cable	-	220	Nut	Steel A2 UNI 7323
55	Float [4]	-	260	Lubricant	Oil

[1] Except for DW-DW VOX 300  
[2] Single phase only

[3] DW-DW VOX 300 only  
[4] Single phase without float only

[5] DW only  
[6] Except for DW VOX 150, 200 and 300

[7] DW150 single phase only

# D SERIES (DS, DVS, DL - DL W/C, DML, DMLV)

## TYPICAL CONSTRUCTIONAL CHARACTERISTICS

**MOTOR CUTOUT**  
Thermal cutout included or miniaturised thermal protector

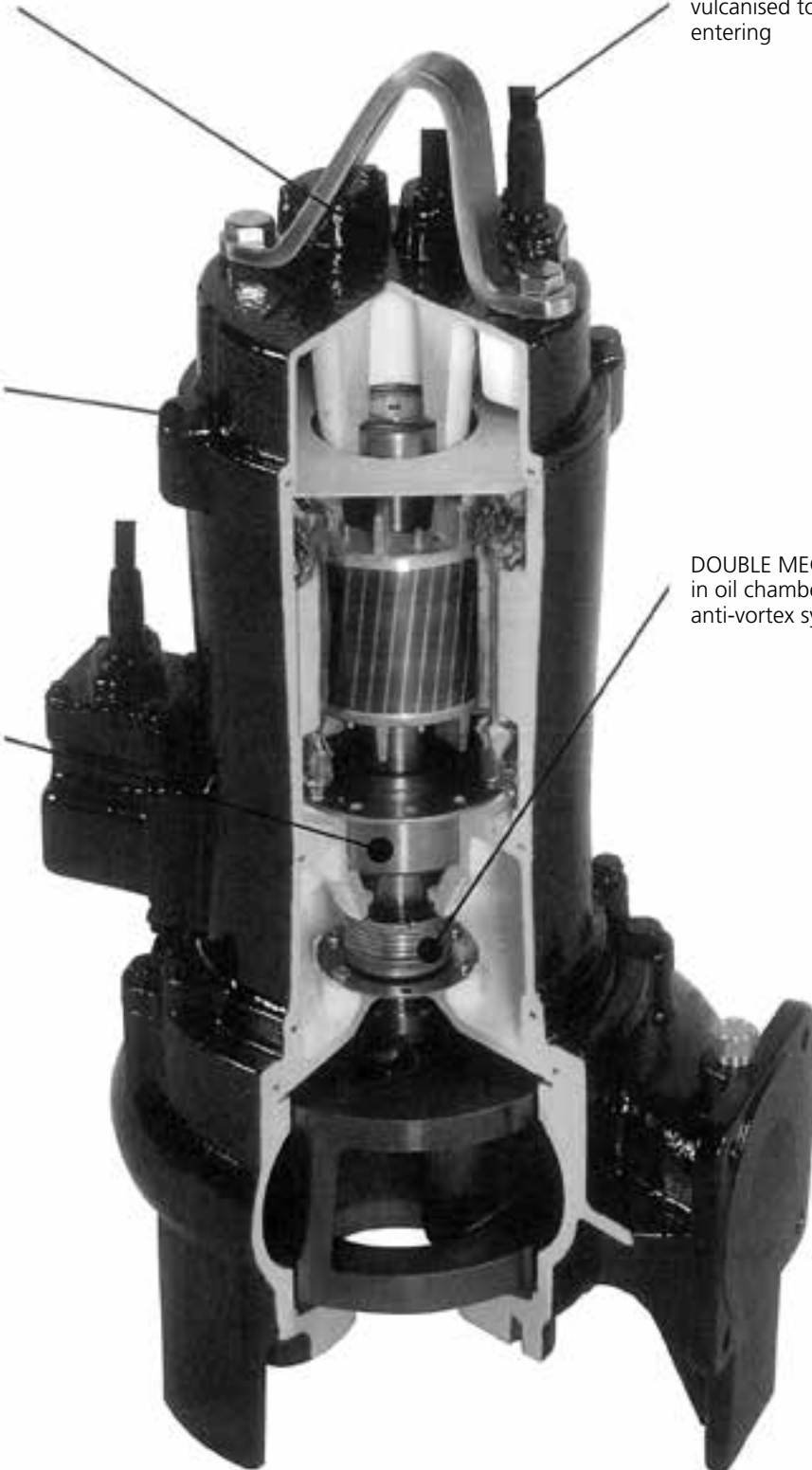
**CABLE INLET**  
The power cable is vulcanised to prevent fluid entering

**ALL BOLTS**  
in stainless steel

**SEALED PERMANENTLY LUBRICATED BEARINGS**  
resistant to high temperatures

**DOUBLE MECHANICAL SEAL**  
in oil chamber with anti-vortex system





**DRY RUNNING**  
The thermal cutout supplied as standard on all EBARA Series D pumps and the double mechanical seal with oil chamber prevent damage from the pump running dry



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## SELECTION TABLE

Model	DS/DSF	DVS	DRS	65DL51.5 80DL 51.5-53.7 100DL 53.7
N. Poles	2	2	2	4
Type of fluid	Clear and rain water	Water loaded with suspended solids	Water loaded with suspended solid bodies and filaments	Water loaded with suspended solid bodies and filaments
rpm	2850	2850	2850	1450
Impeller				
	Semi-open, clearance	Semi-vortex, non-clogging	Open impeller with suction grinder	Two-channel open
Max. free passage diameter	5 to 10 mm	21 to 41 mm	6 to 7 mm	46 to 57 mm

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## SELECTION TABLE

Model	100DL 55.5 - 18.5 150DL 55.5 - 22 200DL 55.5 - 22 250DL 57.5 - 22 300DL 511 - 22 80-100DLC/DLB 100DLB W/C 5.5 - 7.5	DL W/C (with cutter)	DML/DMLF	DMLV/DMLVF	DRD
N. Poles	4	4	4 (DML) and 2 (DMLF)	2, 4, 6	2, 4, 6, 8
Type of fluid	Water loaded with suspended solids and filaments	Water loaded with suspended solids and filaments	Water loaded with suspended solids	Water loaded with suspended solids	Water loaded with suspended solids
rpm	1450	1450	1450(DML) and 2850 (DMLF)	950, 1450, 2850	2850, 1450, 950, 750
Impeller					
	Non-clogging, semi-open	Open single-channel impeller with cutter	Single-channel impeller	Vortex impeller	Double/triple channel impeller
Max. free passage diameter	46 to 88 mm	46 to 60 mm	76 mm (DML) 30 mm (DMLF 1.1 kW) 40 mm (DMLF)	30 to 150 mm	30 to 140 mm

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## SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER SEMI-VORTEX

in cast iron



Submersible electric pumps for loaded water, semi-vortex, cast iron.

### APPLICATIONS

- Effluent collection tanks
- Ideal for applications with effluent containing soft or fibrous solids
- Lifting or clear or grey water with suspended particles
- Septic tanks (imhoff)

### TECHNICAL FEATURES

- Semi-vortex non-clogging impeller enables pumping of foreign matter with dimensions up to 70% of the delivery port diameter
- Easy maintenance

### TECHNICAL DATA

- Maximum fluid temperature: 40°C
- Maximum solid dimensions: 21 mm (50DVS)  
33 mm (65DVS and 80DVS 1.5kW)  
41 mm (65DVS and 80DVS 2.2-3.7 kW)
- Maximum length of fibres: 100mm (50DVS)  
200 (65DVS and 80DVS 1.5kW)  
245 (65DVS and 80DVS 2-3.7 kW)
- 2 pole motor
- Insulation class F
- Protection rating IP68
- Voltage: three-phase 380-415±10%, 50Hz
- Flanges: G1½ (50DVS 1.5kW)  
DN50, DN65, DN80
- Power up to 3.7 kW

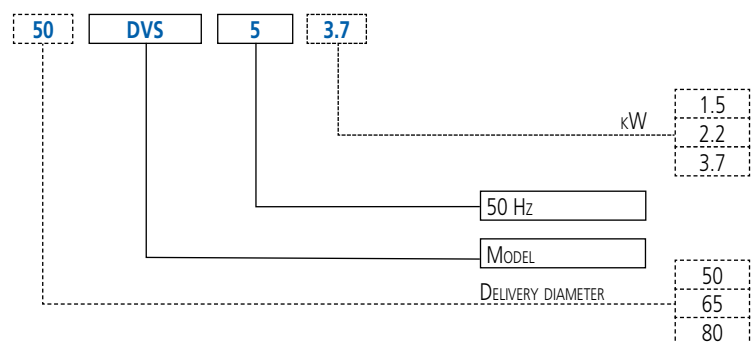
### MATERIALS

- Pump body, semi-vortex impeller, elbow (bend) in cast iron
- Shaft made of AISI 403 stainless steel
- Mechanical seal: SiC/SiC/NBR (impeller side)  
Carbon/Ceramic/NBR (motor side)

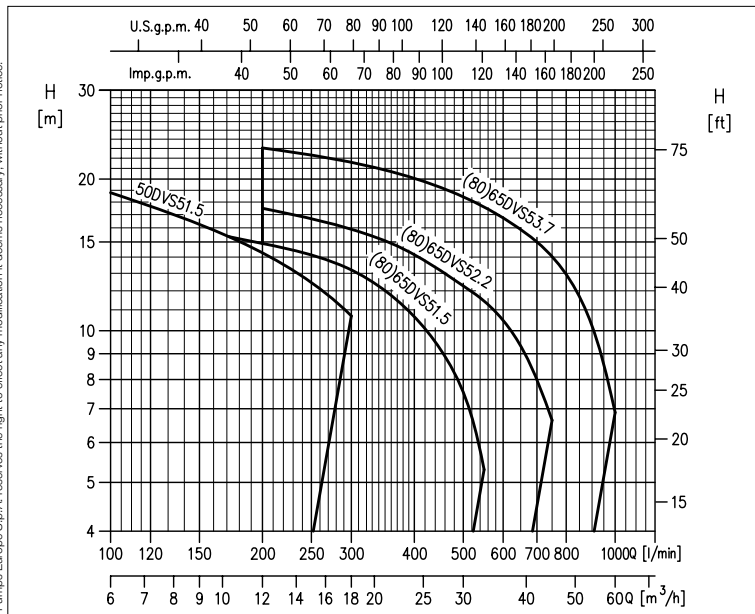
### ACCESSORIES (on request)

For accessories, see page 151 onwards

### PUMP IDENTIFICATION CODE



### PERFORMANCE RANGE (per ISO 9906 Annex A)



### PERFORMANCE TABLE

Model	P <sub>2</sub>		Q = Flow rate												
	[HP]	[kW]	l/min m <sup>3</sup> /h	100	150	200	300	400	500	550	600	700	750	900	1000
50DVS51.5	2	1.5		18.8	16.6	14.3	10.7	-	-	-	-	-	-	-	-
(80)65DVS51.5	2	1.5		-	15.8	14.9	13.2	10.9	7.6	5.3	-	-	-	-	-
(80)65DVS52.2	3	2.2		-	-	17.5	15.9	14.2	12.3	11.5	10.5	8.1	6.6	-	-
(80)65DVS53.7	5	3.7		-	-	23.0	21.6	20.1	18.4	17.6	16.7	15.0	14.0	10.4	6.9

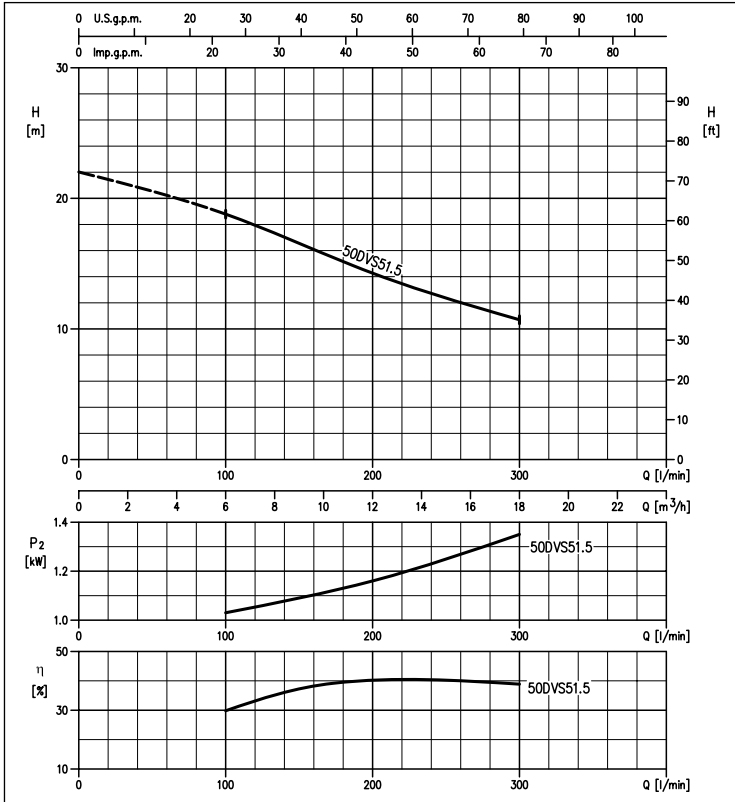
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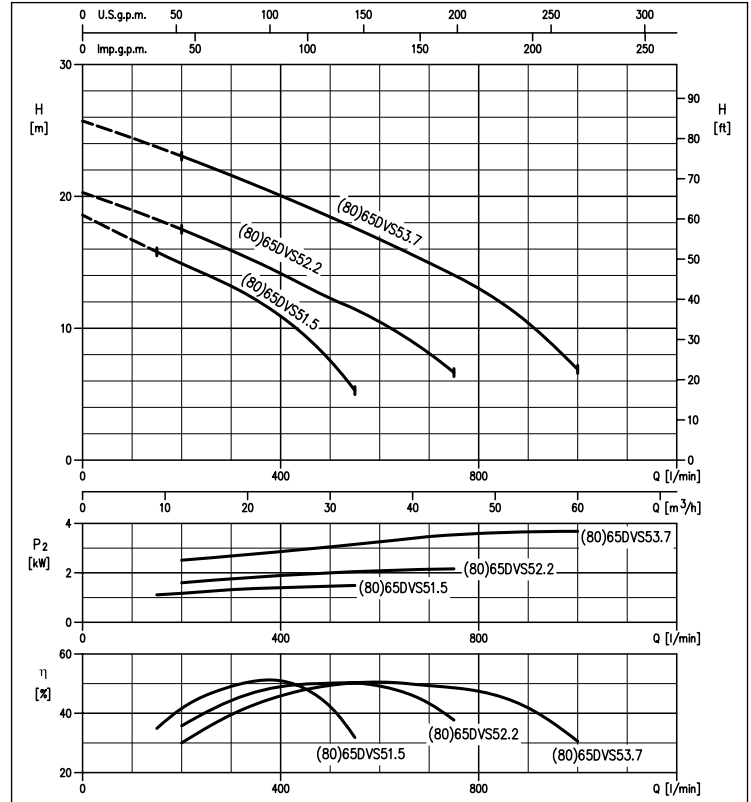
# DVS

## SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER SEMI-VORTEX in cast iron

**PERFORMANCE CURVES series 50DVS51.5 (1.5 kW)**  
(per ISO 9906 Annex A)



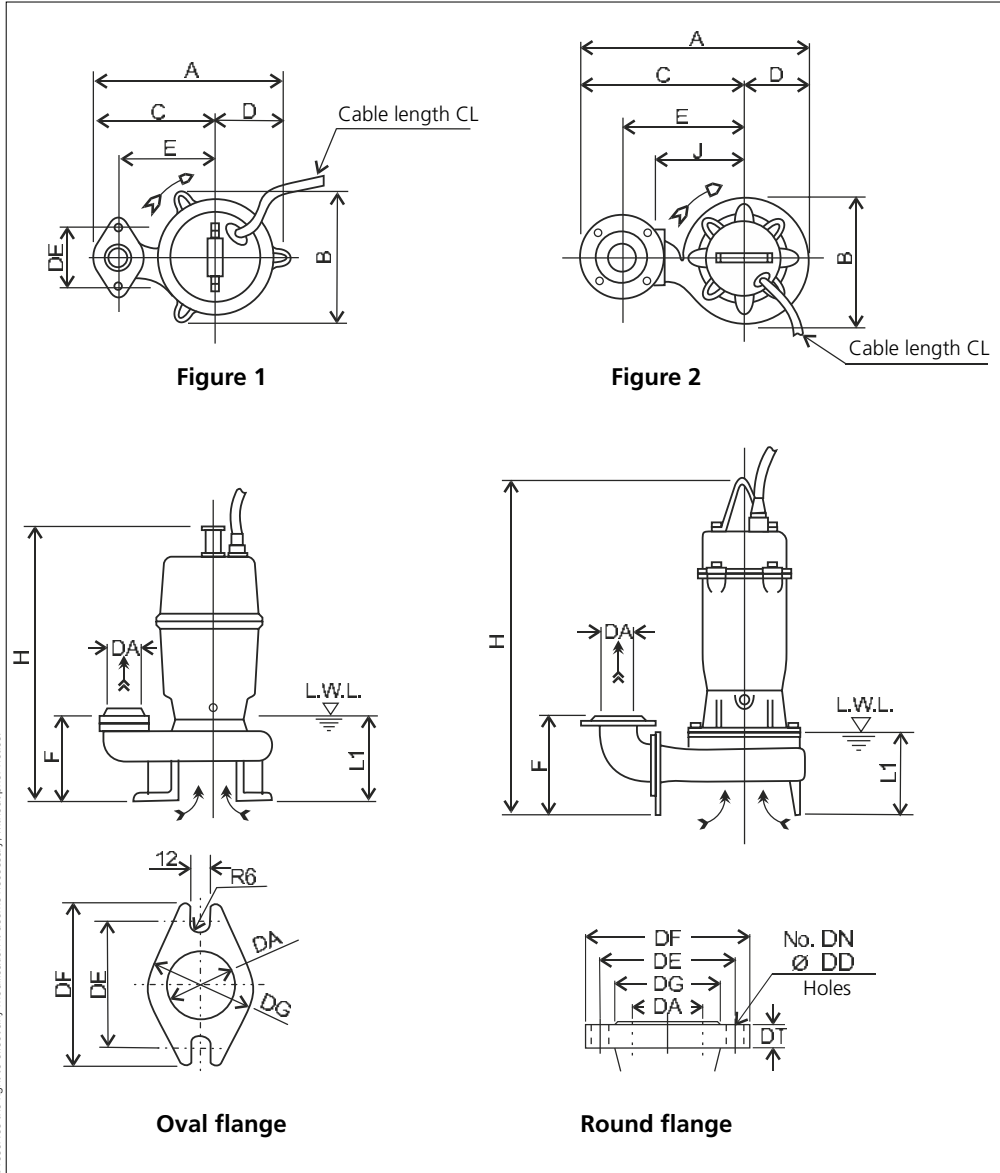
**PERFORMANCE CURVES series (80)65DVS51.5 (1.5 kW)**  
**series (80)65DVS52.2 (2.2 kW)**  
**series (80)65DVS53.7 (3.7 kW)**  
(per ISO 9906 Annex A)



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## SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER SEMI-VORTEX in cast iron

### DIMENSIONS DVS



Type	DA	DE	DF	DG	DT	DN	DD
Oval	50	96	114	76	-	-	-
Round	65	145	185	118	17	4	19
	80	160	200	132	19	8	

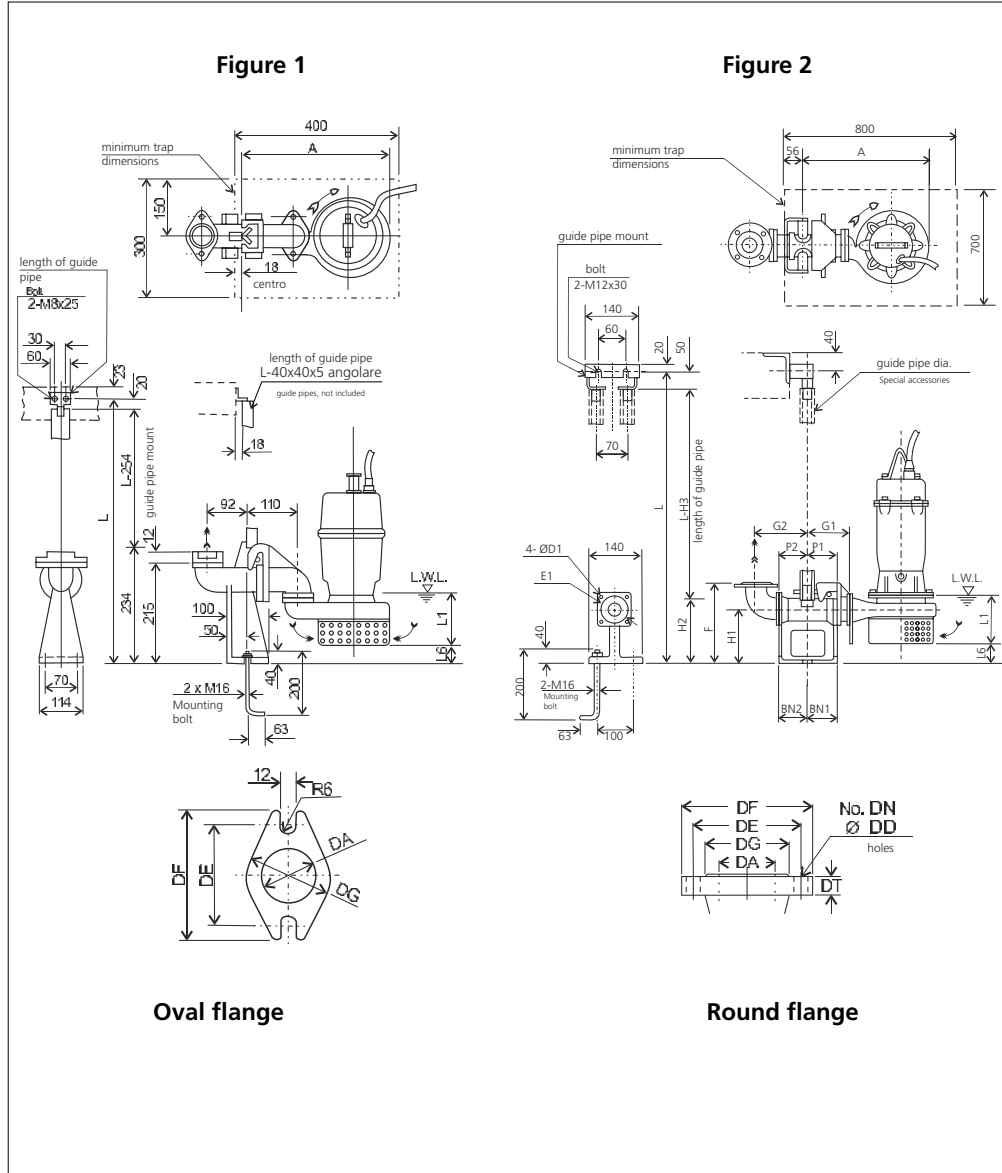
### TABLE OF DIMENSIONS DVS

DA	Model	Fig.	Type Flange	[kW]	DA	A	B	C	D	E	F	H	DE	J	L1 (*)	CL [m]	Weight [kg]
50	50DVS51.5	1	Oval	1.5	G2	249	171	163	86	125	82	439	96	-	105	6	27
65	65DVS51.5	2	Round	1.5	65	396	195	298	98	210	178	519	-	145	125		34
	65DVS52.2			2.2		427	227	313	114	225	201	643		160	155	10	50
	65DVS53.7			3.7													59
	80			80DVS51.5		1.5	80	411	195	328	98	220		183	519	-	145
80DVS52.2	2.2	442	227	114	235	206		643	160		155	10	51				
80DVS53.7	3.7	60															

(\*) - L.W.L. (minimum fluid level)

## SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER SEMI-VORTEX in cast iron

### DIMENSIONS DVS with QDC (lowering device kit)



### TABLE OF DIMENSIONS DVS with QDC (lowering device kit)

DA	Model	Fig.	Type Flange	[kW]	A	P1	P2	G1	G2	F	H1	H2	H3	L <sup>1</sup> (*)	L6	BN1	BN2	D1	E1	QDC (lowering device kit) Model	Weight [kg]
50	50DVS51.5	1	Oval	1.5	311	-	-	-	-	-	-	-	-	105	58	-	-	-	-	LS50	9
65	65DVS51.5	2	Round	1.5	363	75	95	120	160	250	145	190	240	125	72	75	95	12	140	LM65	14
	2.2			394	155									49							
	3.7			394	175									49							
80	80DVS51.5	2	Round	1.5	363	75	95	120	170	255	145	190	240	125	72	75	95	12	140	LM65	14
	2.2			394	155									49							
	3.7			394	175									49							

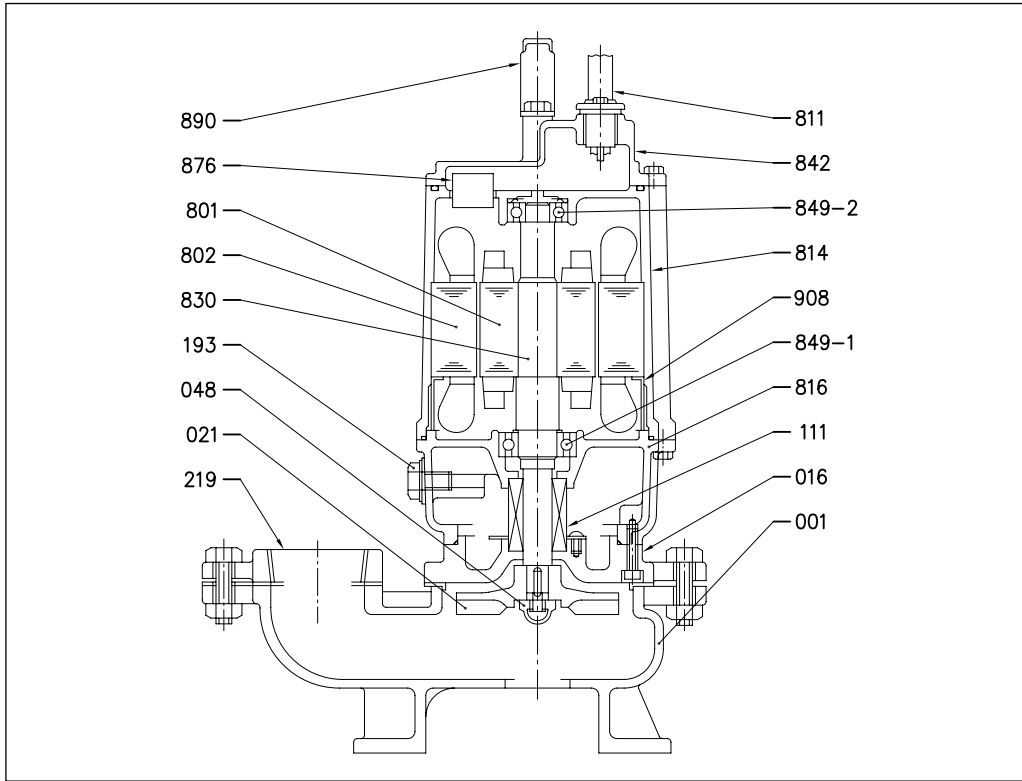
(\*) - L.W.L (minimum fluid level)

# DVS

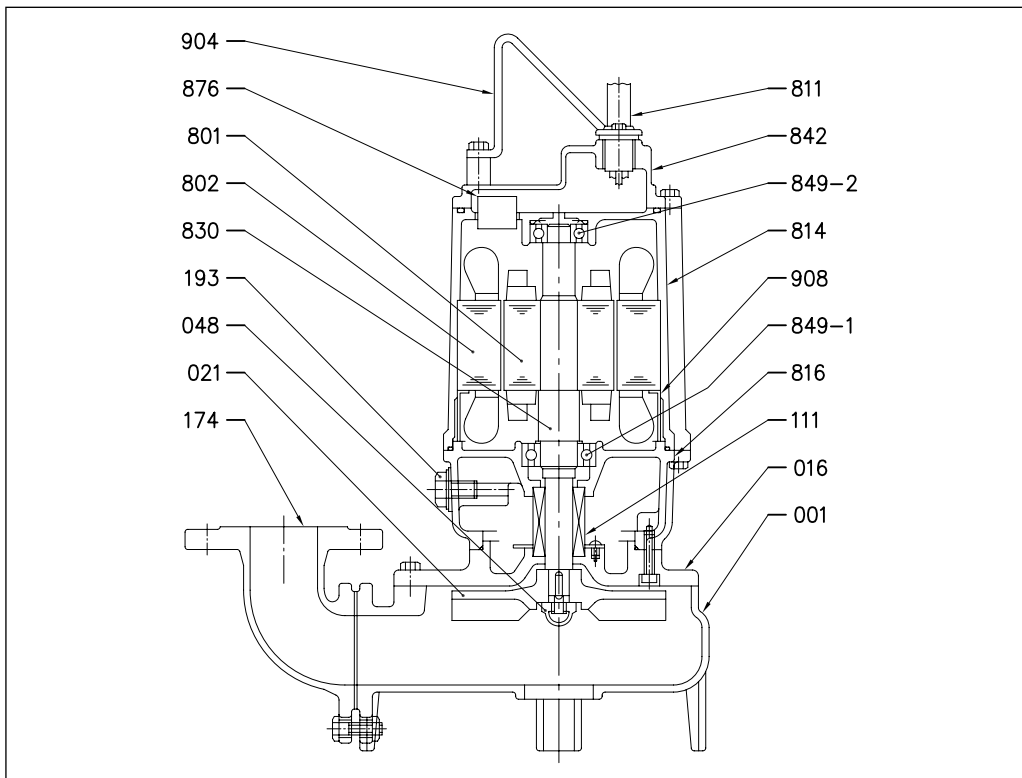
## SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER SEMI-VORTEX

in cast iron

SECTIONAL VIEW 50 DS (1.5kW)



SECTIONAL VIEW 65(80) DVS (1.5kW)



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## SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER SEMI-VORTEX in cast iron

SECTIONAL VIEW 65(80) DVS (2.2 - 3.7 kW)

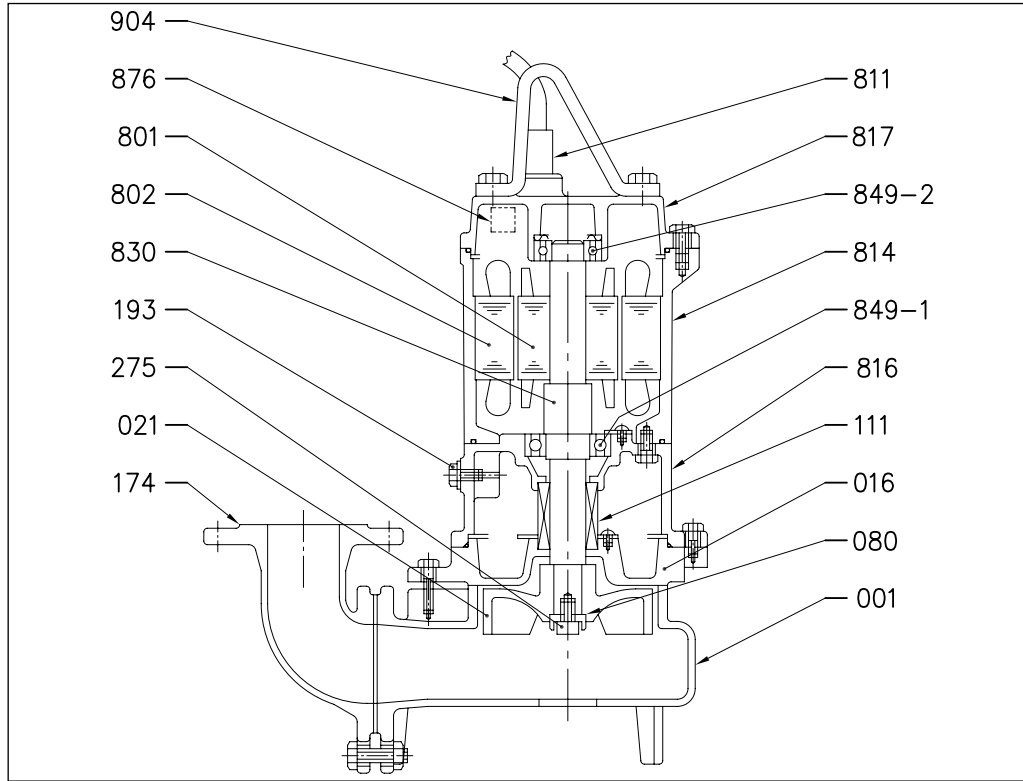


TABLE OF MATERIALS DVS

Ref.	Name	Material	Ref.	Name	Material
001	Pump body	Cast iron EN-GHJL-200-EN 1561	811	Cable	-
016	Mechanical seal cover	Cast iron EN-GHJL-200-EN 1561	814	Motor casing	Cast iron EN-GHJL-200-EN 1561
021	Impeller	Cast iron EN-GHJL-200-EN 1561	816	Motor mount	Cast iron EN-GHJL-200-EN 1561
048	Impeller nut	Brass	830	Shaft	EN 1.4006 (AISI403)
080	Bushing	Cast iron EN-GHJL-200-EN 1561	842	Motor cover	Cast iron EN-GHJL-200-EN 1561
111	Mechanical seal	-	849-1	Ball bearing	-
174	Delivery bend/union	Cast iron EN-GHJL-200-EN 1561	849-2	Ball bearing	-
193	Oil cap	NBR/EN 1.4301 (AISI304)	876	Motor cutout	-
219	Flanges	Cast iron EN-GHJL-200-EN 1561	890	Lifting hook	Stainless steel
801	Rotor	-	908	Spacer	Steel
802	Stator	-			



## SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER SEMI-VORTEX

in cast iron

**ELECTRICAL DATA TABLE DVS (1.5 - 3.7 kW)**

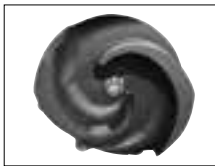
[P <sub>2</sub> ]		[kW]	1.5			2.2			3.7			
Resistance at 20°C		[Ω]	11.973			4.942			2.647			
GD <sup>2</sup>		[kg/m <sup>2</sup> ]	0.0057			0.0082			0.011			
Voltage		[V]	380	400	415	380	400	415	380	400	415	
Full load	0%	Current	[A]	1.25	1.32	1.30	1.95	2.15	2.33	3.20	3.30	3.90
		Power	[W]	430	405	400	500	500	252	800	500	600
	75%	Current	[A]	2.92	2.62	2.61	4.07	4.06	3.82	7.07	6.32	6.45
		Efficiency	[%]	63.59	69.18	70.11	71.23	69.69	77.58	68.00	75.54	74.26
		Power factor	[%]	91.93	89.54	85.68	86.44	84.27	77.40	87.75	83.92	80.61
		rpm	[min <sup>-1</sup> ]	2872	2887	2898	2895	2901	2927	2890	2917	2922
	100%	Current	[A]	3.70	3.30	3.30	5.10	5.00	4.60	8.80	7.80	7.80
		Efficiency	[%]	65.61	71.25	70.89	73.05	72.28	79.33	70.79	77.64	76.74
		Power factor	[%]	9.88	92.08	89.21	89.71	87.87	83.88	90.24	88.18	86.00
		rpm	[min <sup>-1</sup> ]	2821	2847	2854	2851	2864	2900	2847	2886	2890
Torque with rotor locked		[%]	243	295	303	161	186	184	175	216	233	
Starting current		[A]	20.5	21.1	22.5	28.7	30.0	31.5	51.2	51.0	53.0	
Poles			2									
Phases			3									
Frequency		[Hz]	50									
Starts per hour			10									
Tolerance for voltage		[%]	±10%									
Tolerance for frequency		[%]	±1%									
Insulation class			F									
Model			ZDSEU									

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# DL - DL W/C

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)

in cast iron



**IMPELLER  
TWO-CHANNEL OPEN**

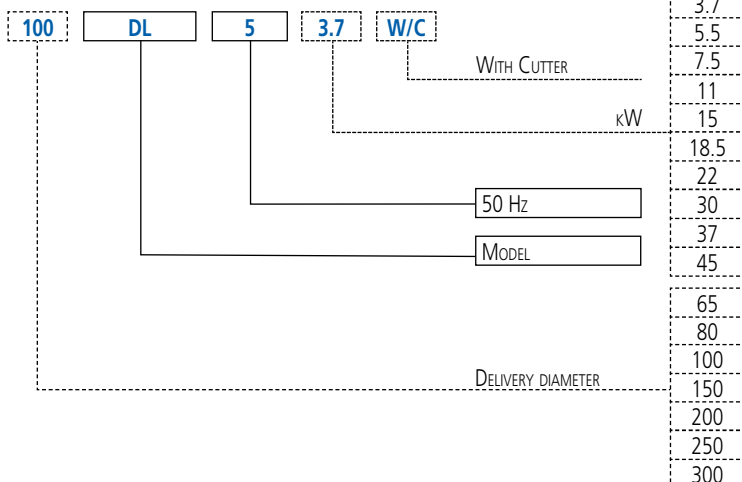


**IMPELLER  
SINGLE CHANNEL OPEN WITH  
CUTTING ACTION**



**IMPELLER  
NON-CLOGGING, SEMI-OPEN**

### PUMP IDENTIFICATION CODE



Submersible electric pumps for foul water (DL) with cutter (DL W/C) in cast iron.

### APPLICATIONS

- Effluent collection tanks
- Ideal for applications with effluent containing soft or fibrous solids
- Lifting or clear or grey water with suspended particles
- Purification systems
- Lifting waste water for small and large communities
- Lifting effluent water from hospitals, hotels, residences, campsites, etc.

### TECHNICAL FEATURES

- Single-channel open impeller with cutting action, two-channel open or non-clogging semi-open designed to prevent clogging of the pump to enable pumping of solid and fibrous matter
- Range: delivery dia. 65 to 300 mm and power up to 45 kW (DL)

### TECHNICAL DATA

- Maximum fluid temperature: 40°C
- Maximum solid dimensions:
  - 46 mm (65DL, 65 DL W/C)
  - 46 mm (80DL, all DLC, 80DL W/C)
  - 57 mm (100DL, 100DLB, 100DL W/C, 100DLB W/C)
  - 68 mm (150DL up to 22kW)
  - 73 mm (200DL up to 22kW)
  - 76 mm (all models 30 - 45 kW)
  - 79 mm (250DL up to 22kW)
  - 88 mm (300DL up to 22kW)
- Maximum length of fibres:
  - 195 mm (65DL, 65DL W/C)
  - 240 mm (80DL, all DLC, 80DL W/C)
  - 300 mm (100DL, 100DLB, 100DL W/C)
  - 400 mm (150DL 5.5 to 45 kW)
  - 500 mm (200DL up to 45 kW)
  - 550 mm (250DL up to 45 kW)
  - 600 mm (300DL up to 45 kW)
- 4 pole motor
- Insulation class F
- Protection rating IP68
- Voltage:
  - three-phase 380-415±10%, 50Hz (1.5 - 7.5kW) (DL and DL W/C)
  - 400-415±10%, 50Hz (starting Δ 11 - 22kW) (DL)
  - 380-415±10%, 50Hz (starting Δ 30 - 45kW) (DL)
- Flanges: DN65, DN80, DN100, DN150, DN200, DN250, DN300 (DL)  
DN65, DN80, DN100 (DL W/C)
- Power up to 45 kW (DL)  
up to 7.5kW (DL W/C)

### MATERIALS

- Pump body, impeller, elbow (bend) in cast iron
- Shaft made of AISI 403 stainless steel
- Mechanical seal: SiC/SiC/NBR (impeller side)  
Carbon/Ceramic/NBR (motor side)

### ACCESSORIES (on request)

For accessories, see page 151 onwards

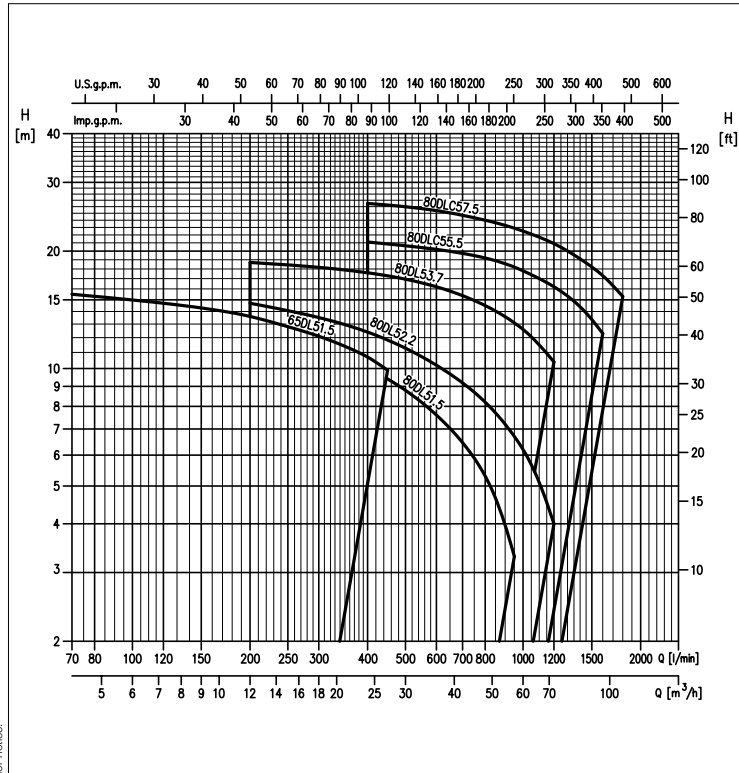


# DL - DL W/C

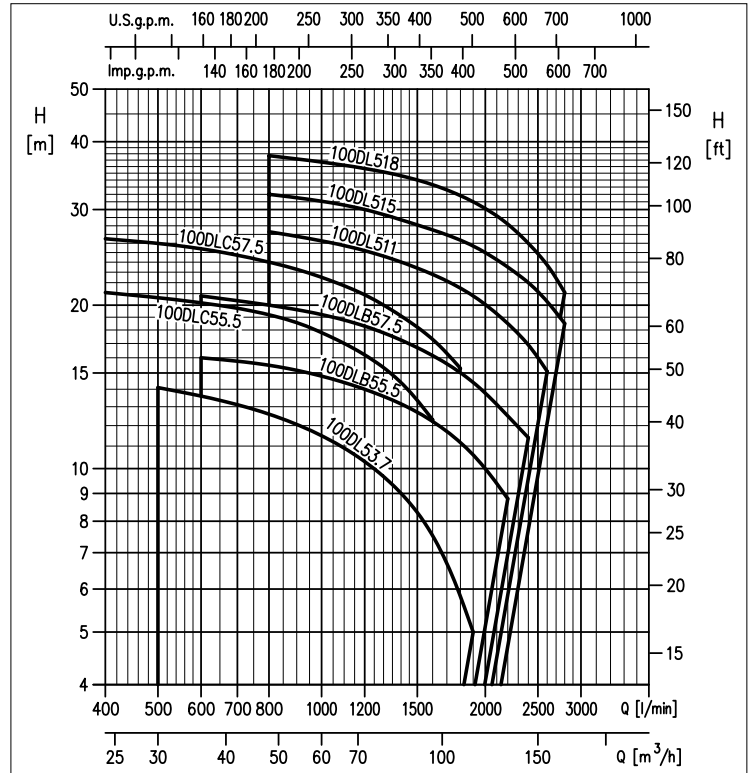
**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

## PERFORMANCE RANGE

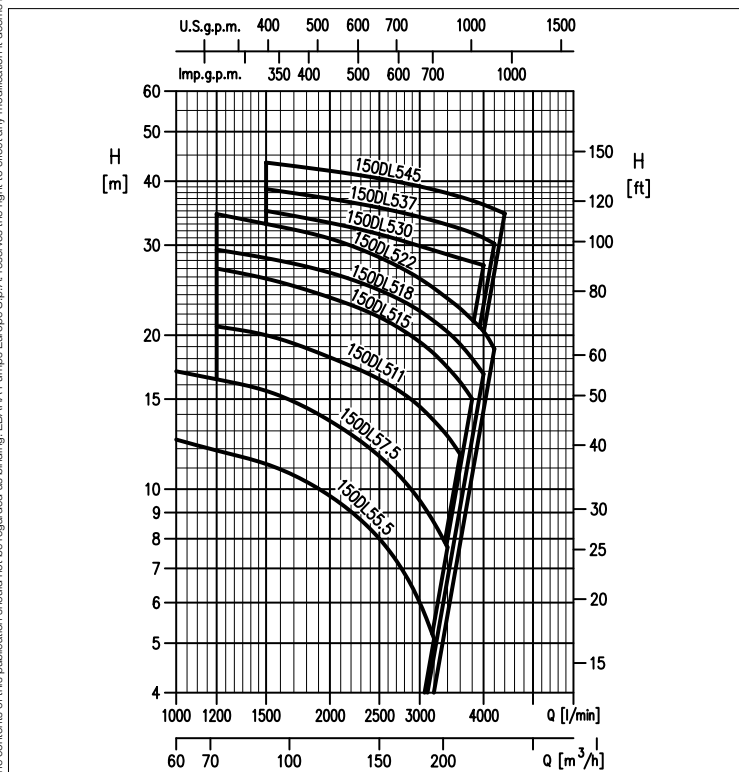
**65-80DL** (per ISO 9906 Annex A)



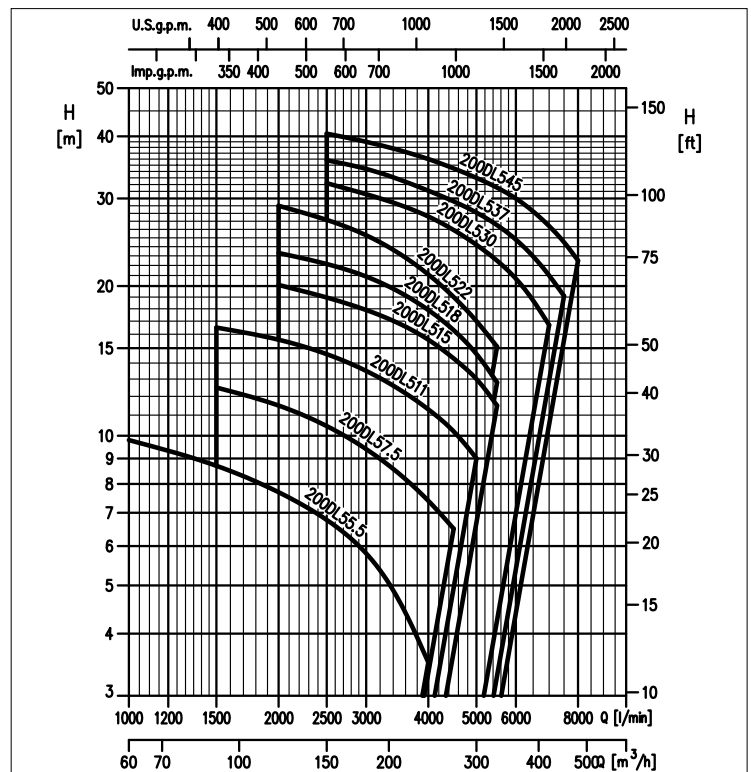
**100DL** (per ISO 9906 Annex A)



**150DL** (per ISO 9906 Annex A)



**200DL** (per ISO 9906 Annex A)



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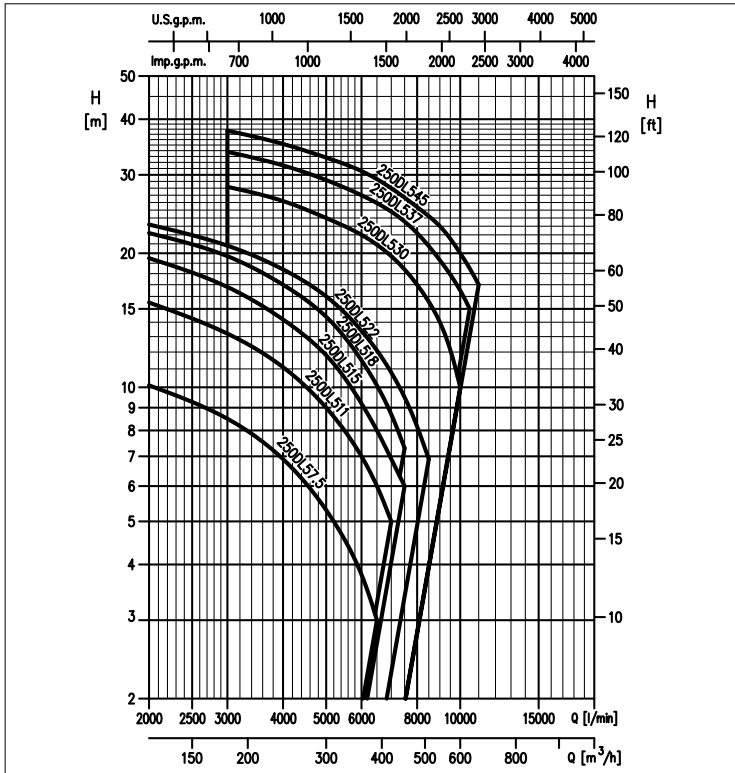


# DL - DL W/C

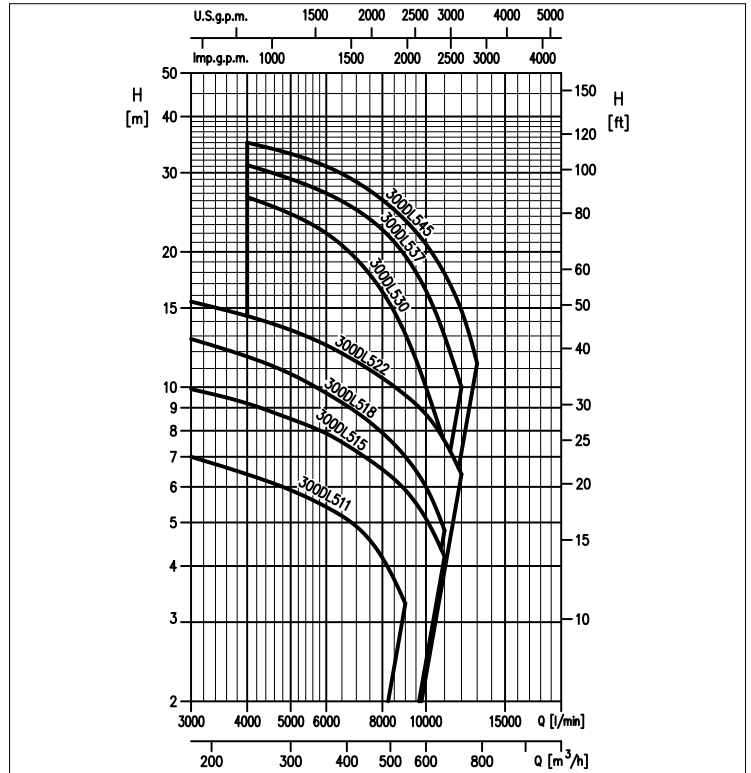
**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

## PERFORMANCE RANGE

**250DL** (per ISO 9906 Annex A)



**300DL** (per ISO 9906 Annex A)



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# DL - DL W/C

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C) in cast iron

PERFORMANCE TABLE 65-80DL

Model	P <sub>2</sub>		Q = Flow rate													
	[HP]	[kW]	l/min	70	150	200	400	450	600	800	950	1000	1200	1400	1600	1800
			m <sup>3</sup> /h	4	9	12	24	27	36	48	57	60	72	84	96	108
H = Head [m]																
65DL51.5	2	1.5	15.5	14.3	13.6	10.7	9.9	-	-	-	-	-	-	-	-	-
80DL51.5	2	1.5	-	-	12.2	10.0	9.4	7.6	5.3	3.3	-	-	-	-	-	-
80DL52.2	3	2.2	-	-	14.7	12.4	11.8	10.2	8.2	6.7	6.2	4.0	-	-	-	-
80DL53.7	5	3.7	-	-	18.7	17.6	17.3	16.2	14.5	13.1	12.6	10.4	-	-	-	-
80DLC55.5	7.5	5.5	-	-	-	21.1	20.9	20.2	19.2	18.2	17.8	16.2	14.4	12.3	-	-
80DLC57.5	10	7.5	-	-	-	26.5	26.3	25.4	24.0	22.9	22.5	20.9	19.1	17.3	15.3	-

PERFORMANCE TABLE 100DL

Model	P <sub>2</sub>		Q = Flow rate													
	[HP]	[kW]	l/min	400	500	600	800	1200	1500	1600	1800	1900	2200	2400	2600	2800
			m <sup>3</sup> /h	24	30	36	48	72	90	96	108	114	132	144	156	168
H = Head [m]																
100DLC55.5	7.5	5.5	21.1	20.7	20.2	19.2	16.2	13.3	12.3	-	-	-	-	-	-	-
100DLC57.5	10	7.5	26.5	25.9	25.4	24.0	20.9	18.3	17.3	15.3	-	-	-	-	-	-
100DL53.7	5	3.7	-	14.1	13.6	12.6	10.3	8.3	7.5	5.9	5.0	-	-	-	-	-
100DLB55.5	7.5	5.5	-	-	16.0	15.5	14.0	12.7	12.2	11.1	10.6	8.8	-	-	-	-
100DLB57.5	10	7.5	-	-	20.8	20.0	18.3	16.7	16.1	15.1	15.0	12.5	11.4	-	-	-
100DL511	15	11	-	-	-	27.3	25.2	23.4	22.8	21.5	20.8	18.5	16.9	15.1	-	-
100DL515	20	15	-	-	-	32.0	30.0	28.1	27.6	26.4	25.7	23.5	22.0	20.3	18.5	-
100DL518.5	25	18.5	-	-	-	37.7	35.7	34.0	33.4	31.9	31.0	28.2	26.0	23.7	21.1	-

PERFORMANCE TABLE 150DL

Model 2000	P <sub>2</sub>		Q = Flow rate										l/min					
	2500 [HP]	3000 [kW]	3200	3400	3500	3600	3800	4000	4200	4400								
			m <sup>3</sup> /h	60	72	90	120	150	180	192	204	210	216	228	240	252	264	
H = Head [m]																		
150DL55.5	7.5	5.5	12.5	11.9	11.2	9.7	8.0	6.0	5.1	-	-	-	-	-	-	-	-	
150DL57.5	10	7.5	17.0	16.4	15.2	13.6	11.6	9.5	8.6	7.7	-	-	-	-	-	-	-	
150DL511	15	11	-	20.8	20.0	18.1	16.4	14.5	13.6	12.7	12.2	11.7	-	-	-	-	-	
150DL515	20	15	-	27.0	25.8	23.7	21.7	19.4	18.4	17.3	16.8	16.2	15.0	-	-	-	-	
150DL518.5	25	18.5	-	29.4	28.3	26.5	24.5	22.3	21.3	20.3	19.8	19.2	18.0	16.8	-	-	-	
150DL522	30	22	-	34.5	33.0	30.9	28.4	25.8	24.7	23.6	23.0	22.4	21.2	20.5	18.8	-	-	
150DL530	40	30	-	-	35.0	33.2	31.5	29.9	29.3	28.8	28.5	28.3	27.8	27.4	-	-	-	
150DL537	50	37	-	-	38.6	37.0	35.5	34.1	33.5	32.9	32.6	32.3	31.7	31.0	30.2	-	-	
150DL545	60	45	-	-	43.5	42.0	40.5	39.1	38.5	37.9	37.6	37.3	36.7	36.0	35.3	34.6	-	

PERFORMANCE TABLE 200DL

Model	P <sub>2</sub>		Q = Flow rate													
	[HP]	[kW]	l/min	1000	1500	2000	2500	3000	4000	4500	5000	5500	6000	7000	7500	8000
			m <sup>3</sup> /h	60	90	120	150	180	240	270	300	330	360	420	450	480
H = Head [m]																
200DL55.5	7.5	5.5	9.8	8.7	7.7	6.8	5.8	3.5	-	-	-	-	-	-	-	-
200DL57.5	10	7.5	-	12.5	11.5	10.5	9.4	7.4	6.5	-	-	-	-	-	-	-
200DL511	15	11	-	16.5	15.6	14.6	13.5	11.3	10.2	9.0	-	-	-	-	-	-
200DL515	20	15	-	-	20.1	19.0	17.9	15.6	14.3	13.0	11.5	-	-	-	-	-
200DL518.5	25	18.5	-	-	23.3	22.2	20.9	17.9	16.3	14.6	12.8	-	-	-	-	-
200DL522	30	22	-	-	29.0	27.2	25.3	21.1	19.0	17.0	15.1	-	-	-	-	-
200DL530	40	30	-	-	-	32.2	30.6	27.6	25.9	24.2	22.5	20.7	16.7	-	-	-
200DL537	50	37	-	-	-	35.8	34.4	31.1	29.6	28.1	26.5	24.8	21.0	19.1	-	-
200DL545	60	45	-	-	-	40.5	39.0	36.0	34.5	33.0	31.5	30.0	26.4	24.5	22.5	-

# DL - DL W/C

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

**PERFORMANCE TABLE 250DL**

Model	P <sub>2</sub>		Q = Flow rate														
	[HP]	[kW]	l/min	2000	3000	4000	5000	6000	6500	7000	7500	8000	8500	9000	10000	10500	11000
			m <sup>3</sup> /h	120	180	240	300	360	390	420	450	480	510	540	600	630	660
H = Head [m]																	
250DL57.5	10	7.5	10.1	8.5	6.9	5.3	3.8	3.0	-	-	-	-	-	-	-	-	-
250DL511	15	11	15.5	13.2	11.1	9.0	7.0	6.0	5.0	-	-	-	-	-	-	-	-
250DL515	20	15	19.5	16.8	14.2	11.8	9.2	8.0	6.9	6.0	-	-	-	-	-	-	-
250DL518.5	25	18.5	22.2	19.7	17.0	14.4	11.5	10.1	8.7	7.3	-	-	-	-	-	-	-
250DL522	30	22	23.2	20.8	18.4	16.0	13.4	12.1	10.8	9.5	8.2	6.9	-	-	-	-	-
250DL530	40	30	-	28.2	26.2	24.0	22.0	20.9	19.7	18.4	17.0	15.6	14.0	10.0	-	-	-
250DL537	50	37	-	33.8	31.5	29.2	27.0	25.9	24.8	23.5	22.2	20.8	19.3	16.5	15.0	-	-
250DL545	60	45	-	37.7	35.2	32.8	30.6	29.3	28.0	26.7	25.4	24.2	23.0	20.0	18.5	17.0	-

**PERFORMANCE TABLE 300DL**

Model	P <sub>2</sub>		Q = Flow rate											
	[HP]	[kW]	l/min	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000	13000
			m <sup>3</sup> /h	180	240	300	360	420	480	540	600	660	720	780
H = Head [m]														
300DL511	15	11	7.0	6.4	5.9	5.5	4.9	4.2	3.3	-	-	-	-	-
300DL515	20	15	9.9	9.2	8.5	8.0	7.2	6.6	5.9	5.1	4.2	-	-	-
300DL518.5	25	18.5	12.8	11.7	10.7	9.7	8.8	7.9	7.0	6.0	4.8	-	-	-
300DL522	30	22	15.5	14.4	13.4	12.4	11.4	10.5	9.6	8.7	7.6	6.4	-	-
300DL530	40	30	-	26.5	24.4	22.0	19.3	16.3	13.1	10.0	7.5	-	-	-
300DL537	50	37	-	31.2	29.2	27.0	24.8	22.4	19.6	16.4	13.0	10.0	-	-
300DL545	60	45	-	35.0	33.1	31.0	28.6	26.1	23.5	20.8	17.9	14.8	11.3	-

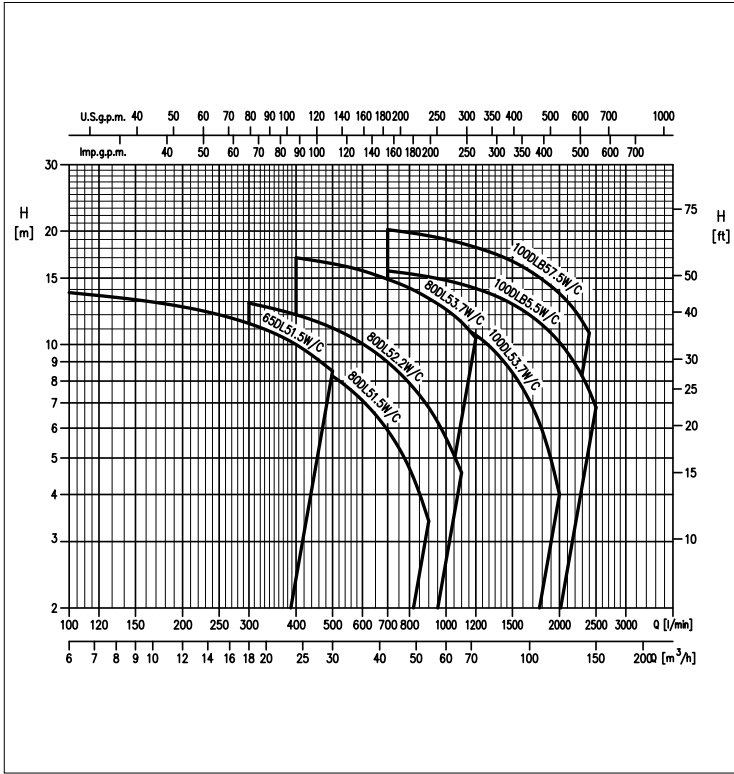
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# DL - DL W/C

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

**PERFORMANCE RANGE DL W/C (WITH CUTTER)** (per ISO 9906 Annex A)



**PERFORMANCE TABLE 65-80-100 DL W/C (WITH CUTTER)**

Model	P <sub>2</sub>		Q = Flow rate															
	[HP]	[kW]	l/min m <sup>3</sup> /h	100 6	250 15	300 18	400 24	500 30	700 42	900 54	1000 60	1100 66	1200 72	1400 84	1600 96	2000 120	2400 144	2500 150
			H = Head [m]															
65DL51.5W/C	2	1.5	13.7	12.0	11.4	10.0	8.5	-	-	-	-	-	-	-	-	-	-	-
80DL51.5W/C	2	1.5	-	10.7	10.3	9.3	8.2	5.9	3.4	-	-	-	-	-	-	-	-	-
80DL52.2W/C	3	2.2	-	-	12.9	12.0	11.1	9.0	6.8	5.7	4.6	-	-	-	-	-	-	-
80DL53.7W/C	5	3.7	-	-	-	17.0	16.4	14.9	13.4	12.6	11.6	10.4	-	-	-	-	-	-
100DL53.7W/C	5	3.7	-	-	-	-	14.1	13.1	12.2	11.7	11.2	10.6	9.2	7.6	4.0	-	-	-
100DLB5.5W/C	7.5	5.5	-	-	-	-	-	15.7	15.1	14.8	14.5	14.1	13.3	12.3	10.1	7.5	6.8	-
100DLB5.7W/C	10	7.5	-	-	-	-	-	20.2	19.4	19.0	18.6	18.1	17.2	16.1	13.7	10.7	-	-

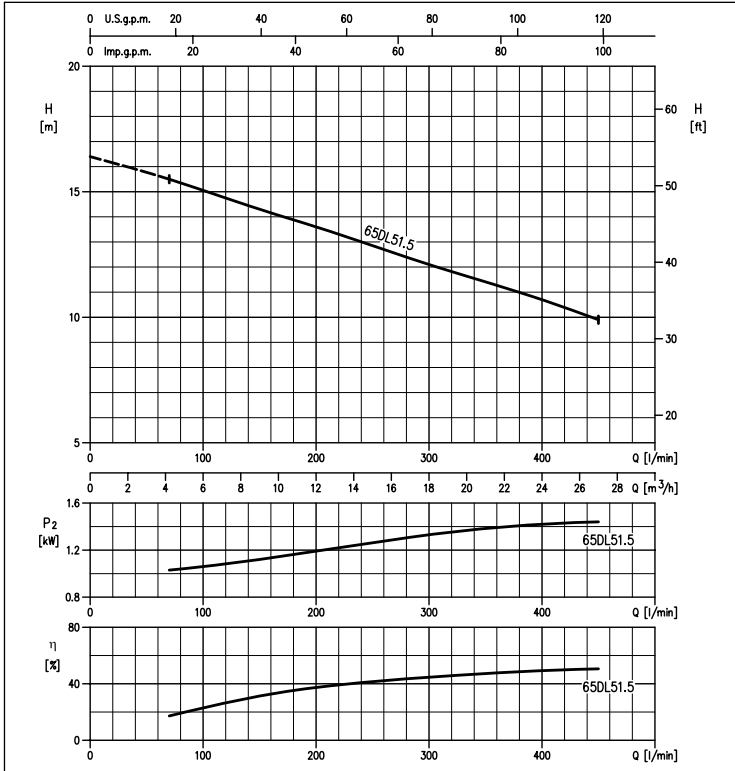
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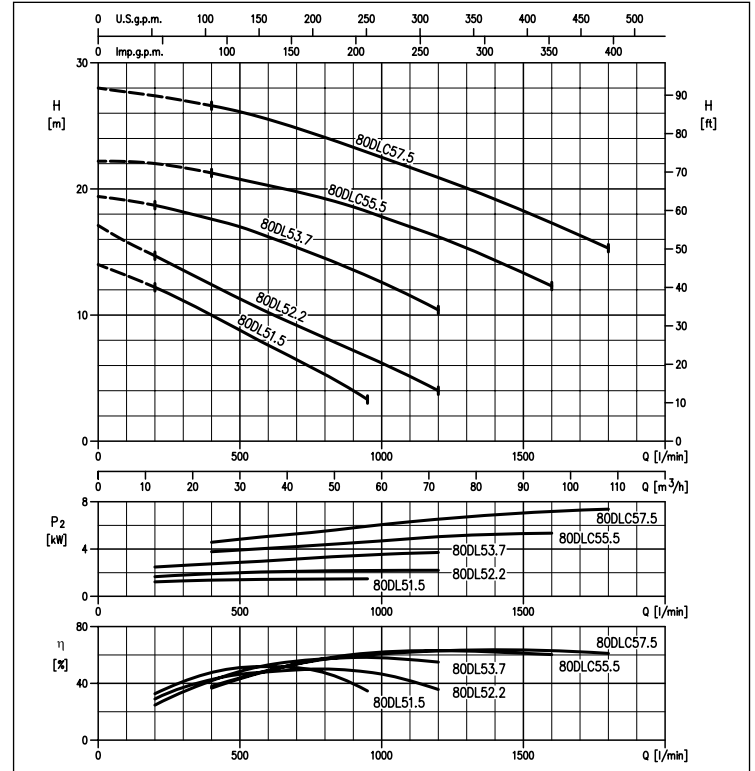
# DL - DL W/C

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

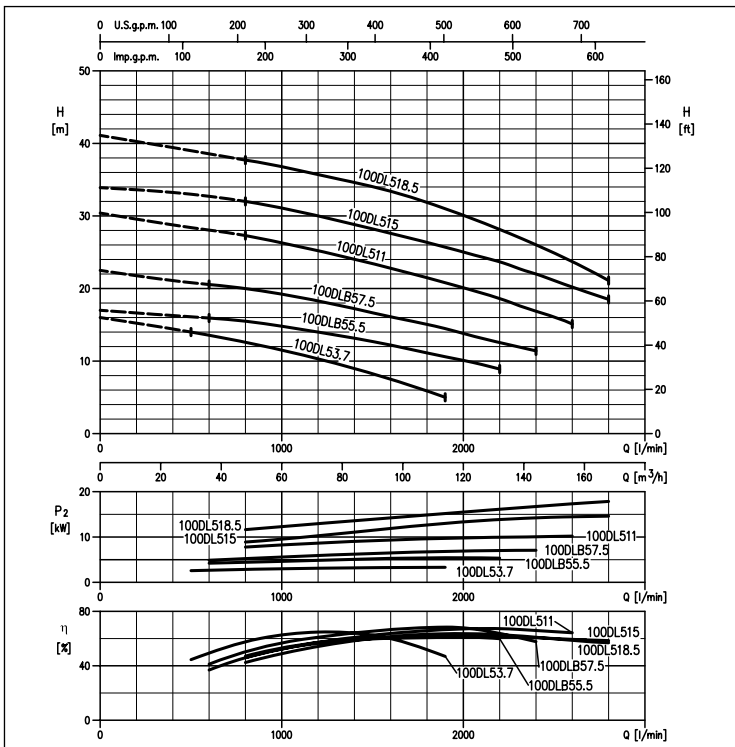
**PERFORMANCE CURVES series 65DL51.5 (1.5 kW)**  
(per ISO 9906 Annex A)



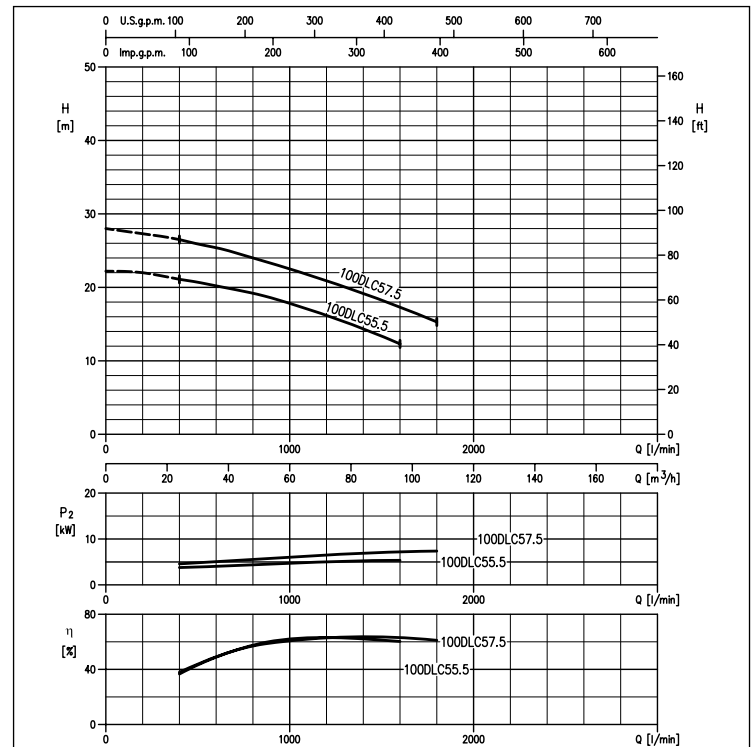
**PERFORMANCE CURVES 80DL51.5 (1.5 kW) 80DL52.2 (2.2 kW)**  
**80DL53.7 (3.7 kW) 80DLC55.5 (5.5 kW)**  
**80DLC57.5 (7.5 kW)**  
(per ISO 9906 Annex A)



**PERFORMANCE CURVES 100DL53.7 (3.7 kW) 100DLB55.5 (5.5 kW)**  
**100DLB57.5 (7.5 kW) 100DL511 (11 kW)**  
**100DL515 (15 kW) 100DL518.5 (18.5 kW)**  
(per ISO 9906 Annex A)



**PERFORMANCE CURVES 100DLC55.5 (5.5 kW)**  
**100DLC57.5 (7.5 kW)**  
(per ISO 9906 Annex A)



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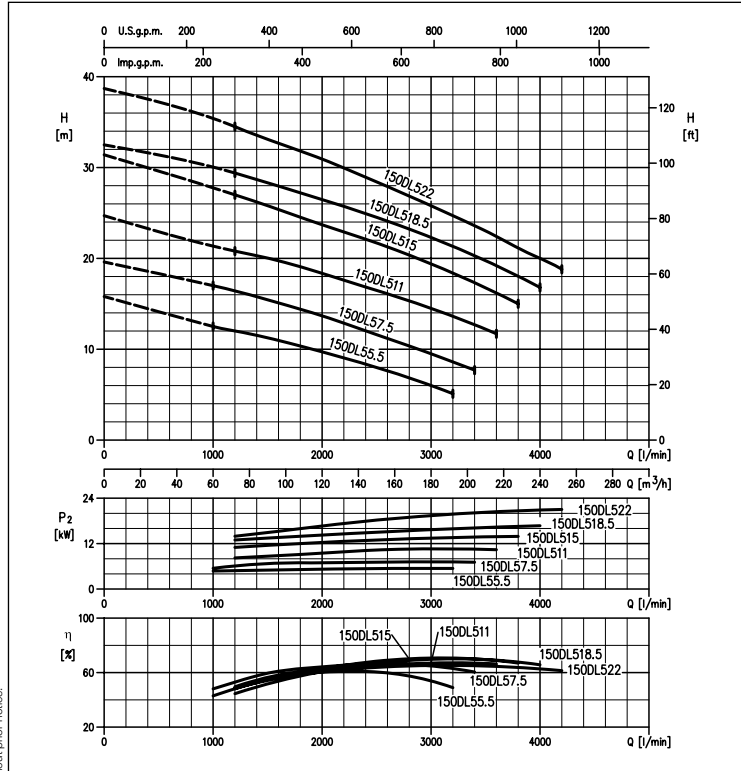




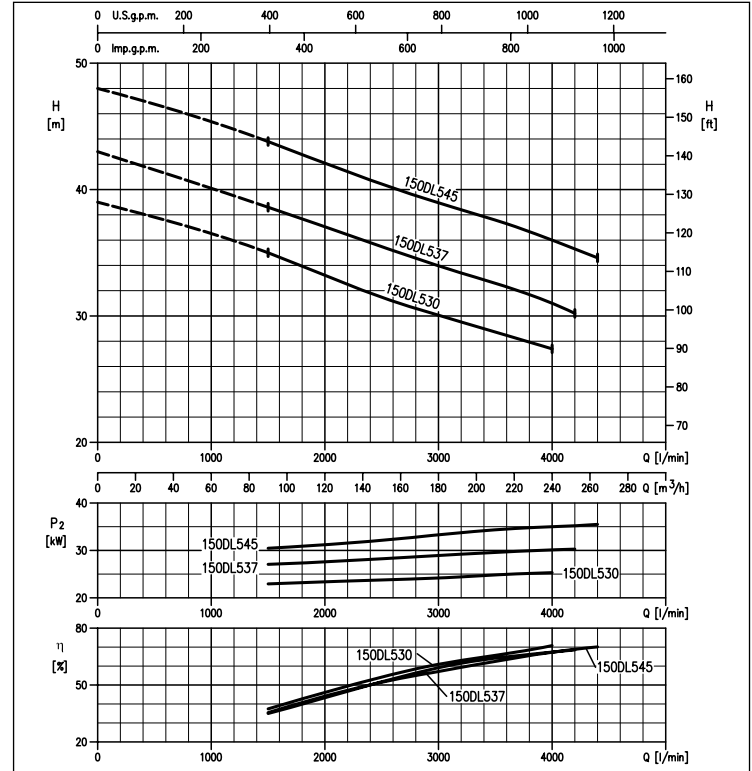
# DL - DL W/C

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C) in cast iron

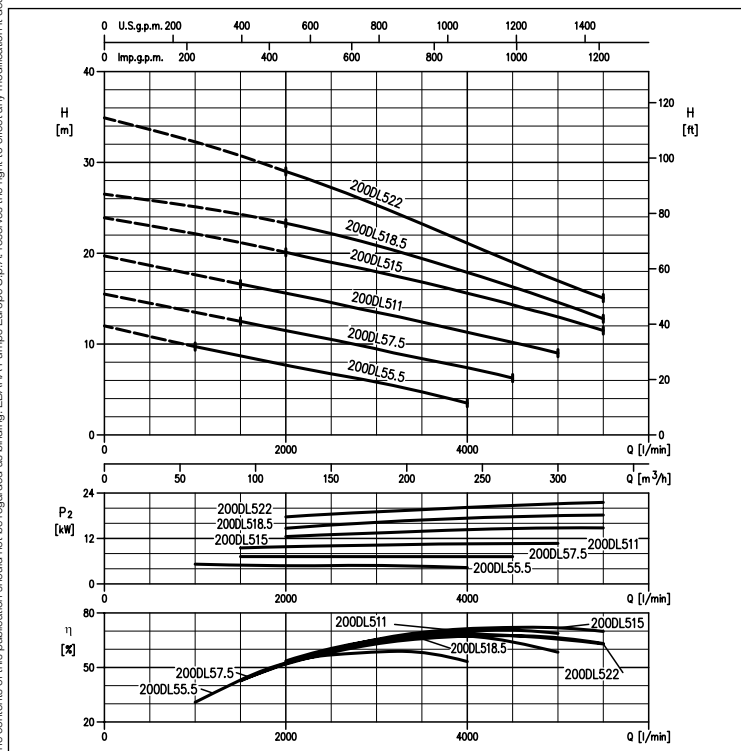
**PERFORMANCE CURVES 150DL55.5 (5.5 kW) 150DL57.5 (7.5 kW)**  
 (per ISO 9906 Annex A) **150DL511 (11 kW) 150DL515 (15 kW)**  
**150DL518.5 (18.5 kW) 150DL522 (22 kW)**



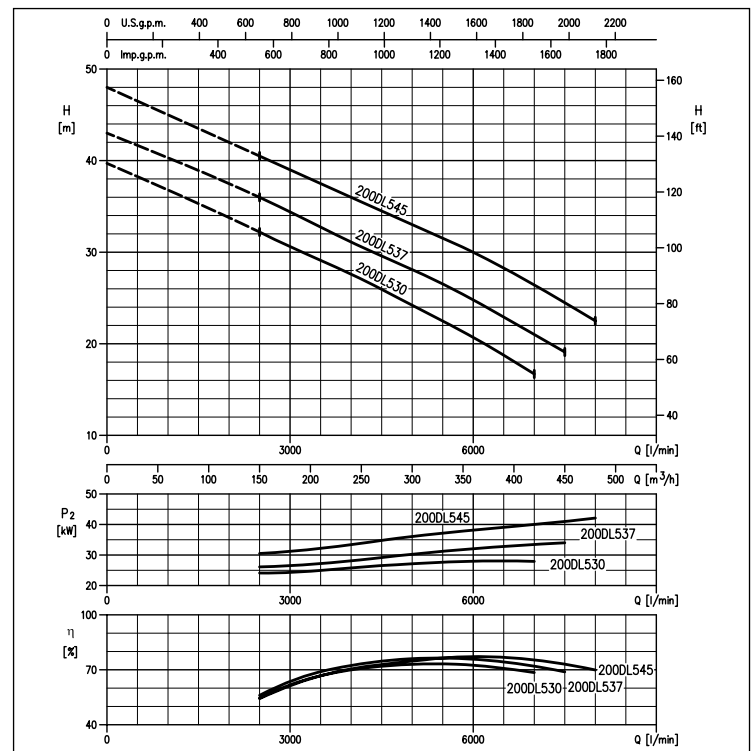
**PERFORMANCE CURVES 150DL530 (30 kW)**  
 (per ISO 9906 Annex A) **150DL537 (37 kW)**  
**150DL545 (45 kW)**



**PERFORMANCE CURVES 200DL55.5 (5.5 kW) 200DL57.5 (7.5 kW)**  
 (per ISO 9906 Annex A) **200DL511 (11 kW) 200DL515 (15 kW)**  
**200DL518.5 (18.5 kW) 200DL522 (22 kW)**



**PERFORMANCE CURVES 200DL530 (30 kW)**  
 (per ISO 9906 Annex A) **200DL537 (37 kW)**  
**200DL545 (45 kW)**



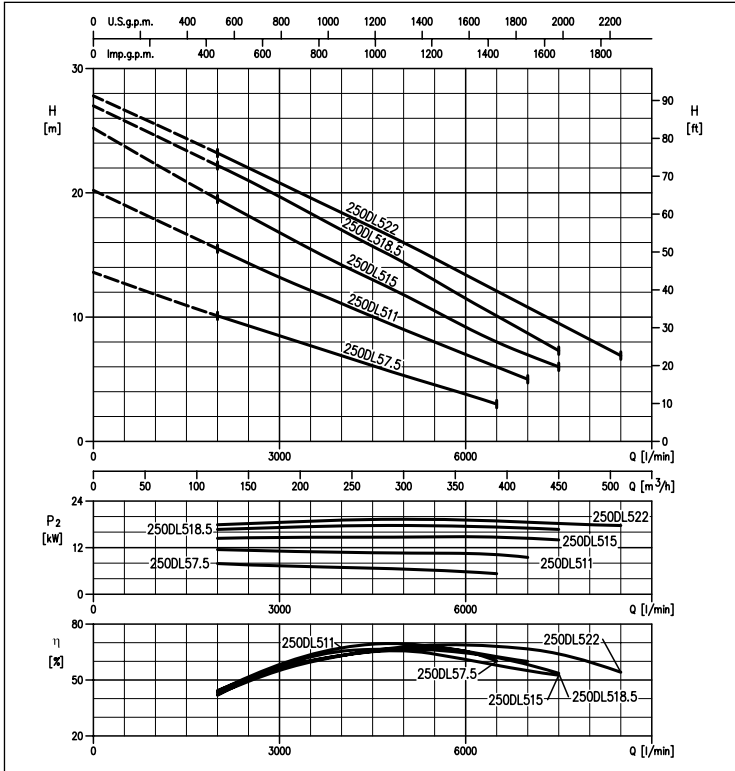
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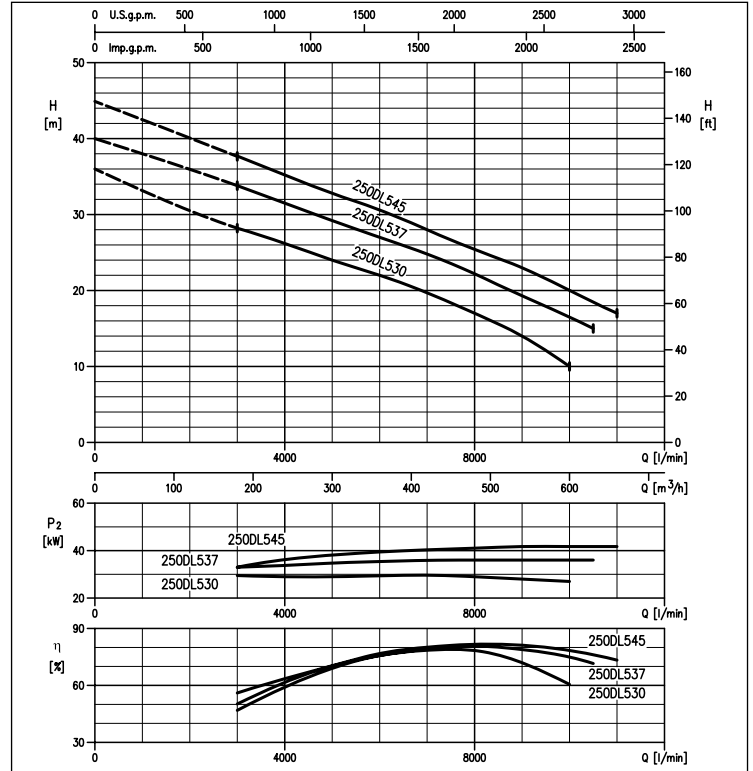
# DL - DL W/C

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

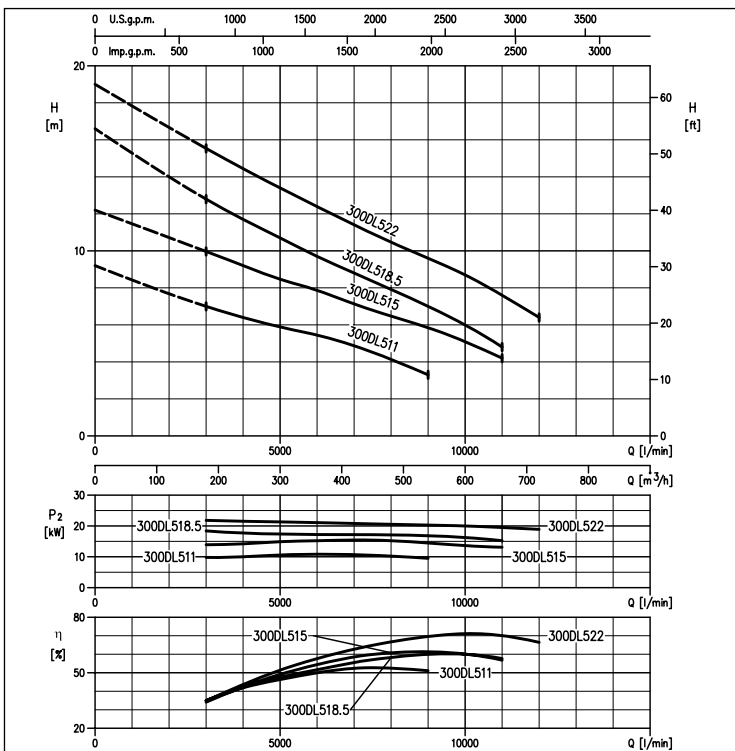
**PERFORMANCE CURVES 250DL57.5 (7.5 kW) 250DL 511 (11 kW)**  
(per ISO 9906 Annex A) **250DL515 (15 kW) 250DL 518.5 (18.5 kW)**  
**250DL522 (22 kW)**



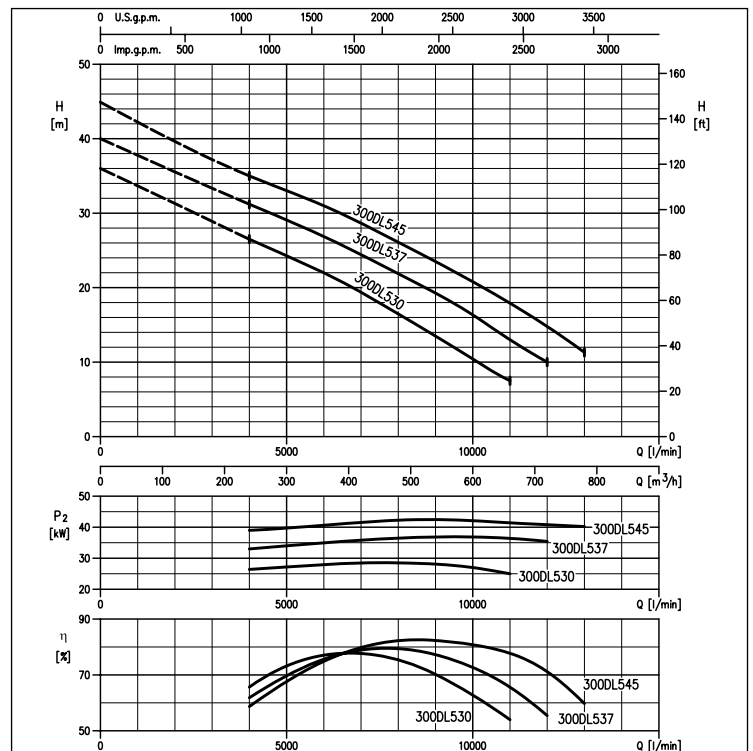
**PERFORMANCE CURVES 250DL530 (30 kW) 250DL537 (37 kW)**  
(per ISO 9906 Annex A) **250DL545 (45 kW)**



**PERFORMANCE CURVES 300DL511 (11 kW) 300DL515 (15 kW)**  
(per ISO 9906 Annex A) **300DL518.5 (18.5 kW) 300DL522 (22 kW)**



**PERFORMANCE CURVES 300DL530 (30 kW) 300DL537 (37 kW)**  
(per ISO 9906 Annex A) **300DL545 (45 kW)**



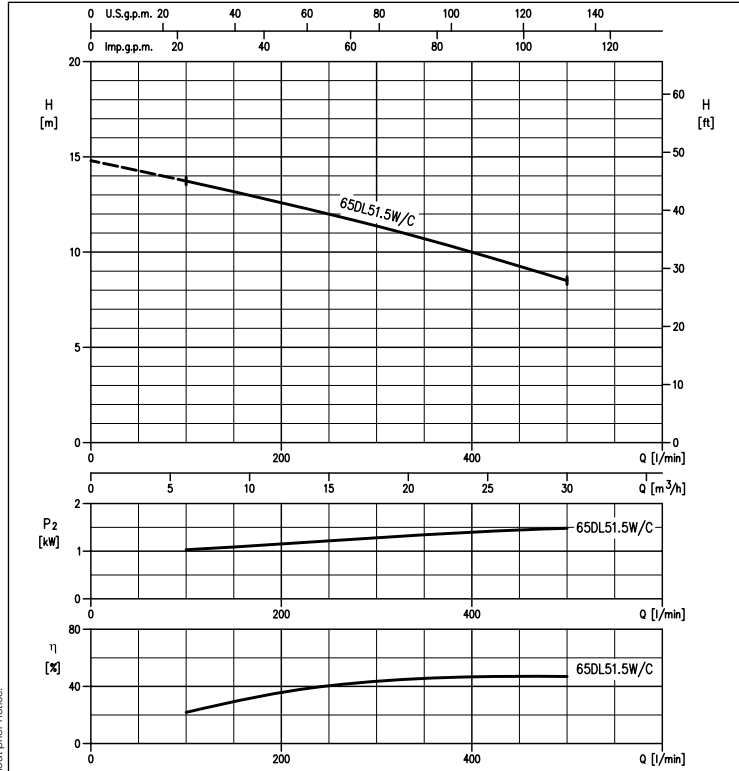
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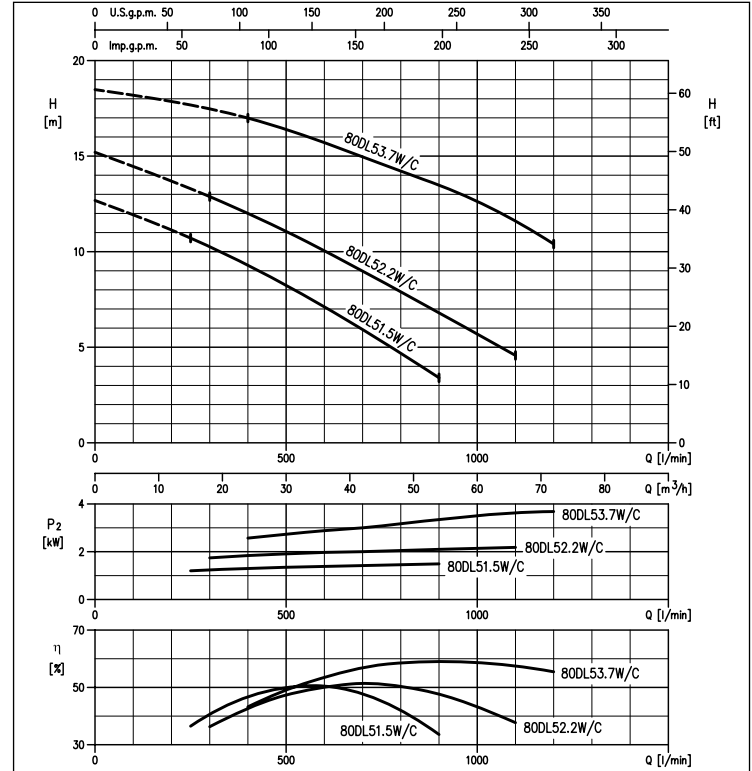
# DL - DL W/C

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

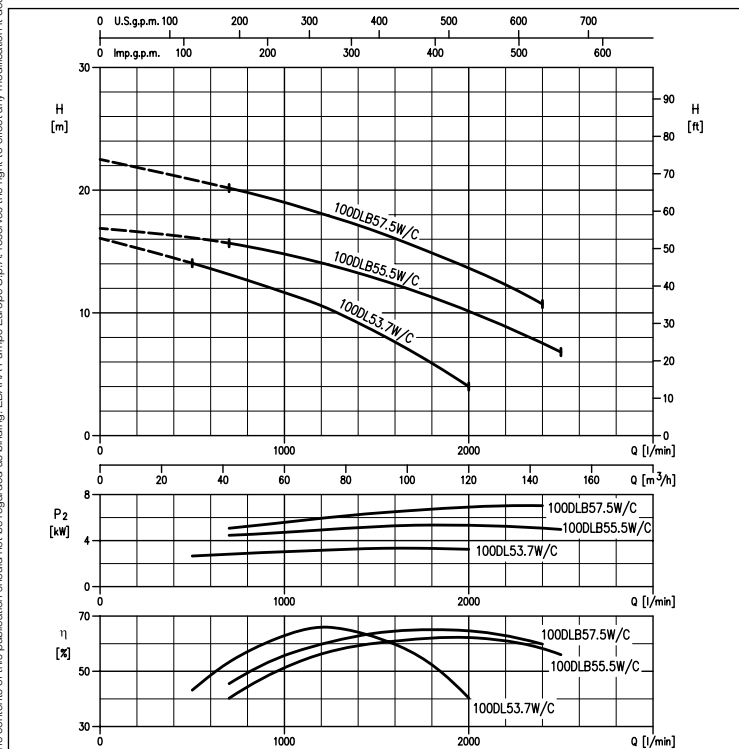
**PERFORMANCE CURVES 65DL51.5 W/C (1.5 kW)**  
(per ISO 9906 Annex A)



**PERFORMANCE CURVES 80DL51.5 W/C (1.5 kW)**  
**80DL52.2 W/C (2.2 kW)**  
**80DL53.7 W/C (3.7 kW)**  
(per ISO 9906 Annex A)



**PERFORMANCE CURVES 100DL53.7 W/C (3.7 kW)**  
**100DLB55.5 W/C (5.5 kW)**  
**100DLB57.5 W/C (7.5 kW)**  
(per ISO 9906 Annex A)



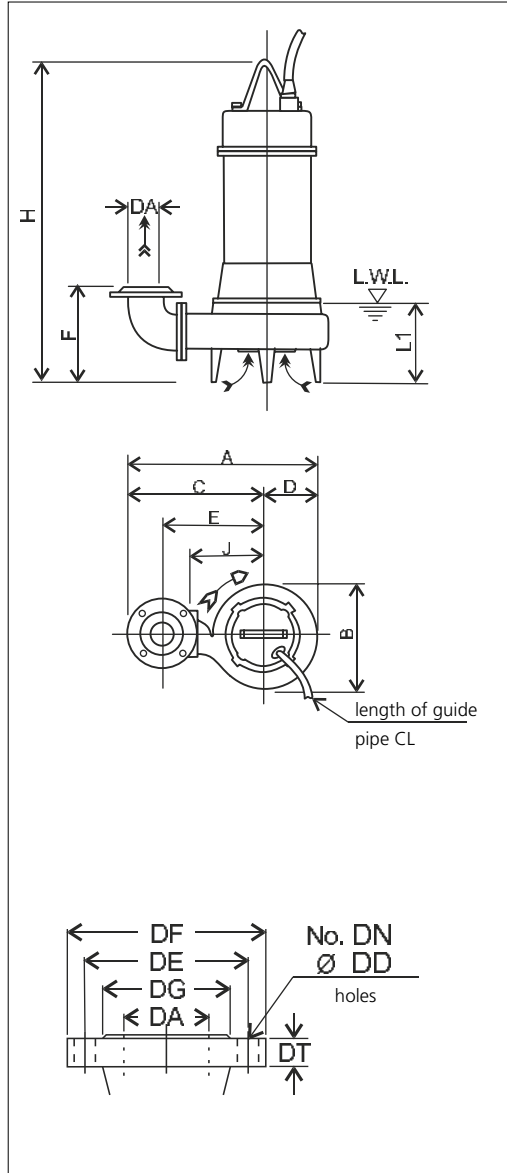
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# DL - DL W/C

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)

in cast iron

### DIMENSIONS DL



Flange dimensions table [mm] - EN 1092-2

Type	DA	DE	DF	DG	DT	DN	DD
Round	65	145	185	118	17	4	19
	80	160	200	132	19	8	
	100	180	220	156	21		
	150	240	285	211	23	12	23
	200	295	340	266			
	250	350	395	319	25		
300	400	445	370	24			

### TABLE OF DIMENSIONS DL

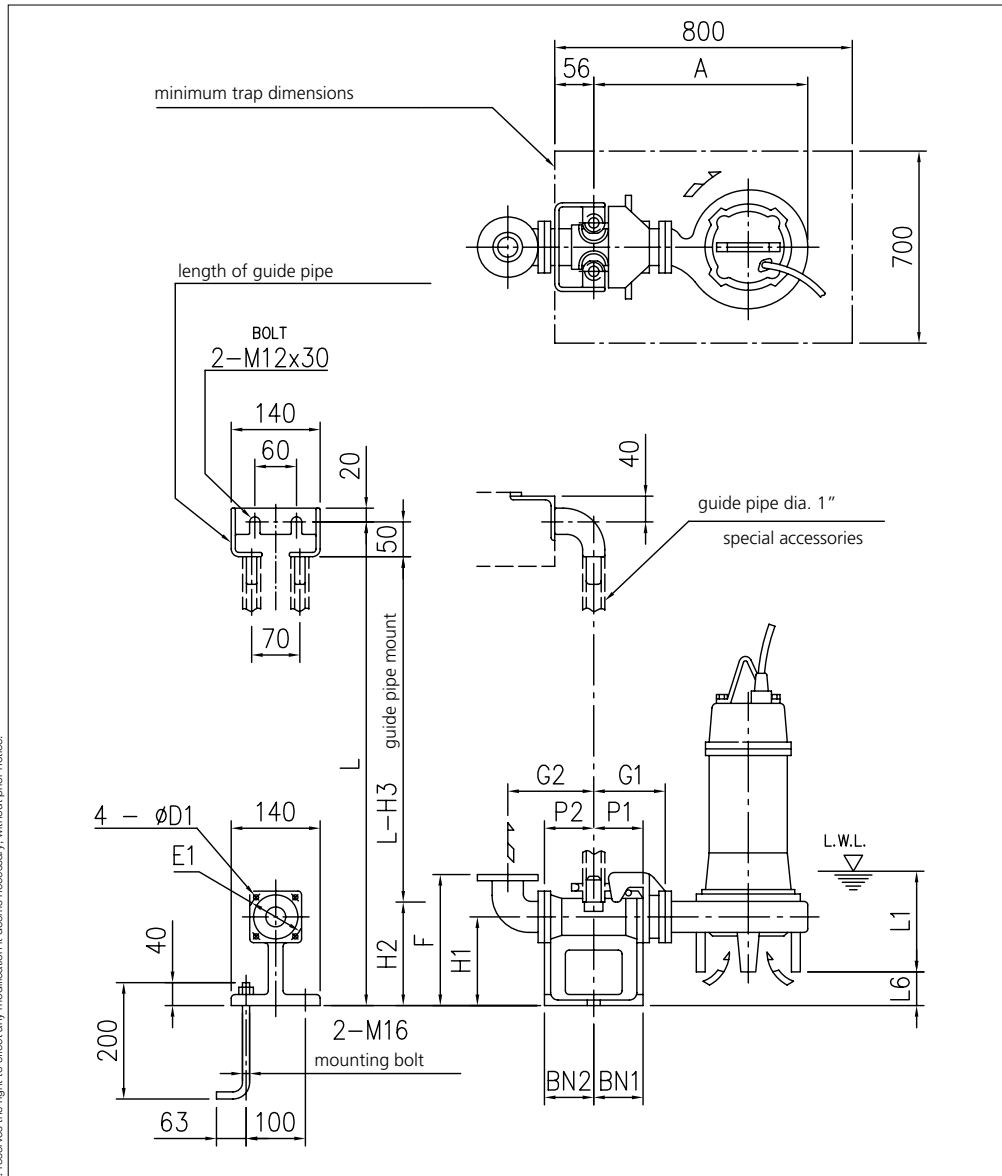
DA	Model	[kW]	A	B	C	D	E	F	H	J	L1(*)	E1	Weight [kg]
65	65DL51.5	1.5	497	291	353	144	265	200	576	200	140		52
80	80DL51.5	1.5	524	292	378	146	285		597	210	165		55
	80DL52.2	2.2	542	308	388	154	295	220	654	220			
	80DL53.7	3.7	567	328	403	164	310		687	235	205		67
	80DLC55.5	5.5	618	379	428	190	335	307	753	260			
	80DLC57.5	7.5	648	399	448	200	355	305	751	280			
100	100DL53.7	3.7	614	335	445	169	340	250	706	235	185		75
	100DLB55.5	5.5	646	369	460	186	355	323	768	250			
	100DLC55.5	5.5	660	379	470	190	365	322	753	260			
	100DLB57.5	7.5	673	385	480	193	375	323	760	270			
	100DLC57.5	7.5	690	399	490	200	385	320	751	280			
	100DL511	11	701	402	500	201	395	323	859	290			
	100DL515	15							954				
	100DL518.5	18.5	741	441	520	221	415	330	958	310			
150	150DL55.5	5.5	750	398	550	200	410	381	799	280	245		79
	150DL57.5	7.5	780	418	570	210	430		784	300			
	150DL511	11						377	883				
	150DL515	15	810	438	590	220	450		972	320			
	150DL518.5	18.5	848	476	610	238	470	381	979	340			
	150DL522	22	848	476	610	238	470	381	979	340			
	150DL530	30							1284	360			
	150DL537	37	912	520	650	262	510	468	1404	360			
200	150DL545	45							1404	360			
	200DL55.5	5.5	832	430	615	217	450	414	826	300	285		146
	200DL57.5	7.5	863	453	635	228	470	410	809	320			
	200DL511	11							908				
	200DL515	15	896	479	655	241	490	411	995	340			
	200DL518.5	18.5											
	200DL522	22	932	512		257		415	1001				
	200DL530	30							1284	360			
200DL537	37	937	520		262		483	1404	360				
250	200DL545	45							1404	360			
	250DL57.5	7.5	969	525	700	269	500	622	904	370	400		158
	250DL511	11	993	541	720	273	520	634	1000	390			
	250DL515	15							1086				
	250DL518.5	18.5	1007	549	730	277	530	646	1089	400			
	250DL522	22											
	250DL530	30							1336	460			
	250DL537	37	1125	660	790	335	590	706	1475	460			
250DL545	45							1475	460				
300	300DL511	11							1050				
	300DL515	15	1100	588	798	302	575	671		420			
	300DL518.5	18.5											
	300DL522	22	1135	618	818	317	595	668	1131	440			
	300DL530	30							1336	538			
	300DL537	37	1172	660	838	335	615	726	1475	460			
	300DL545	45								565			

(\*) - L.W.L (minimum fluid level)

# DL - DL W/C

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

## DIMENSIONS 65DL, 80DL (1.5 - 3.7 kW) with QDC (lowering device kit)



Type	DA	DE	DF	DG	DT	DN	DD
Round	65	145	185	118	17	4	19
	80	160	200	132	19	8	

## TABLE OF DIMENSIONS 65DL, 80DL (1.5 - 3.7 kW) with QDC (lowering device kit)

DA	Model	[kW]	A	P1	P2	G1	G2	F	H1	H2	H3	L1 (*)	L6	BN1	BN2	D1	E1	QDC (lowering device kit) Model	QDC (lowering device kit) Weight [kg]
65	65DL51.5	1.5	464	75	95	120	160	250	145	190	240	140	50	75	95	12	140	LM65	14
	80DL51.5	1.5	481															LM80	17
80	80DL52.2	2.2	499		90	125	165	285	175	230	280	165	65	75	90	15	155	LM80	17
	80DL53.7	3.7	524															LM80	17

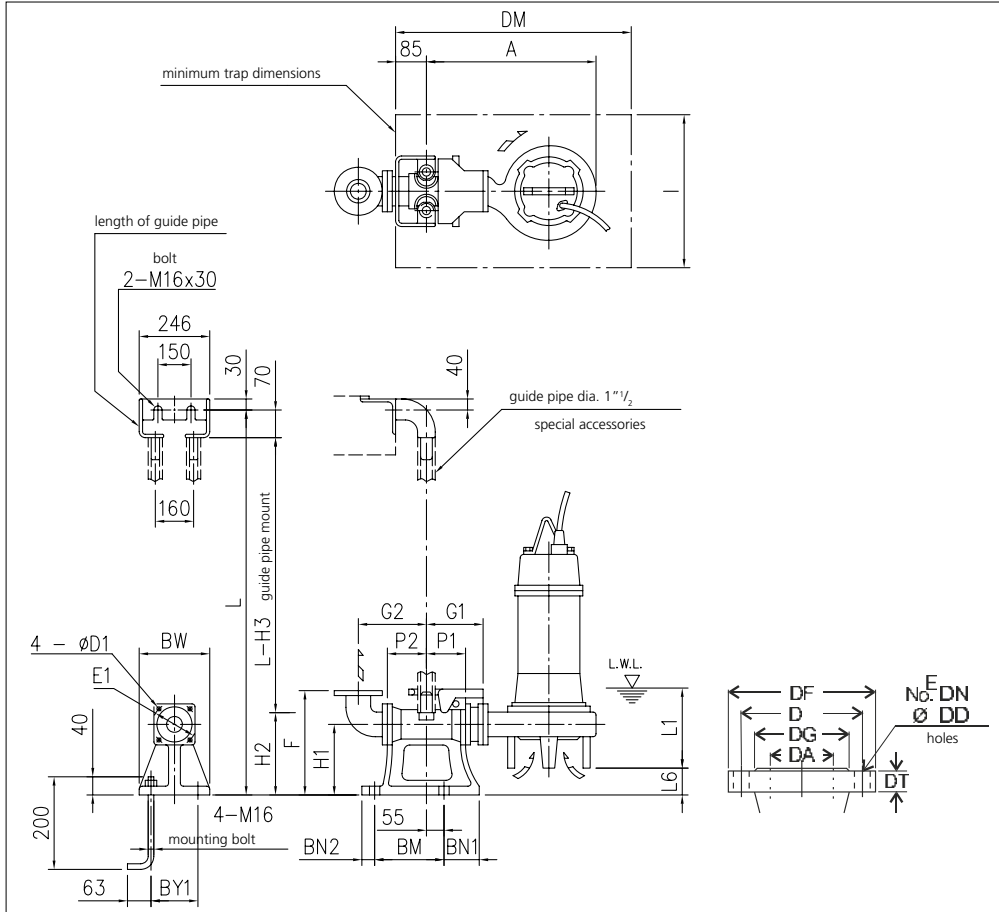
(\*) - L.W.L (minimum fluid level)

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# DL - DL W/C

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

## DIMENSIONS 80DL (5.5 - 7.5), 100DL with QDC (lowering device kit)



Type	DA	DE	DF	DG	DT	DN	DD
Round	80	160	200	132	19	8	19
	100	180	220	156	21		

## TABLE OF DIMENSIONS 80DL (5.5 - 7.5), 100DL with QDC (lowering device kit)

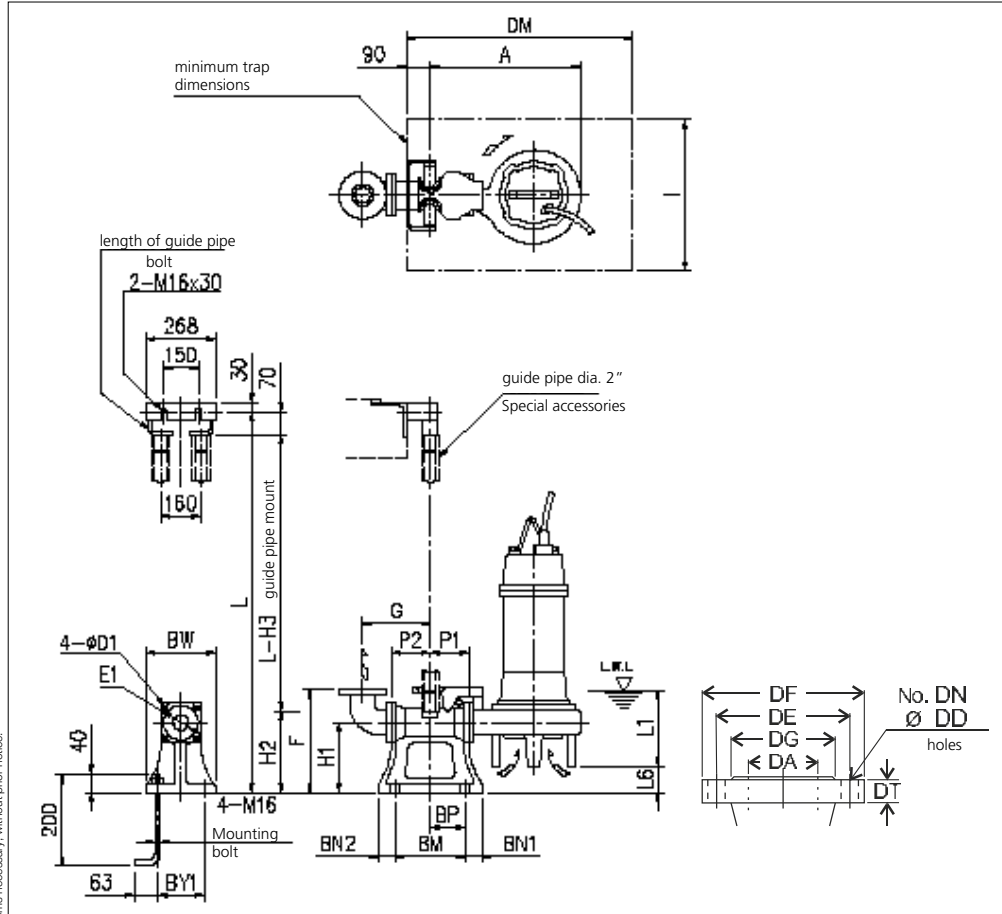
DA	Model	[kW]	A	P1	P2	G1	G2	F	H1	H2	H3	L1 (*)	L6	BN1	BN2	BM	BY1	BW	DM	I	D1	E1	QDC (lowering device kit) Model	Weight [kg]		
80	80DLC55.5	5.5	635		120		195	350		255	325	205	43									15	155	LL80	44	
	80DLC57.5	7.5	665																							45
100	100DL53.7	3.7	589	105	105	185	210	365	240	265	335	185	115	100	40	220	180	230	800	700		19	175	LL100	46	
	100DLB55.5	5.5	621																							42
	100DLC55.5	5.5	635																							43
	100DLB57.5	7.5	648																							42
	100DLC57.5	7.5	665																							45
	100DL511	11	676																							42
	100DL515	15	716																							35
	100DL518.5	18.5																								

(\*) - L.W.L (minimum fluid level)

# DL - DL W/C

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

**DIMENSIONS 150DL, 200DL with QDC (lowering device kit)**



Type	DA	DE	DF	DG	DT	DN	DD
Round	150	240	285	211	23	8	23
	200	295	340	266			

**TABLE OF DIMENSIONS 150DL, 200DL with QDC (lowering device kit)**

DA	Model	[kW]	A	P1	P2	G	F	H1	H2	H3	L1(*)	L6	BN1	BN2	BM	BP	BY1	BW	DM	I	D1	E1	QDC (lowering device kit) Model	QDC Weight [kg]																	
150	150DL55.5	5.5	635	155	195	325	450	290	362	432	245	69	60	370	165	280	330	1000	700	210	16	210	LL125	65																	
	150DL57.5	7.5	665									73																													
	150DL511	11	695									73																													
	150DL515	15	733									69																													
	150DL518.5	18.5	733									69																													
	150DL522	22	777									205													355	480	320	405	475	288	210	60	390	170	300	350	1100	800	250	LL150	80
	150DL530	30	777									205													355	480	320	405	475	296	210	60	390	170	300	350	1100	800	250	LL150	80
	150DL545	45	777									296													210	60															
200	200DL55.5	5.5	672	155	205	355	495	320	405	475	285	81	60	390	170	300	350	1100	800	250	16	250	LL150	80																	
	200DL57.5	7.5	703									85																													
	200DL511	11	736									85																													
	200DL515	15	772									84																													
	200DL518.5	18.5	772									80																													
	200DL522	22	777									288													210	60															
	200DL530	30	777									288													210	60															
	200DL537	37	777									296													210	60															
200DL545	45	777	296	210	60																																				

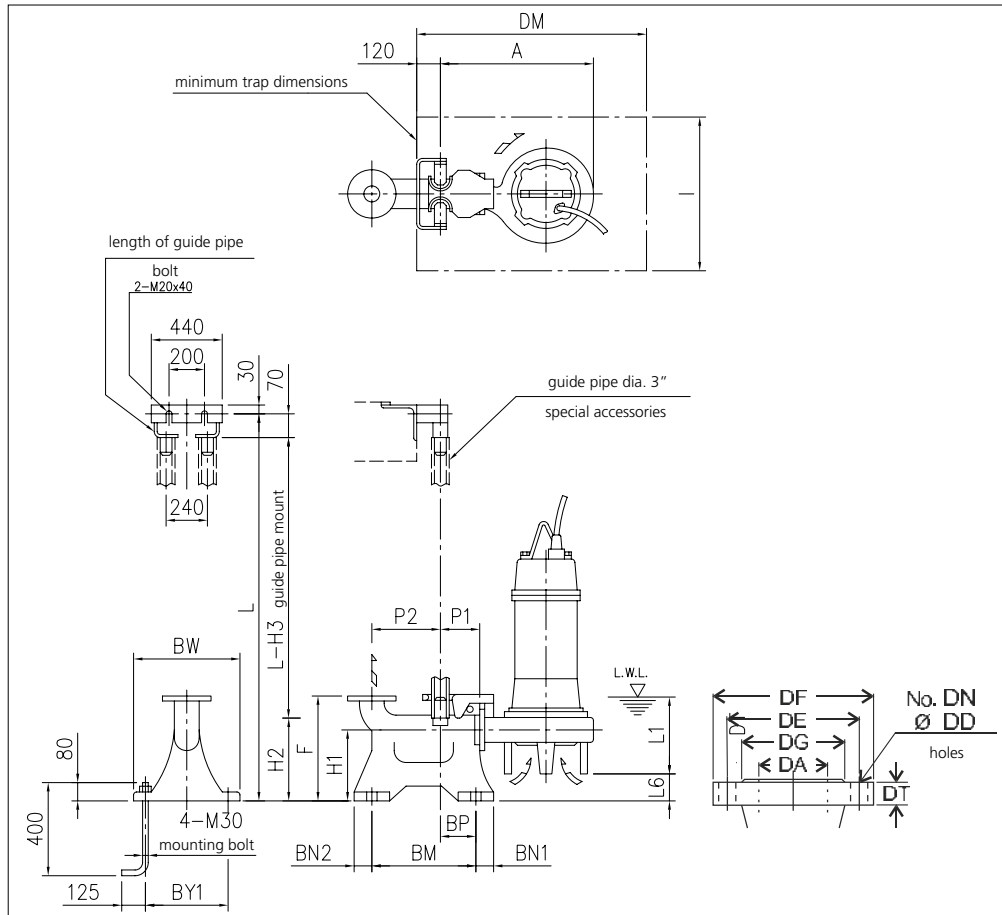
(\*) - L.W.L (minimum fluid level)

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# DL - DL W/C

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

## DIMENSIONS 250DL, 300DL with QDC (lowering device kit)



Flange dimensions table [mm] - EN 1092-2							
Type	DA	DE	DF	DG	DT	DN	DD
Round	250	350	395	319	25	12	23
	300	400	445	370	24		

## TABLE OF DIMENSIONS 250DL, 300DL with QDC (lowering device kit)

DA	Model	[kW]	A	P1	P2	F	H1	H2	H3	L1 (*)	L6	BN1	BN2	BM	BP	BY1	BW	DM	I	QDC (lowering device kit) Model	Weight [kg]												
250	250DL57.5	7.5	834	195	435	700	350	440	510	400	58	70	70	650	215	500	560	1200	900	LL250	150												
	250DL511	11	858								46																						
	250DL515	15									34																						
	250DL518.5	18.5	872		465	800	430	550	620	450	292											300	680	580	640								
	250DL522	22									319																						
	250DL530	30	990								292																						
	250DL537	37									300																						
250DL545	45			319																													
300	300DL511	11	917	195	465	800	430	550	620	450	109	70	70	680	215	580	640	1200	900	LL300	200												
	300DL515	15	952								112																						
	300DL518.5	18.5									292																						
	300DL522	22									300																						
	300DL530	30	990								292																						
	300DL537	37									300																						
	300DL545	45									319																						

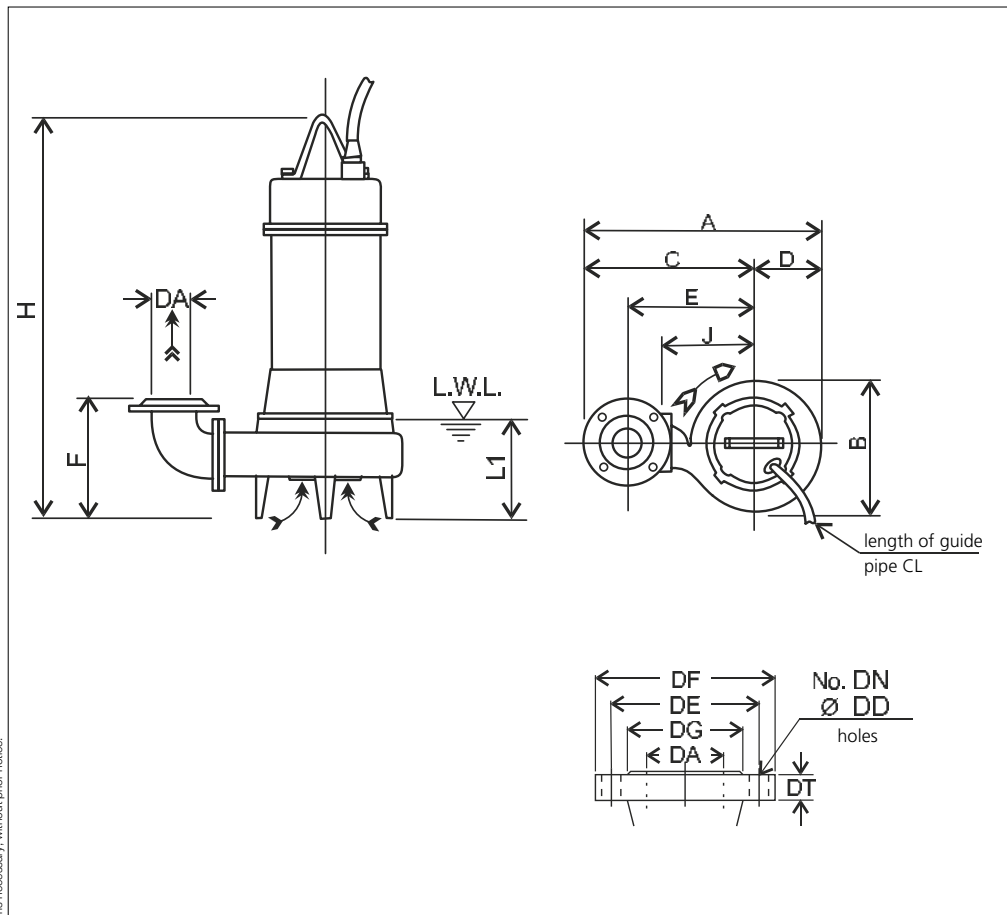
(\*) - L.W.L (minimum fluid level)



# DL - DL W/C

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

## DIMENSIONS DL W/C (with cutter)



Type	DA	DE	DF	DG	DT	DN	DD
Round	64	145	185	118	17	4	19
	80	160	200	132	19	8	
	100	180	220	156	21		

## TABLE OF DIMENSIONS DL W/C (with cutter)

DA	Model	[kW]	A	B	C	D	E	F	H	J	L1 (*)	CL [m]	Weight [kg]
65	65DL51.5W/C	1.5	497	291	353	144	265	200	576	200	140	10	52
80	80DL51.5W/C	1.5	524	292	378	146	285	220	597	210	165		55
	80DL52.2W/C	2.2	542	308	388	154	295		654	220			67
	80DL53.7W/C	3.7	567	328	403	164	310		687	235			75
100	100DL53.7W/C	3.7	614	335	445	169	340	250	706	250	185		79
	100DLB55.5W/C	5.5	646	369	460	186	355	323	768	250	205		123
	100DLB57.5W/C	7.5	673	385	480	193	375	760	270	141			

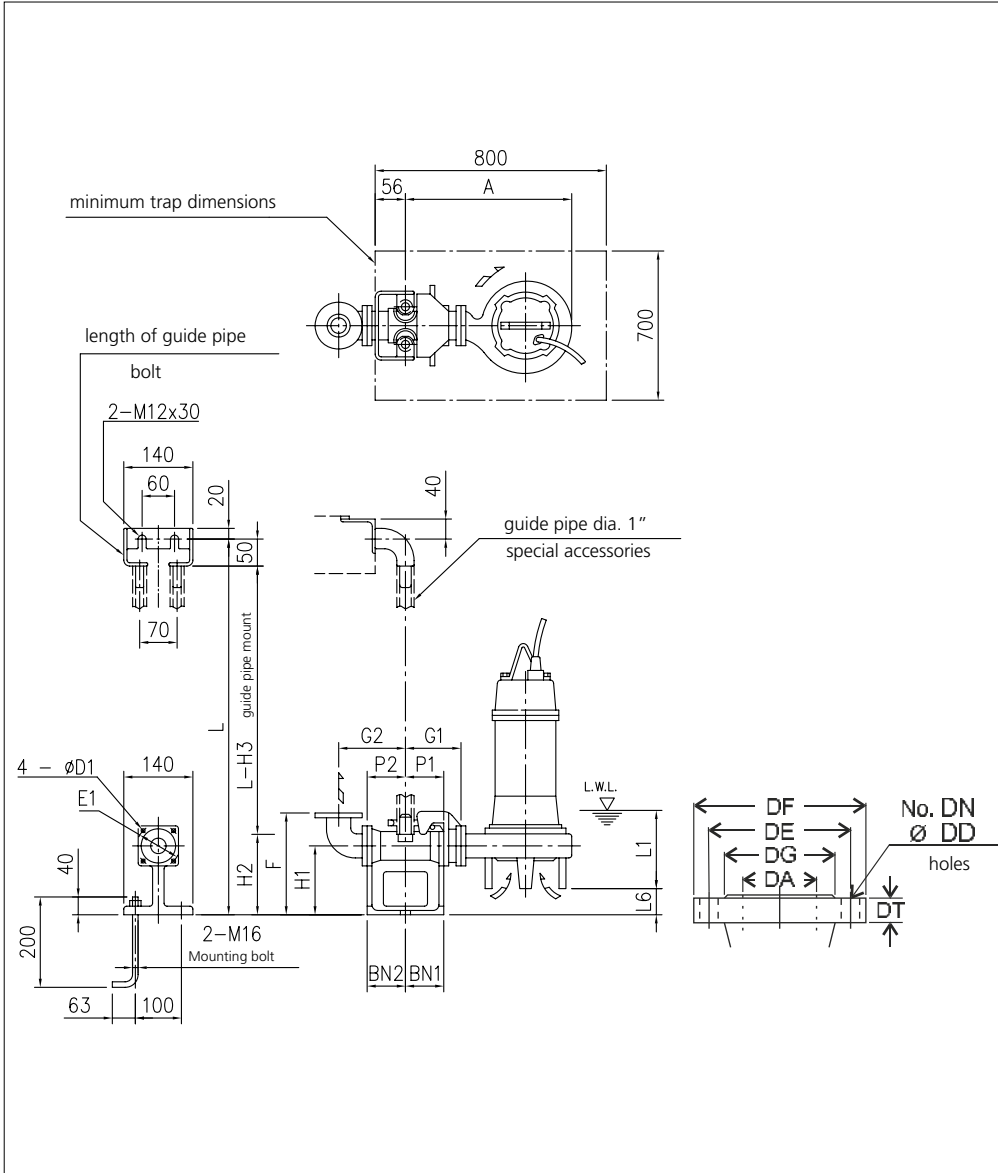
(\*) - L.W.L (minimum fluid level)

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# DL - DL W/C

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

**DIMENSIONS 65DL W/C, 80DL W/C (with cutter) (1.5 - 3.7 kW) with QDC (lowering device kit)**



**Flange dimensions table [mm] - EN 1092-2**

Type	DA	DE	DF	DG	DT	DN	DD
Round	65	145	185	118	17	4	19
	80	160	200	132	19	8	

**TABLE OF DIMENSIONS 65DL W/C, 80DL W/C (with cutter) (1.5 - 3.7 kW) with QDC (lowering device kit)**

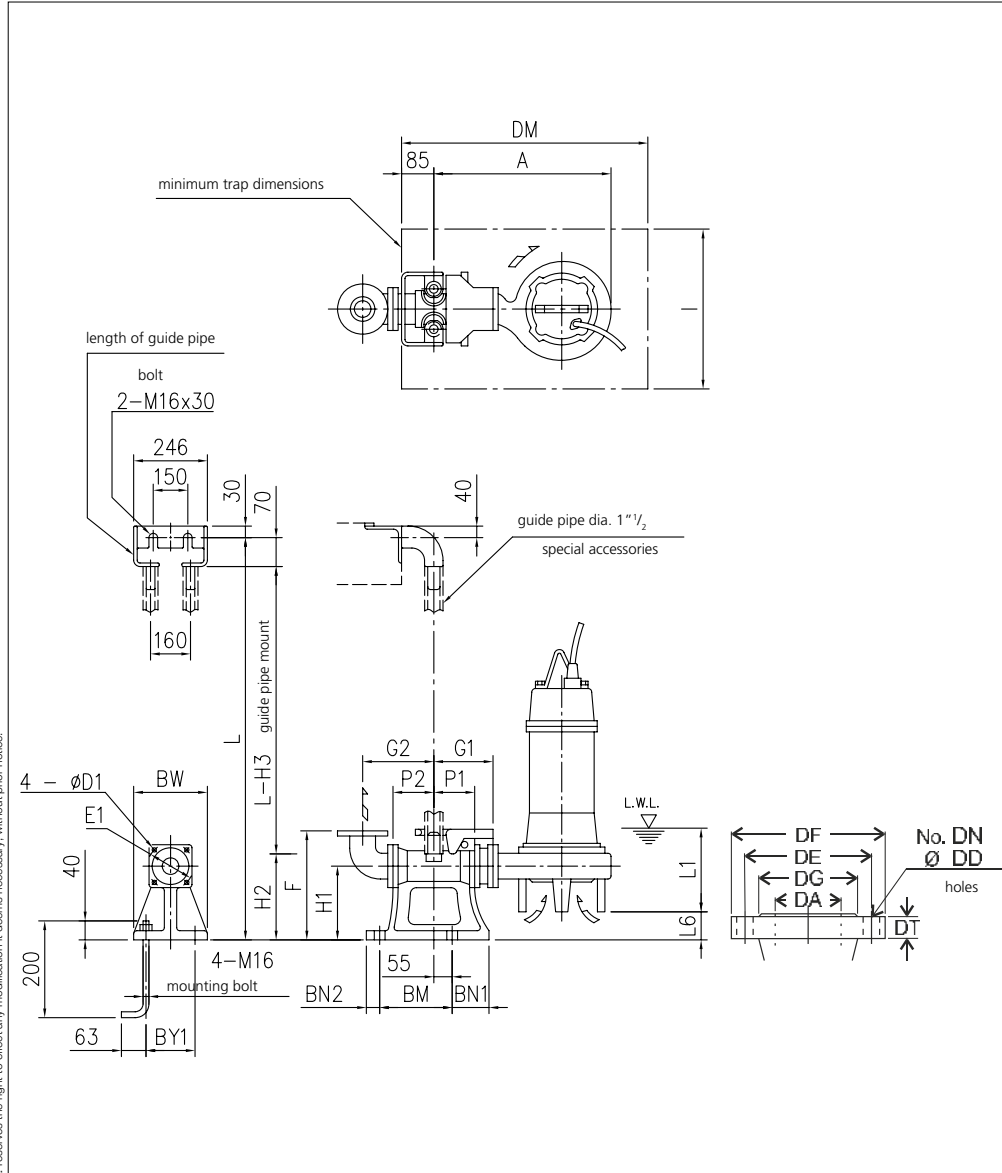
DA	Model	[kW]	A	P1	P2	G1	G2	F	H1	H2	H3	L1 (*)	L6	BN1	BN2	D1	E1	(lowering device kit) Model	QDC Weight [kg]
65	65DL51.5W/C	1.5	464	75	95	120	160	250	145	190	240	140	50	75	95	12	140	LM65	14
80	80DL51.5W/C	1.5	481		90	125	165	285	175	230	280	165	65		90	15	155	LM80	17
	80DL52.2W/C	2.2	499																
	80DL53.7W/C	3.7	524																

(\*) - L.W.L (minimum fluid level)

# DL - DL W/C

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

## DIMENSIONS 100DL with QDC (lowering device kit)



Type	DA	DE	DF	DG	DT	DN	DD
Round	80	160	200	132	19	8	19
	100	180	220	156	21		
	150	240					

## TABLE OF DIMENSIONS 100DL W/C (with cutter) with QDC (lowering device kit)

DA	Model	[kW]	A	P1	P2	G1	G2	F	H1	H2	H3	L1 (*)	L6	BN1	BN2	BM	BY1	BW	DM	I	D1	E1	QDC (lowering device kit) Model	Weight (kg)
100	100DL53.7W/C	3.7	589	105	105	185	210	365	240	265	335	185	115	100	40	220	180	230	800	700	19	175	LL100	46
	100DLB55.5W/C	5.5	621									205	42											
	100DLB57.5W/C	7.5	648									205	42											

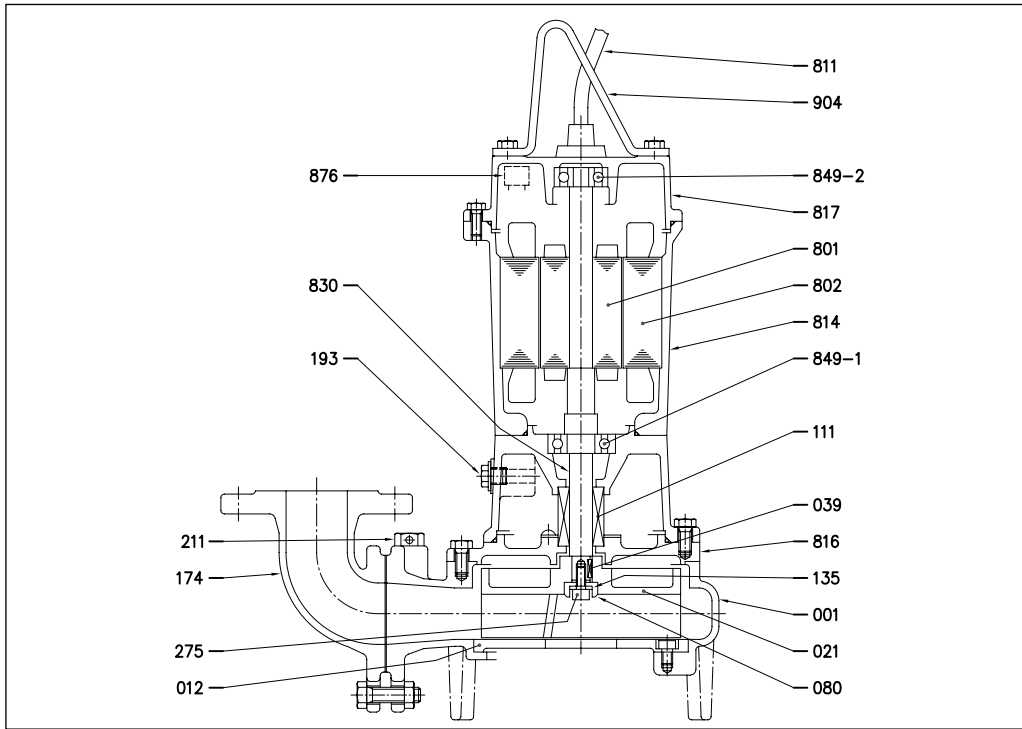
(\*) - L.W.L (minimum fluid level)

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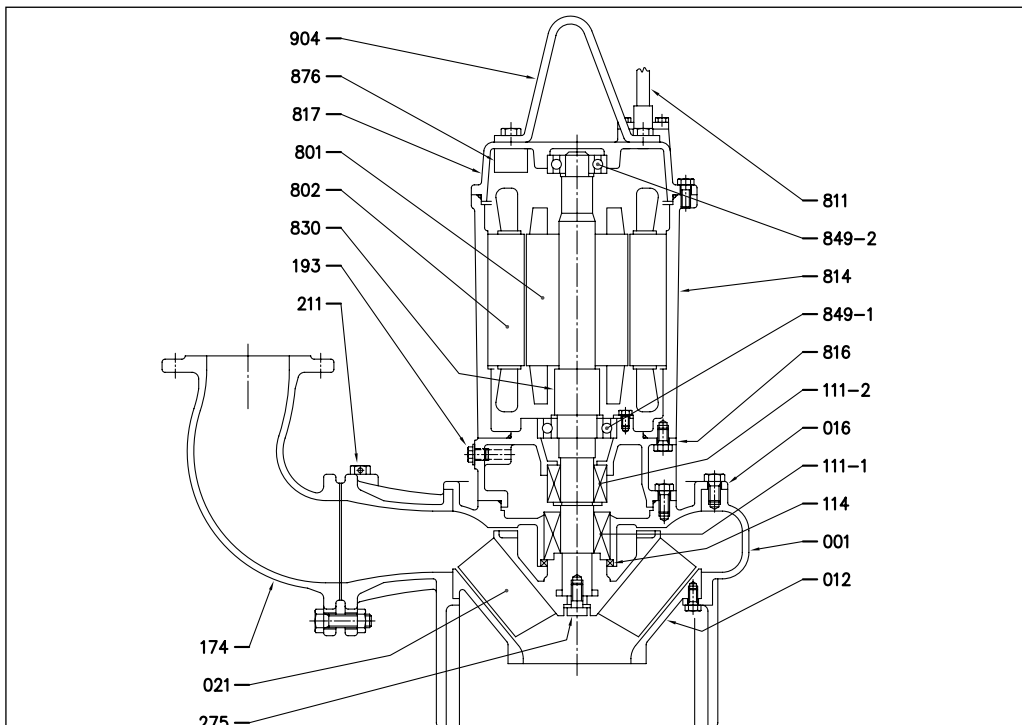
# DL - DL W/C

**SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)**  
in cast iron

**SECTIONAL VIEW** 65DL, 65DL W/C (1.5 kW)  
80DL, 80DL W/C (1.5 - 3.7 kW)  
100DL, 100DL W/C (3.7 kW)



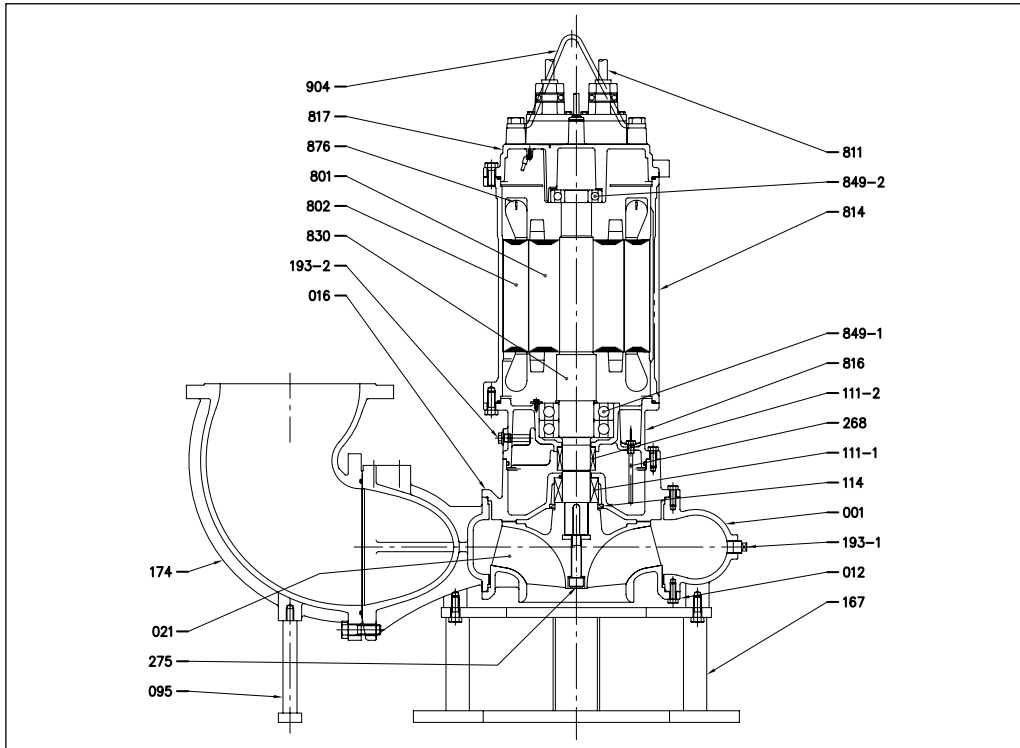
**SECTIONAL VIEW** 80DL (5.5 - 7.5 kW) 100DL (5.5 - 18.5 kW) 100DL W/C (5.5 - 7.5 kW)  
150DL (5.5 - 22 kW) 200DL (5.5 - 22 kW)  
250DL (7.5 - 22 kW) 300DL (11 - 22 kW)



# DL - DL W/C

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C) in cast iron

**SECTIONAL VIEW** 150DL (30 - 45 kW), 200DL (30 - 45 kW)  
250DL (30 - 45 kW), 300DL (30 - 45 kW)



**TABLE OF MATERIALS DL - DL W/C (with cutter)**

Ref.	Name	Material	Ref.	Name	Material
001	Pump body	Cast iron EN-GHJL-200-EN 1561	193-2	Oil cap + gasket	NBR/EN 1.4301 (AISI304)
012	Suction side cover	Cast iron EN-GHJL-200-EN 1561	211	Air vent [1]	-
016	Mechanical seal cover	Cast iron EN-GHJL-200-EN 1561	275	Impeller nut	EN 1.4301 (AISI304)
021	Impeller	Cast iron EN-GHJL-200-EN 1561	801	Rotor	-
039	Key	EN 1.4028 (AISI420)			
080	Bushing	EN 1.4301 (AISI304)	802	Stator	-
095	Elbow mount [1]	EN 1.4301 (AISI304)	811	Cable	-
111	Mechanical seal	-	814	Motor casing	Cast iron EN-GHJL-200-EN 1561
111-1	Mechanical seal	-	816	Motor mount	Cast iron EN-GHJL-200-EN 1561
111-2	Mechanical seal	-	817	Motor cover	Cast iron EN-GHJL-200-EN 1561
114	Gasket	NBR	830	Shaft	EN 1.4006 (AISI403)
135	Seal washer	EN 1.4301 (AISI304)	849-1	Ball bearing	-
174	Delivery bend/union	Cast iron EN-GHJL-200-EN 1561	849-2	Ball bearing	-
193	Oil cap	NBR/EN 1.4301 (AISI304)	876	Motor cutout	-
193-1	Cap	EN 1.4301 (AISI304)	904	Lifting hook	Stainless steel

[1] - Except for 150DL, 200DL, 250DL and 300DL

# DL - DL W/C

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)

in cast iron

**ELECTRICAL DATA TABLE DL, DL W/C (with cutter) (1.5 - 3.7 kW)**

[P <sub>2</sub> ]		[kW]	1.5			2.2			3.7			
Resistance at 20°C		[Ω]	8.466			5.937			3.447			
GD <sup>2</sup>		[kg/m <sup>2</sup> ]	0.013			0.025			0.04			
Voltage		[V]	380	400	415	380	400	415	380	400	415	
Full load	0%	Current	[A]	2.3	2.51	2.746	2.65	2.85	3.2	3.5	3.65	3.9
		Power	[W]	500	420	546	650	450	420	650	800	450
	75%	Current	[A]	3.47	3.37	3.56	4.65	4.34	4.46	6.70	6.73	6.25
		Efficiency	[%]	62.67	70.31	62.99	63.89	69.75	69.23	73.21	69.72	76.38
		Power factor	[%]	78.70	68.43	69.87	84.32	78.63	74.40	85.95	85.37	80.93
	100%	rpm	[min <sup>-1</sup> ]	1438	1449	1446	1440	1452	1458	1447	1449	1455
		Current	[A]	4.10	3.90	4.10	5.70	5.20	5.20	8.40	8.30	7.60
		Efficiency	[%]	65.69	72.58	65.73	66.44	72.31	71.82	74.67	72.09	77.98
		Power factor	[%]	84.62	76.54	77.83	88.26	84.45	81.96	89.62	89.25	86.85
	rpm		[min <sup>-1</sup> ]	1414	1432	1426	1417	1437	1443	1427	1430	1440
	Torque with rotor locked		[%]	319	378	385	216	277	301	229	275	296
	Starting current		[A]	23.70	24.50	23.60	29.30	30.00	32.00	49.40	47.50	49.00
Starts per hour			10									
Model			ZDLEU									

**ELECTRICAL DATA TABLE DL (5.5 - 11 kW), DL W/C (with cutter) (5.5 - 7.5 kW)**

[P <sub>2</sub> ]		[kW]	5.5			7.5			11			
Resistance at 20°C		[Ω]	2.339			1.513			-	0.869		
GD <sup>2</sup>		[kg/m <sup>2</sup> ]	0.61			0.071			0.12			
Voltage		[V]	380	400	415	380	400	415	380	400	415	
Full load	0%	Current	[A]	4.9	4.3	4.5	7.85	6.5	7.1	-	7.80	8.60
		Power	[W]	470	900	470	707	1200	707	-	1500	790
	75%	Current	[A]	9.38	8.97	8.58	13.38	12.46	12.07	-	17.03	16.81
		Efficiency	[%]	79.17	75.51	79.10	79.46	76.94	79.81	-	80.39	81.35
		Power factor	[%]	84.39	87.90	84.53	80.38	84.72	81.25	-	86.98	83.95
	100%	rpm	[min <sup>-1</sup> ]	1464	1458	1464	1467	1463	1467	-	1468	1470
		Current	[A]	11.70	11.30	10.70	16.40	15.50	14.80	-	21.50	21.00
		Efficiency	[%]	80.42	77.14	80.38	80.98	78.64	81.26	-	82.12	82.29
		Power factor	[%]	88.83	91.07	88.97	85.80	88.81	86.76	-	89.92	88.56
	rpm		[min <sup>-1</sup> ]	1451	1442	1451	1455	1449	1455	-	1456	1458
	Torque with rotor locked		[%]	271	249	271	288	272	288	-	185	155
	Starting current		[A]	81.00	70.00	74.00	120.00	104.00	108.00	-	121.0	128.0
Starts per hour			10						6			
Model			ZDLEU									

# DL - DL W/C

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C) in cast iron

**ELECTRICAL DATA TABLE DL (15 - 22 kW)**

[P <sub>2</sub> ]		[kW]	15			18.5			22			
Resistance at 20°C		[Ω]	-	0.677		-	0.439		-	0.376		
GD <sup>2</sup>		[kg/m <sup>2</sup> ]	0.15			0.25			0.28			
Voltage		[V]	380	400	415	380	400	415	380	400	415	
Full load	0%	Current	[A]	-	8.50	8.85	-	12.80	15.10	-	12.50	13.50
		Power	[W]	-	1600	880	-	2000	1300	-	2000	965
	75%	Current	[A]	-	22.13	21.11	-	27.76	27.38	-	32.73	31.37
		Efficiency	[%]	-	81.59	84.15	-	84.25	85.39	-	82.74	85.54
		Power factor	[%]	-	89.91	88.12	-	85.61	82.55	-	87.94	85.56
	100%	rpm	[min <sup>-1</sup> ]	-	1464	1464	-	1477	1480	-	1471	1473
		Current	[A]	-	28.50	27.00	-	35.00	34.00	-	42.00	40.00
		Efficiency	[%]	-	82.79	84.99	-	85.77	86.79	-	84.17	86.11
		Power factor	[%]	-	91.76	90.93	-	88.95	87.23	-	89.82	88.86
		rpm	[min <sup>-1</sup> ]	-	1450	1451	-	1469	1472	-	1460	1463
Torque with rotor locked		[%]	-	171	182	-	171	185	-	155	169	
Starting current		[A]	-	160.0	167.0	-	238.0	248.0	-	265.0	265.0	
Starts per hour			6									
Model			ZDLEU									

**ELECTRICAL DATA TABLE DL (30 - 45 kW)**

[P <sub>2</sub> ]		[kW]	30			37			45			
Resistance at 20°C		[Ω]	0.236			0.152			0.117			
GD <sup>2</sup>		[kg/m <sup>2</sup> ]	0.72			1.11			1.32			
Voltage		[V]	380	400	415	380	400	415	380	400	415	
Full load	0%	Current	[A]	20	23.7	27.3	25.4	31.4	36.3	29.7	36.2	41.9
		Power	[W]	925	1104	1332	1116	1584	1956	1320	1752	2172
	75%	Current	[A]	45.69	45.96	47.48	56.47	58.11	60.14	68.59	70.07	72.18
		Efficiency	[%]	89.77	89.48	87.78	91.33	90.25	89.33	90.25	88.93	88.13
		Power factor	[%]	83.35	78.97	75.10	81.75	76.38	71.87	82.84	78.17	73.81
	100%	rpm	[min <sup>-1</sup> ]	1462	1464	1466	1479	1480	1481	1476	1478	1479
		Current	[A]	59.00	58.00	58.50	72.50	72.50	73.50	88.00	87.50	88.50
		Efficiency	[%]	89.28	89.39	88.21	91.57	90.89	90.29	90.63	89.83	89.28
		Power factor	[%]	86.41	83.45	80.60	86.64	80.95	77.56	85.56	82.33	79.12
		rpm	[min <sup>-1</sup> ]	1447	1451	1453	1470	1472	1473	1467	1470	1471
Torque with rotor locked		[%]	245	272	294	154	171	184	156	173	186	
Starting current		[A]	356.50	377.40	393.20	390.70	413.90	431.30	497.80	527.40	549.70	
Starts per hour			6									
Model			ZDLEU									

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# DML - DMLF

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron



Submersible electric pumps in cast iron for foul water.

### APPLICATIONS

- Evacuation of civil and industrial waste water
- Effluent treatment
- Draining underground areas
- Handling fluids containing suspended solids / filaments
- Draining infiltration water
- Handling foul waste water (domestic services)
- Draining cesspits

### TECHNICAL FEATURES

- Fitted with single-channel impeller
- Top and bottom seal ring (DML)
- Anti-vortex system in oil chamber (DML)

### TECHNICAL DATA

- Maximum fluid temperature: 40°C
- Maximum solid dimensions: 76 mm (DML)  
30 mm (DMLF 1.4 kW)  
40 mm (DMLF)
- 4 pole motor (DML)
- 2 pole motor (DMLF)
- Insulation class F (DML)
- Insulation class H (DMLF)
- Protection rating IP68
- Three phase voltage 380-415V -10 +6%, 50Hz (DML 2.2 kW) - DOL
- Three phase voltage 380-415V ±10%, 50Hz (DML 3.7 - 22 kW) - Y/Δ
- Single phase voltage 230V ±10%, 50Hz (DMLF)
- Flanges DN80, DN100, DN150 (DML)
- Flanges DN50, DN65 (DMLF)
- Power up to 22kW (DML)
- Powers from 1.4 a 1.9 kW (DMLF)

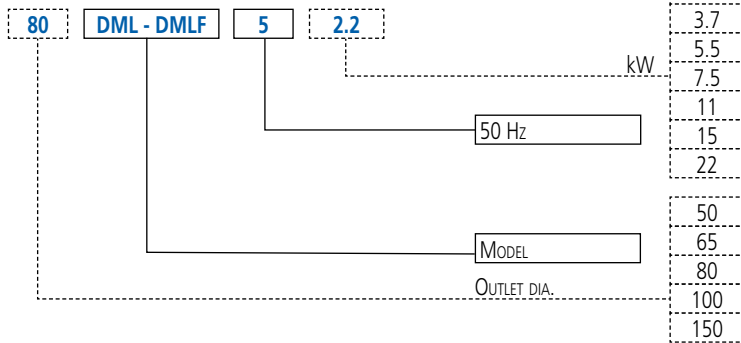
### MATERIALS

- Pump body, single-channel impeller, elbow (bend) in cast iron
- Shaft in AISI 403 (DML) and AISI 420B (DMLF)
- Mechanical seal:
  - SiC/SiC/NBR (pump side) (DML and DMLF)
  - Carbon/Ceramic/NBR (motor side) (DML)

### ACCESSORIES (on request)

For accessories, see page 151 onwards

### PUMP IDENTIFICATION CODE







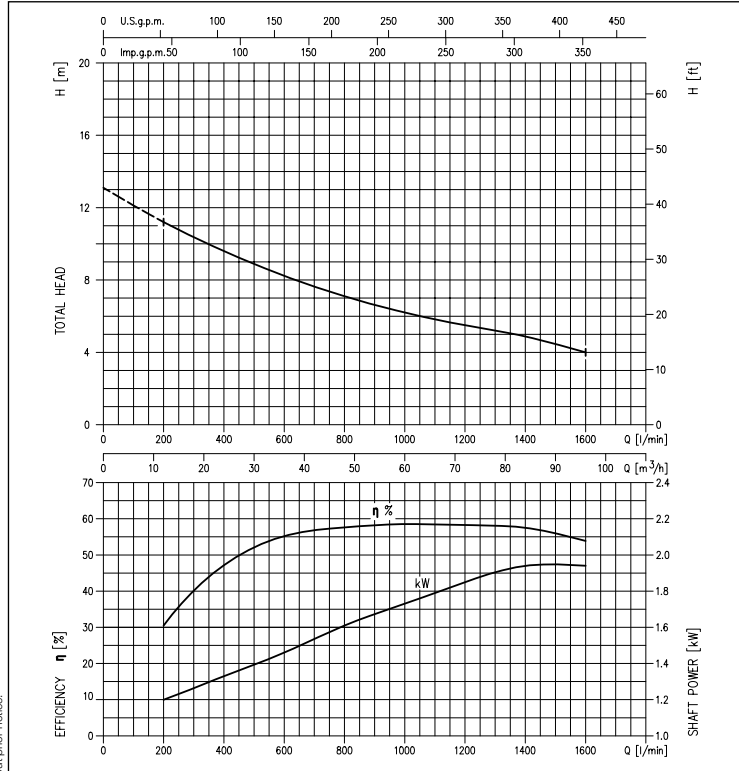
# DML - DMLF

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

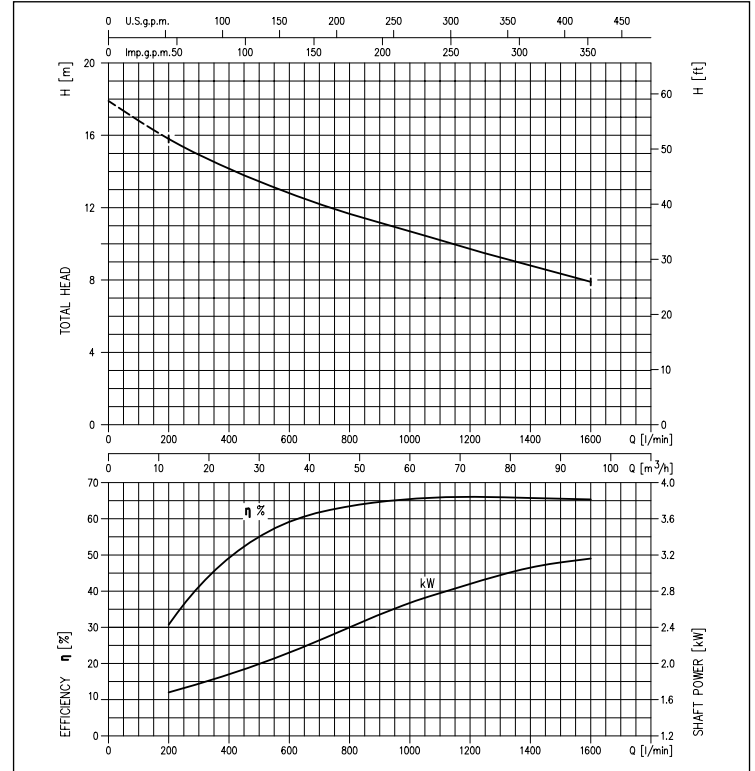
### PERFORMANCE CURVES series 80DML52.2

(per ISO 9906 Annex A) IMPELLER DIA.: 179 mm



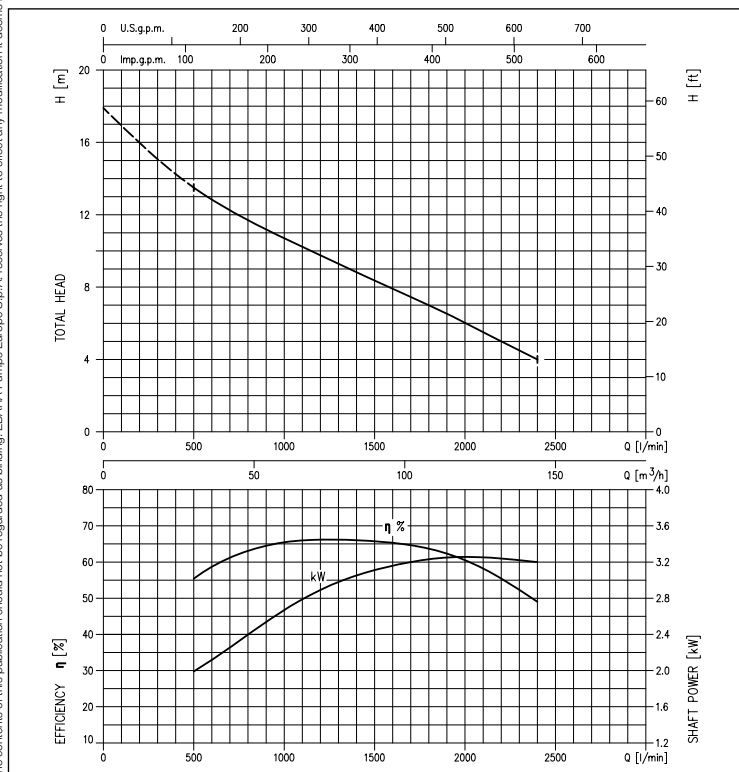
### PERFORMANCE CURVES series 80DML53.7

(per ISO 9906 Annex A) IMPELLER DIA.: 210 mm



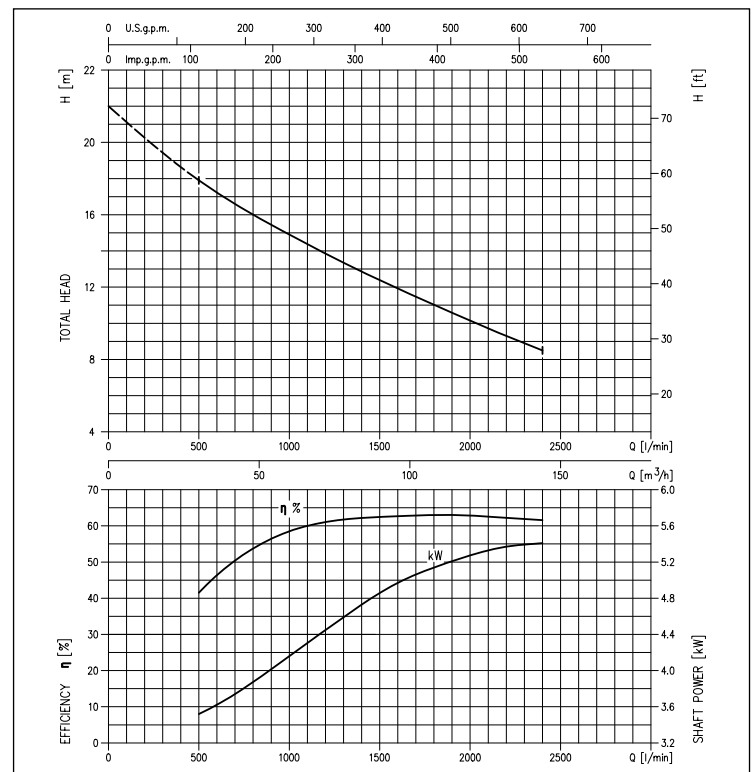
### PERFORMANCE CURVES 100DML53.7

(per ISO 9906 Annex A) IMPELLER DIA.: 210 mm



### PERFORMANCE CURVES 100DML55.5

(per ISO 9906 Annex A) IMPELLER DIA.: 232 mm



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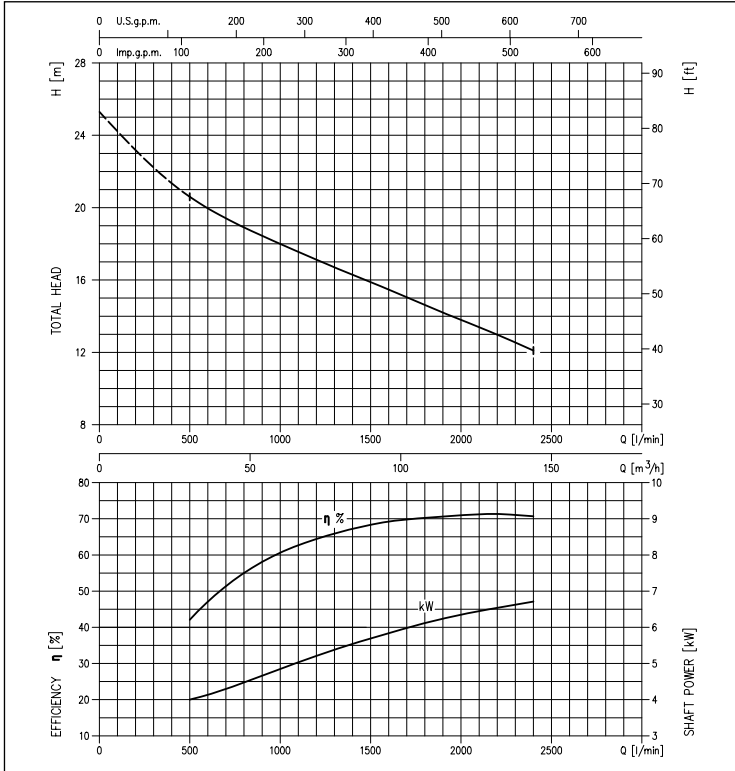


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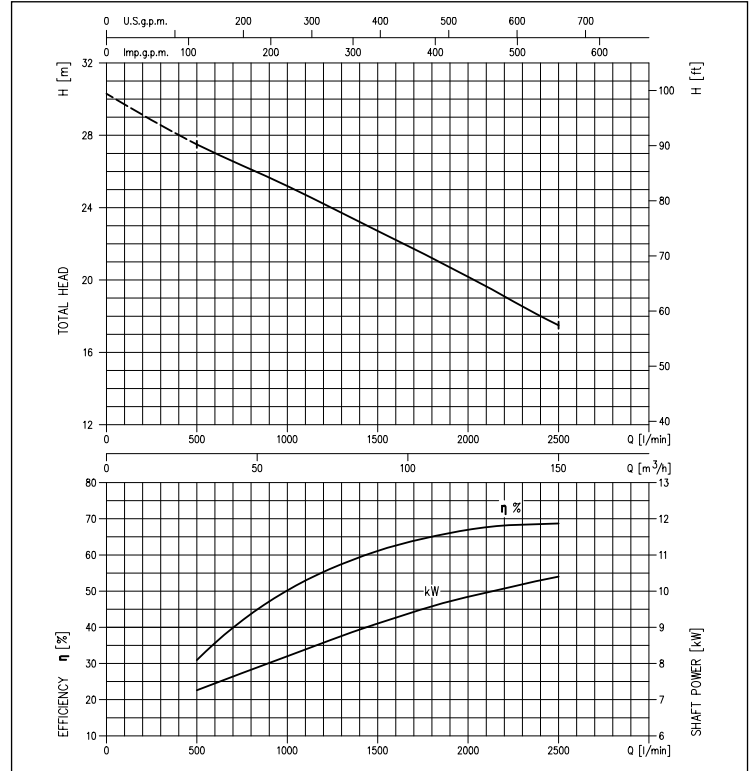
## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

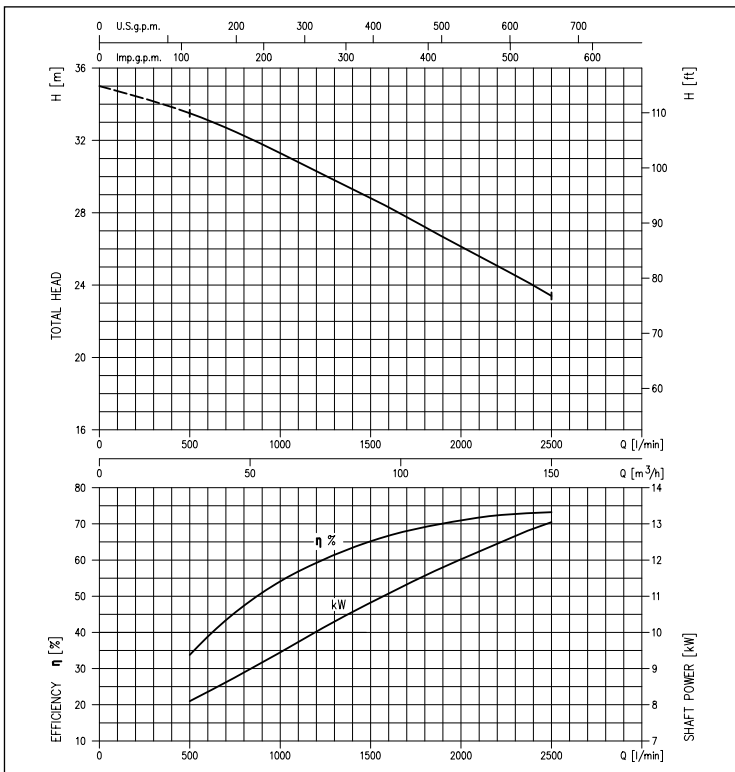
**PERFORMANCE CURVES series 100DML57.5**  
(per ISO 9906 Annex A) IMPELLER DIA.: 248 mm



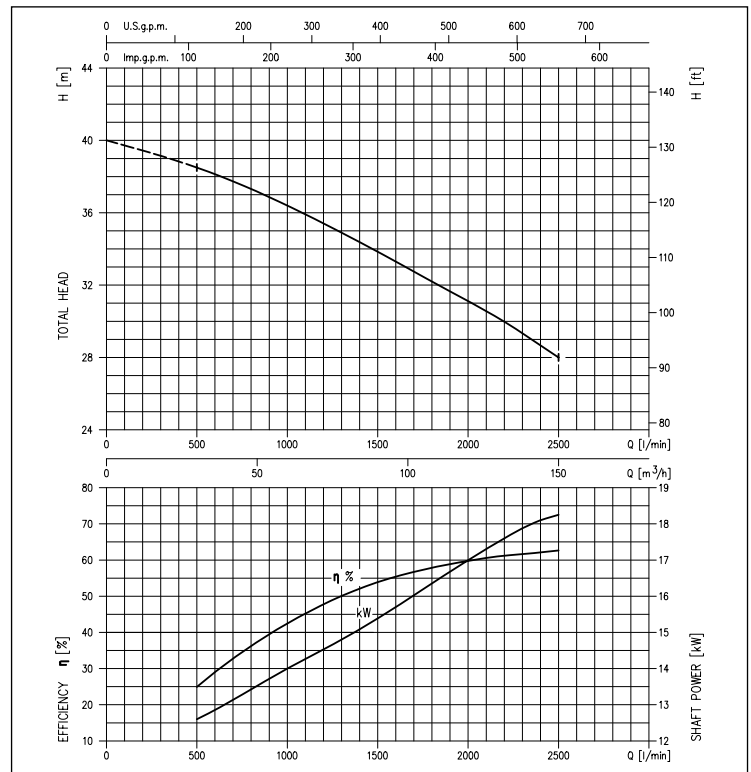
**PERFORMANCE CURVES series 100DML511**  
(per ISO 9906 Annex A) IMPELLER DIA.: 286 mm



**PERFORMANCE CURVES series 100DML515**  
(per ISO 9906 Annex A) IMPELLER DIA.: 309 mm



**PERFORMANCE CURVES series 100DML522**  
(per ISO 9906 Annex A) IMPELLER DIA.: 330 mm



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# DML - DMLF

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

PERFORMANCE TABLE DML 80

Model	P <sub>2</sub>		Q=Flow rate								
	[HP]	[kW]	l/min m <sup>3</sup> /h	200 12	400 24	600 36	800 48	1000 60	1200 72	1400 84	1600 96
80DML52.2	3	2.2	11.2		9.6	8.2	7.1	6.2	5.5	4.9	4.0
80DML53.7	5	3.7	15.8		14.2	12.8	11.7	10.7	9.7	8.8	7.9

PERFORMANCE TABLE DML 100

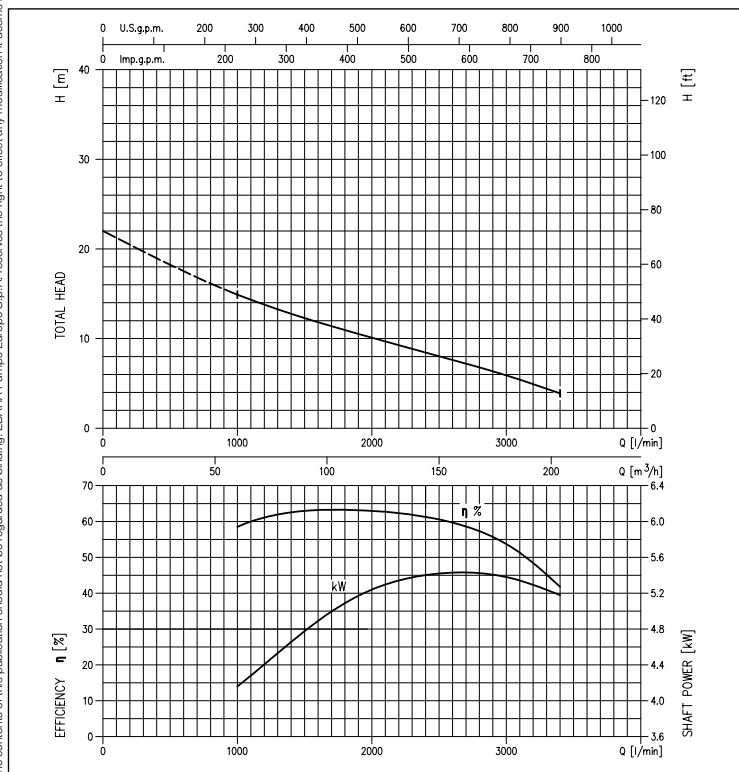
Model	P <sub>2</sub>		Q=Flow rate								
	[HP]	[kW]	l/min m <sup>3</sup> /h	500 30	1000 60	1300 78	1600 96	1900 114	2200 132	2400 144	2500 150
100DML53.7	5	3.7	13.5		10.7	9.3	7.9	6.5	5.0	4.0	-
100DML55.5	7.5	5.5	17.9		14.9	13.4	11.9	10.6	9.3	8.5	-
100DML57.5	10	7.5	20.6		18.0	16.7	15.5	14.2	13.0	12.1	-
100DML511	15	11	27.5		25.2	23.7	22.2	20.7	19.1	18.0	17.5
100DML515	20	15	33.5		31.3	29.8	28.3	26.7	25.1	24.0	23.4
100DML522	30	22	38.5		36.4	34.9	33.3	31.7	30.0	28.7	28.0

PERFORMANCE TABLE DML 150

Model	P <sub>2</sub>		Q=Flow rate									
	[HP]	[kW]	l/min m <sup>3</sup> /h	1000 60	2000 120	2500 150	3000 180	3400 204	4000 240	4500 270	5000 300	5500 330
150DML55.5	7.5	5.5	14.9		10.1	8.0	5.9	3.9	-	-	-	-
150DML57.5	10	7.5	18.0		13.7	11.6	9.5	7.5	4.0	-	-	-
150DML511	15	11	25.2		20.2	17.5	14.7	12.2	8.6	5.4	-	-
150DML515	20	15	31.3		26.1	23.4	20.6	18.2	14.8	11.9	8.6	-
150DML522	30	22	36.4		31.1	28.0	25.2	22.9	19.5	16.8	13.8	10.5

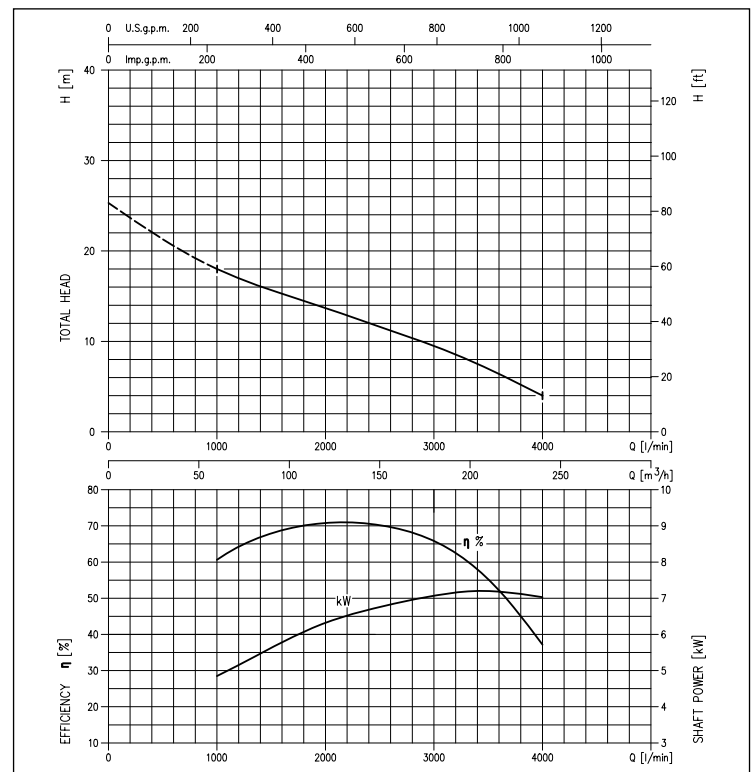
PERFORMANCE CURVES series 150DML 55.5

(per ISO 9906 Annex A) IMPELLER DIA.: 232 mm



PERFORMANCE CURVES series 150DML 57.5

(per ISO 9906 Annex A) IMPELLER DIA.: 248 mm



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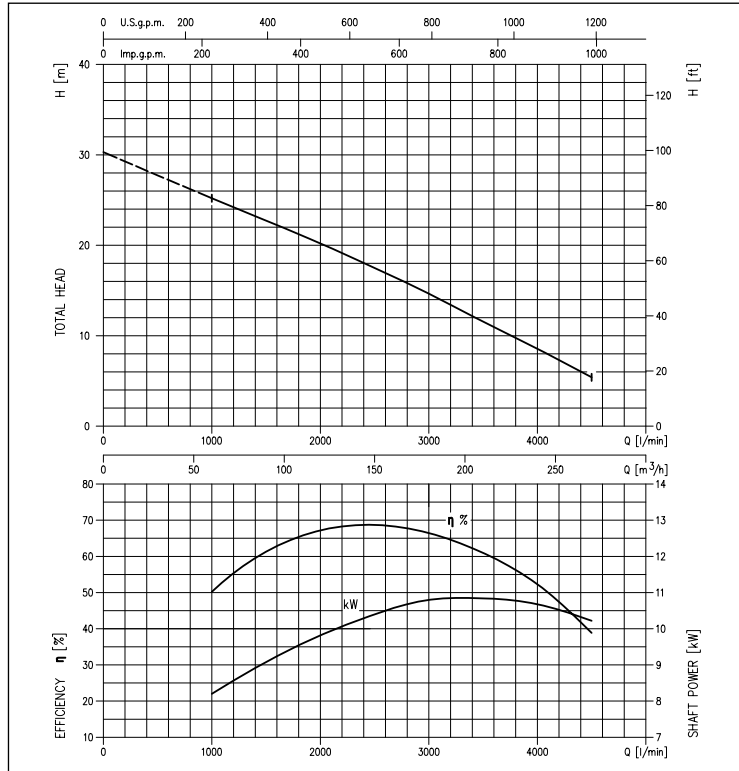
# DML - DMLF

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

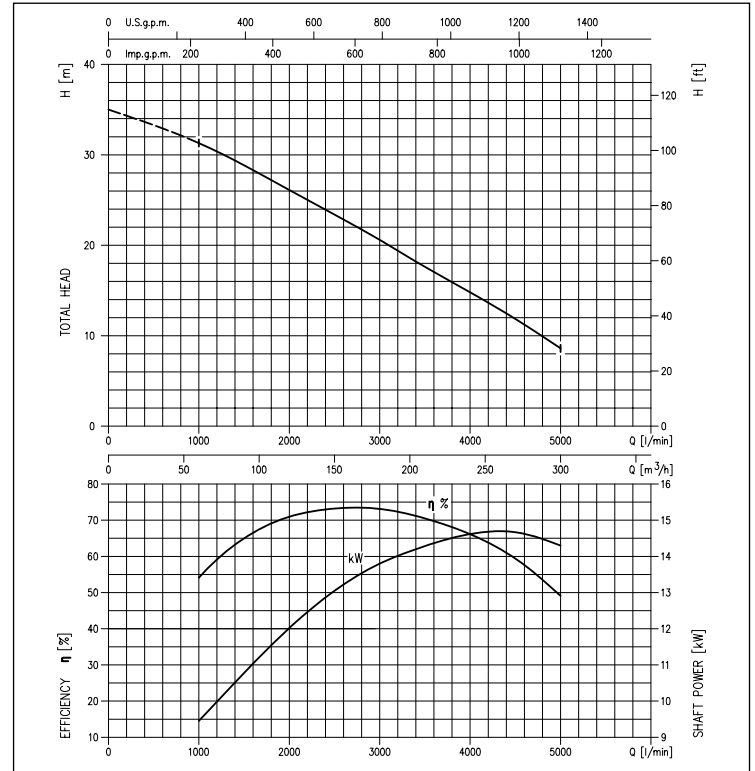
### PERFORMANCE CURVES series 150DML 511

(per ISO 9906 Annex A) IMPELLER DIA.: 286 mm



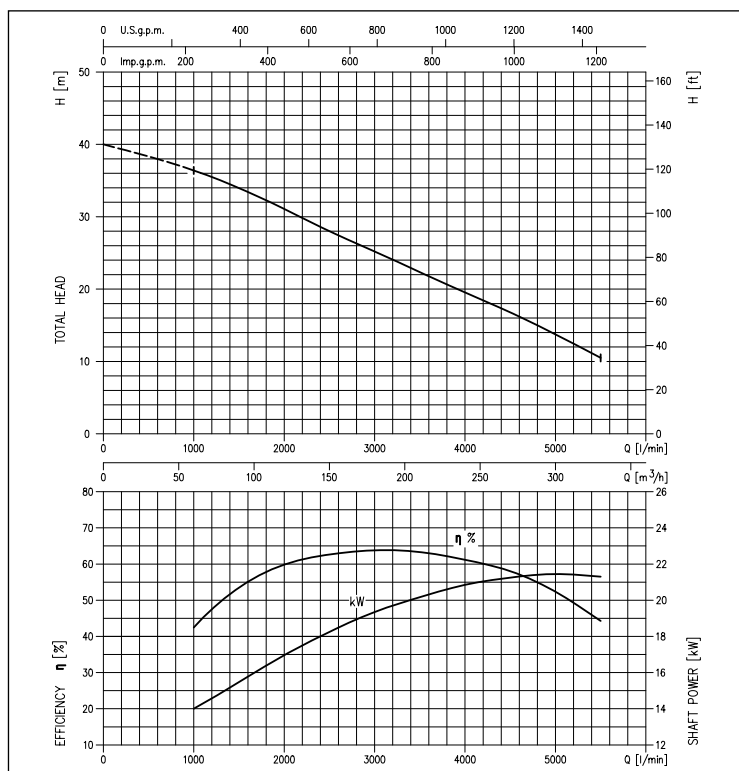
### PERFORMANCE CURVES series 150DML 515

(per ISO 9906 Annex A) IMPELLER DIA.: 309 mm



### PERFORMANCE CURVES series 150DML522

(per ISO 9906 Annex A) IMPELLER DIA.: 330 mm



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# DML - DMLF

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

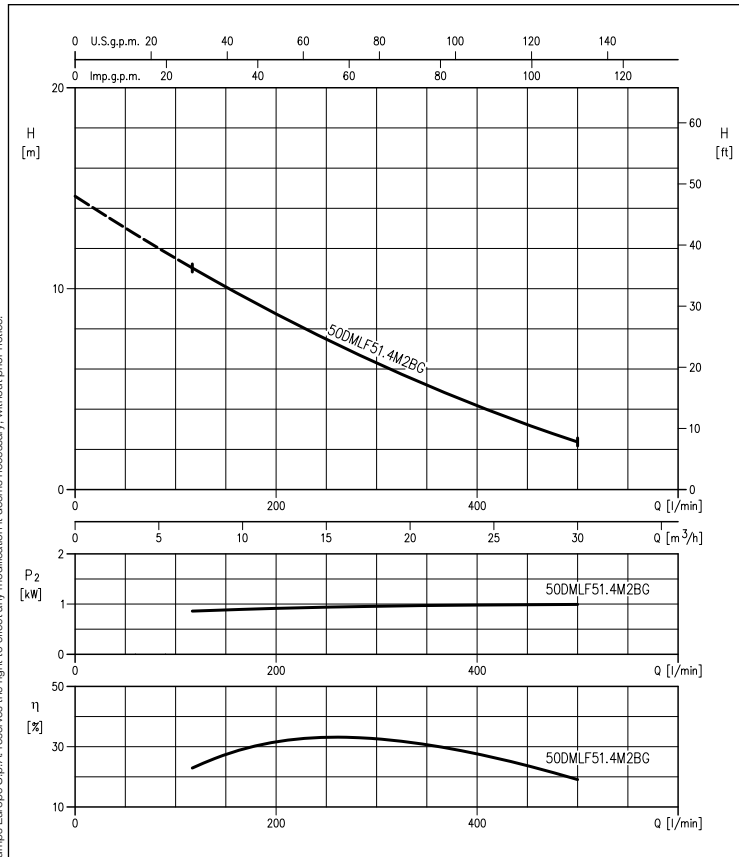
in cast iron

PERFORMANCE TABLE 50-65DMLF

Model	P <sub>2</sub>		Q=Flow rate									
	[HP]	[kW]	117 m <sup>3</sup> /h 7	183 11	200 12	300 18	350 21	400 24	500 30	600 36	667 40	750 45
50DMLF51.4M2BG	1.5	1.4	11.0	9.2	8.7	6.3	5.2	4.2	2.4	-	-	-
65DMLF51.5M2AG	1.5	1.5	-	16.5	16.2	13.7	12.5	11.2	8.5	5.6	3.6	-
65DMLF51.9M2BG	2.5	1.9	-	-	13.4	11.6	10.8	9.9	8.2	6.5	5.4	4

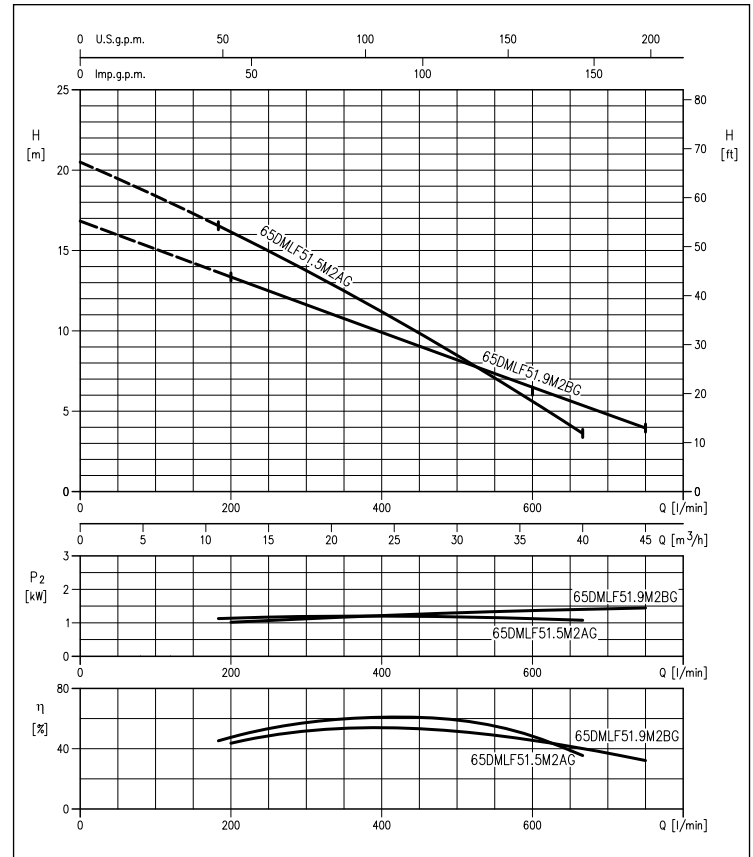
PERFORMANCE CURVES series 50DMLF51.4M2BG (1.4 kW)

(per ISO 9906 Annex A)



PERFORMANCE CURVES series 65DMLF51.5M2AG (1.5 kW)  
series 65DMLF51.9M2BG (1.9 kW)

(per ISO 9906 Annex A)



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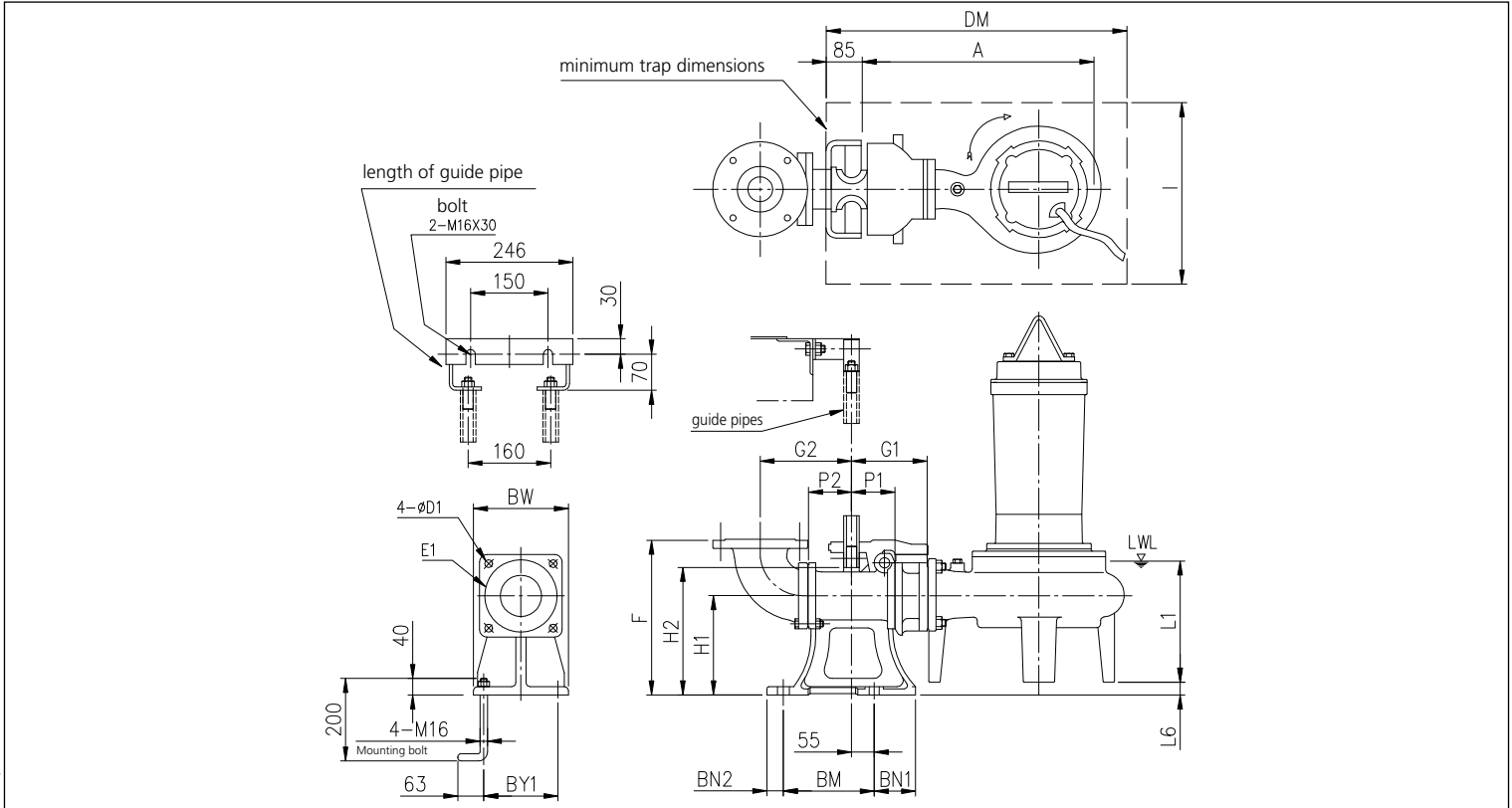


# DML - DMLF

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

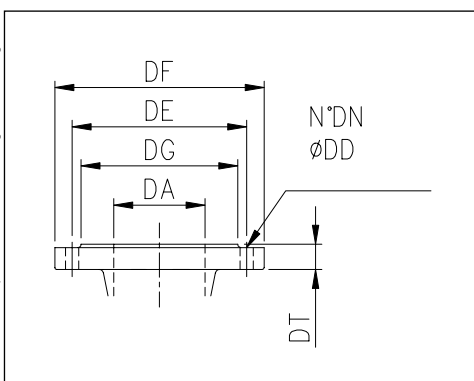
### DIMENSIONS QDC (lowering device kit) LL 100 (for models 100 (150) DML)



### TABLE OF DIMENSIONS QDC (lowering device kit)

Model	A	P1	P2	G1	G2	F	H1	H2	Dimensions [mm]							Coupling foot	Weight [kg]				
									L1	L6	BN1	BN2	BM	BY1	BW			DM	I	D1	E1
100DML55.5	628	105	105	185	210	370	240	265	310	31	100	40	220	180	230	800	700	19	175	LL100	46.0
100DML57.5	628	105	105	185	210	370	240	265	310	31	100	40	220	180	230	800	700	19	175	LL100	46.0
100DML511	721	105	105	185	210	370	240	265	329	15	100	40	220	180	230	1000	700	19	175	LL100	46.0
100DML515	721	105	105	185	210	370	240	265	329	15	100	40	220	180	230	1000	700	19	175	LL100	46.0
100DML522	765	105	105	185	210	370	240	265	342	12	100	40	220	180	230	1000	700	19	175	LL100	46.0
150DML55.5	628	105	105	185	235	400	240	265	310	31	100	40	220	180	230	800	700	19	175	LL100	46.0
150DML57.5	628	105	105	185	235	400	240	265	310	31	100	40	220	180	230	800	700	19	175	LL100	46.0
150DML511	721	105	105	185	235	400	240	265	329	15	100	40	220	180	230	1000	700	19	175	LL100	46.0
150DML515	721	105	105	185	235	400	240	265	329	15	100	40	220	180	230	1000	700	19	175	LL100	46.0
150DML522	765	105	105	185	235	400	240	265	342	12	100	40	220	180	230	1000	700	19	175	LL100	46.0

### FLANGE DIMENSIONS



### TABLE OF DIMENSIONS FLANGES

Dimensions						
DA	DG	DE	DF	DT	N. DN	DD
80	138	160	200	22	8	18
100	158	180	220	24	8	18
150	212	240	285	26	8	22

# DML - DMLF

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

### DIMENSIONS 50DMLF/50DMLF with QDC (1.4 kW)

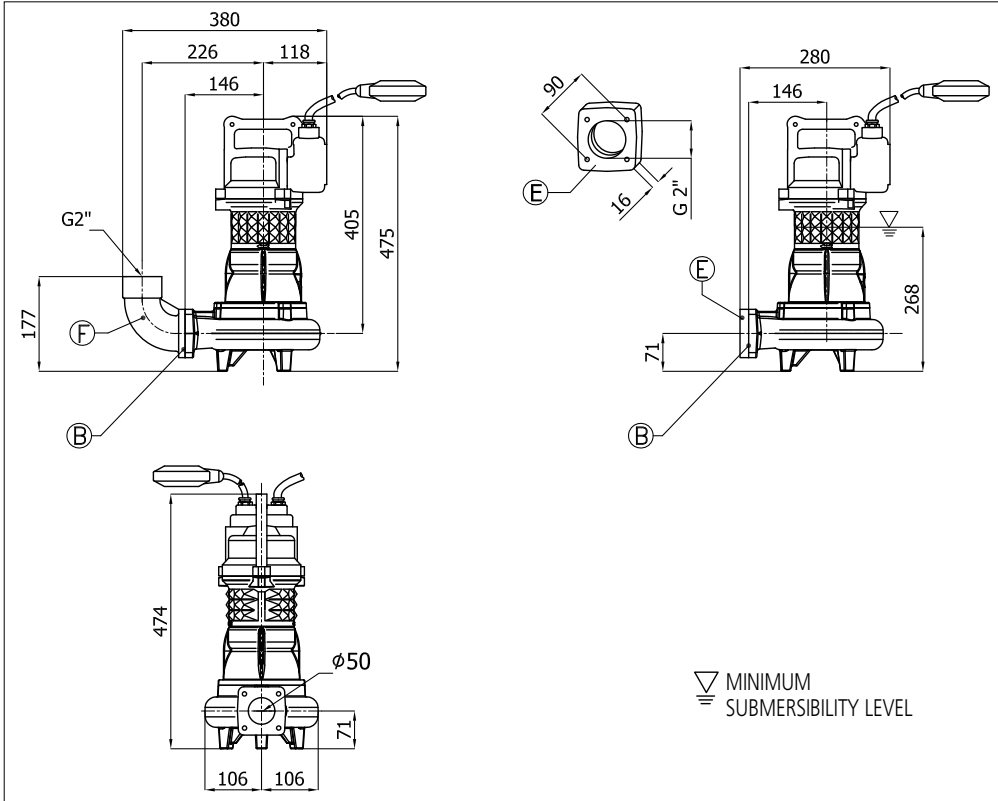
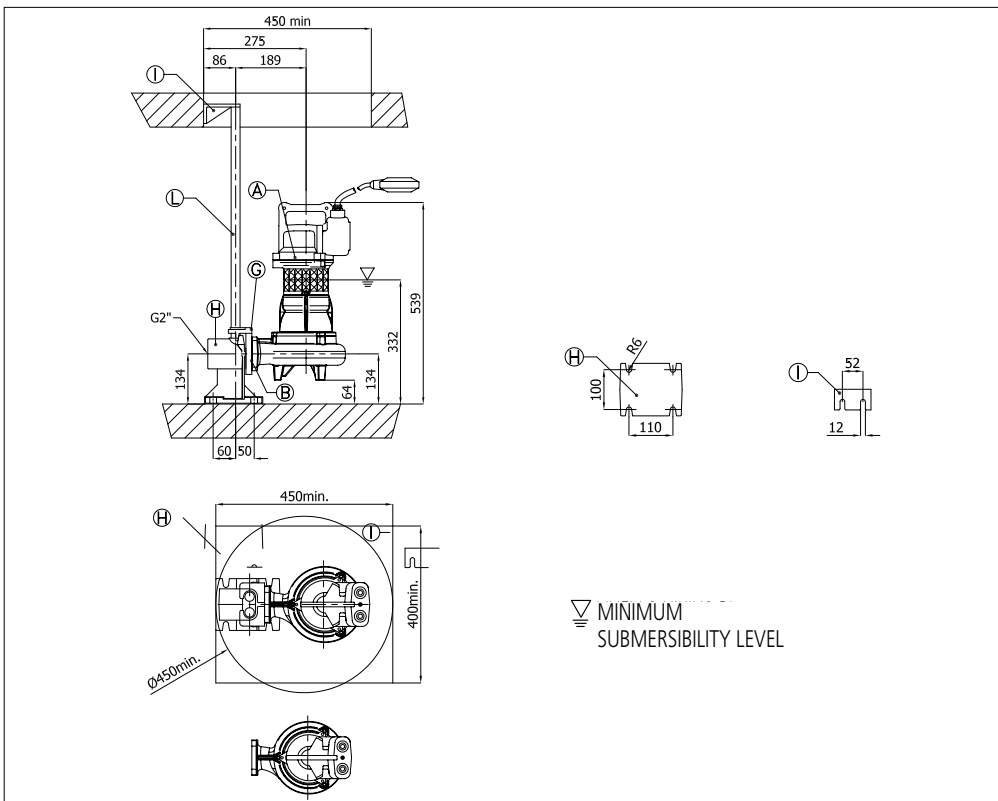


TABLE OF DIMENSIONS 50DMLF/50DMLF with QDC (1.4 kW)

DA	Model	[kW]	Weight [kg]
50	50DMLF51.4M2BG	1.4	31





# DML - DMLF

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

### DIMENSIONS 65DMLF/65DMLF with QDC (1.5 - 1.9 kW)

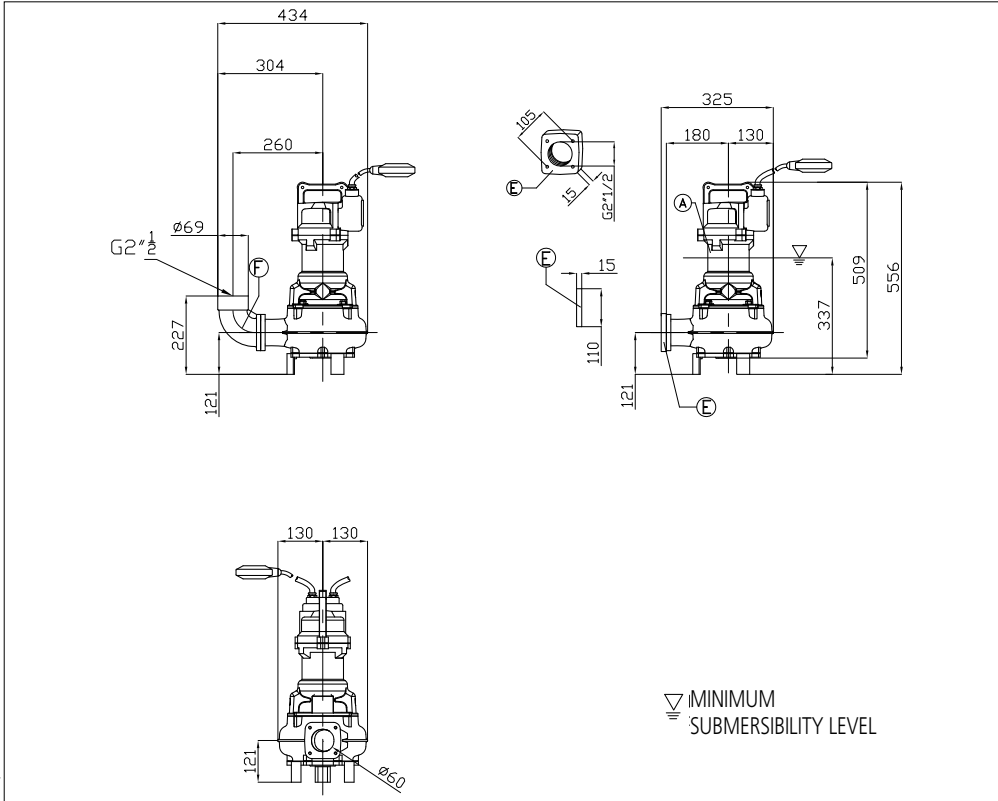
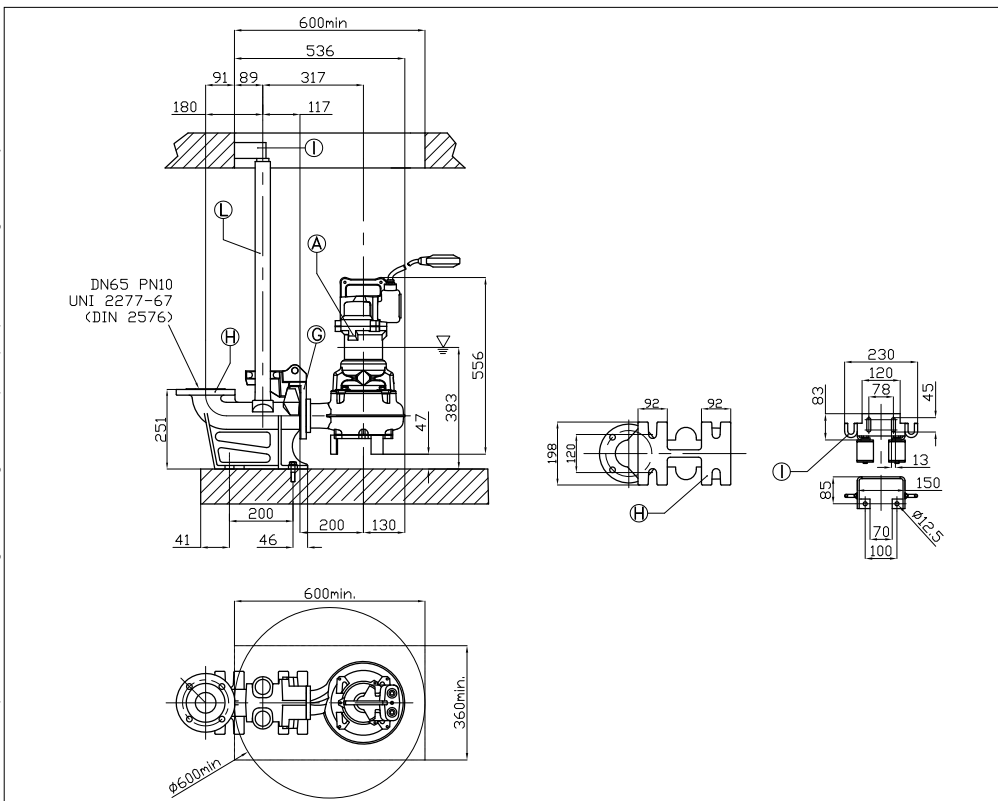


TABLE OF DIMENSIONS 65DMLF/65DMLF with QDC (1.5 - 1.9 kW)

DA	Model	[kW]	Weight [kg]
65	65DMLF51.5M2AG	1.5	42
	65DMLF51.9M2BG	1.9	45



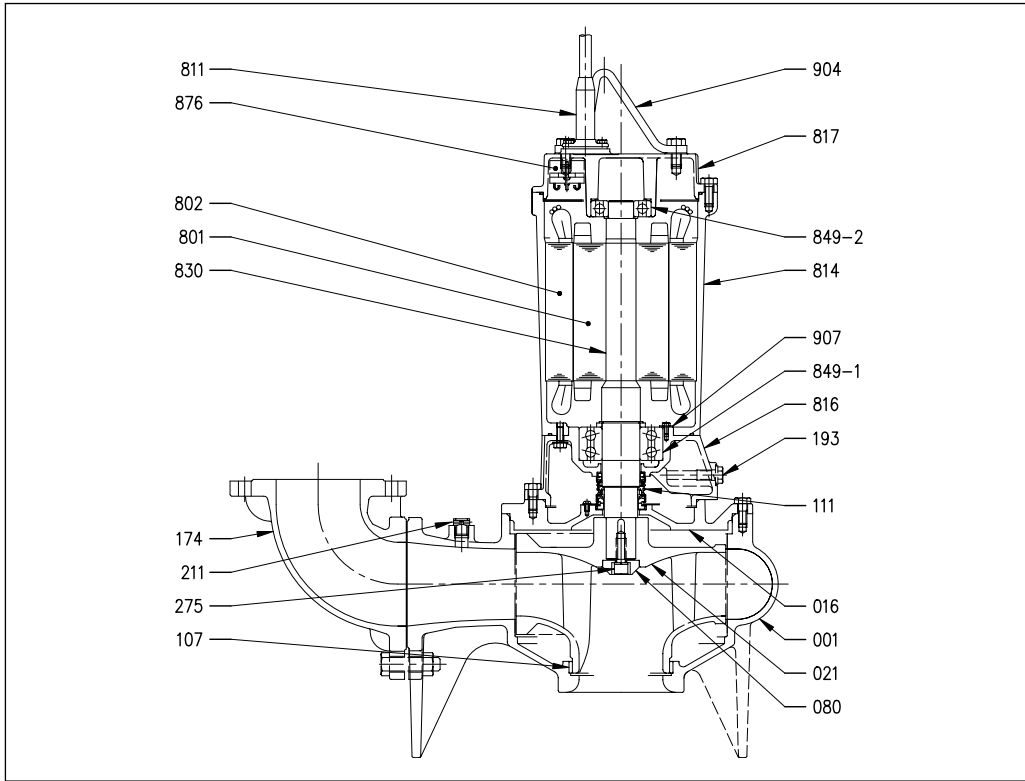
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# DML - DMLF

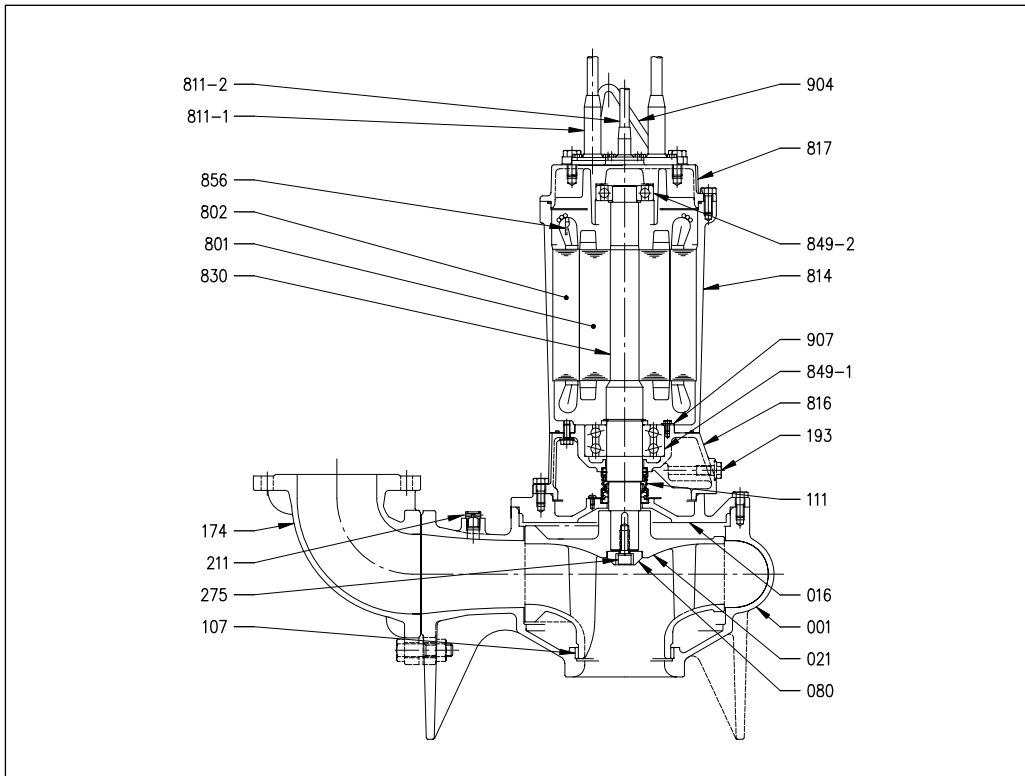
## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

SECTIONAL VIEW 80DML 52.2



SECTIONAL VIEW 80 (100) (150) DML (3.7 - 7.5kW)

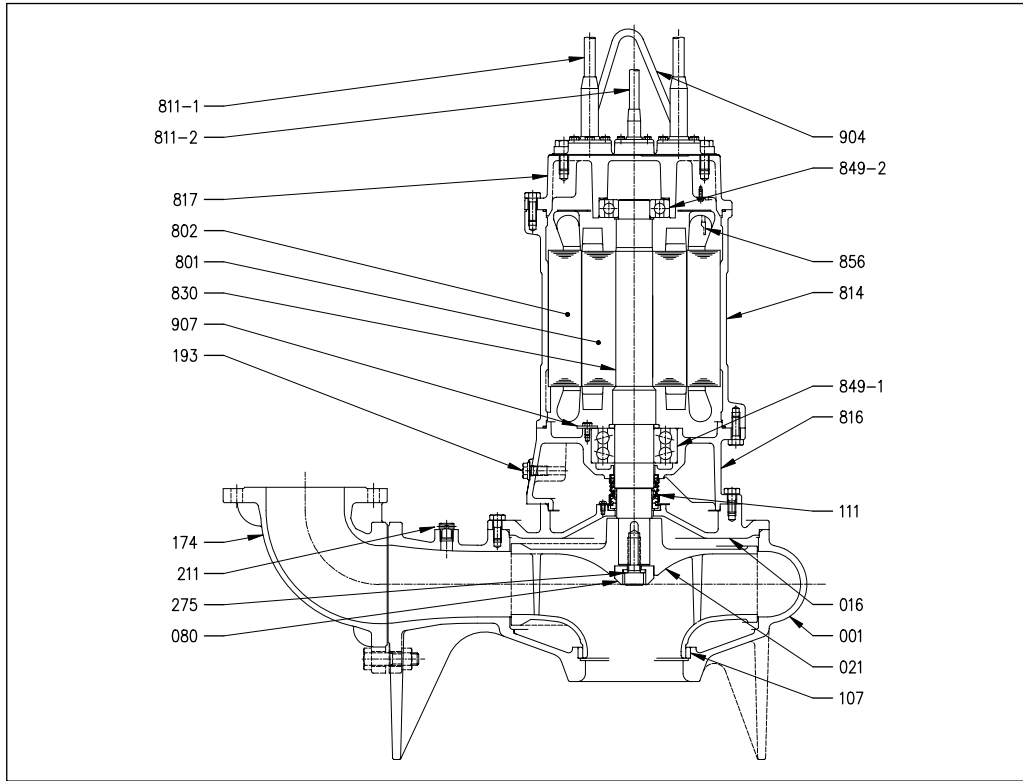


# DML - DMLF

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

### SECTIONAL VIEW 100 (150) DML (11 - 22kW)



### TABLE OF MATERIALS DML

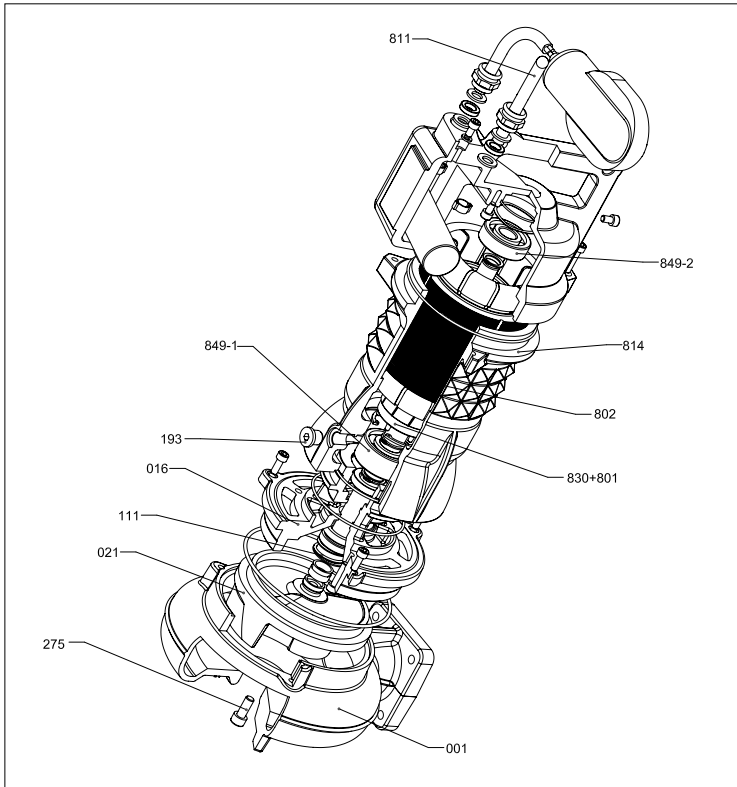
Ref.	Name	Material	Ref.	Name	Material
001	Pump body	Cast iron EN-GHJL-200 - EN 1561	811-1	Power cable	-
016	Mechanical seal cover	Cast iron EN-GHJL-200 - EN 1561	811-2	Signal cable	-
021	Impeller	Cast iron EN-GHJL-200 - EN 1561	814	Motor casing	Cast iron EN-GHJL-200 - EN 1561
080	Bushing	Steel	816	Upper mount	Cast iron EN-GHJL-200 - EN 1561
107	Clearance ring	Bronze	817	Lower bearing	Cast iron EN-GHJL-200 - EN 1561
111	Mechanical seal	-	830	Shaft	EN 1.4006 (AISI403)
174	Delivery bend/union	Cast iron EN-GHJL-200 - EN 1561	849-1	Ball bearing	-
193	Oil cap	NBR/Stainless steel	849-2	Ball bearing	-
211	Air relief valve	Brass	856	Thermal cutout	-
275	Bolt (impeller)	A2-70 stainless steel class ISO 3506/1	876	Motor cutout	-
801	Rotor	-	904	Lifting hook	Steel
802	Stator	-	907	Cover	Steel
811	Cable	-			

# DML - DMLF

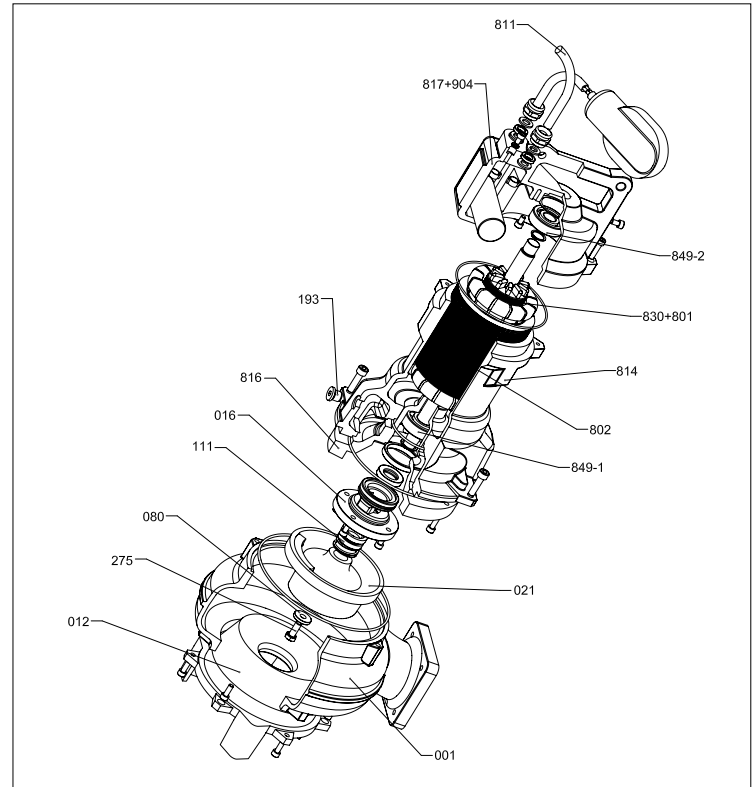
## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

SECTIONAL VIEW 50DMLF (1.4 kW)



SECTIONAL VIEW 65DMLF (1.5 kW)



SECTIONAL VIEW 65DMLF (1.9 kW)

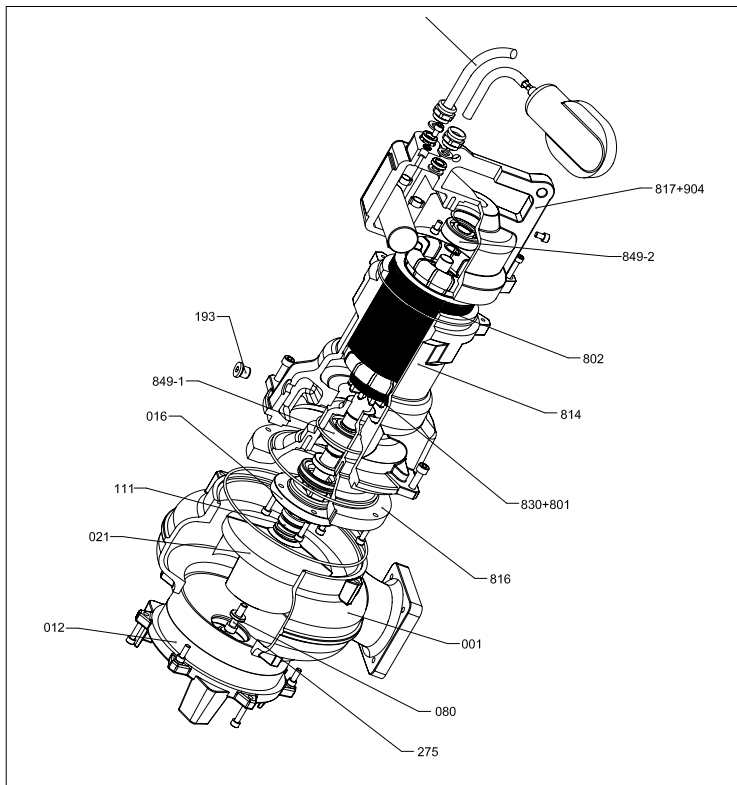


TABLE OF MATERIALS DMLF

Ref.	Name	Material
001	Pump body	Cast iron EN-GJL-250
012	Suction side cover	Cast iron EN-GJL-250
016	Mechanical seal cover	Cast iron EN-GJL-250
021	Impeller	Cast iron EN-GJL-250+Ni
080	Bushing	Steel
111	Mechanical seal	-
193	Oil cap	NBR/stainless steel
275	Impeller nut	AISI304 class A2
801	Rotor	-
802	Stator	-
811	Cable	-
814	Motor casing	Cast iron EN-GJL-250
816	Upper mount	Cast iron EN-GJL-250
817	Lower bearing	Cast iron EN-GJL-250
830	Shaft	AISI 420B
849-1	Ball bearing	-
849-2	Ball bearing	-
904	Lifting hook	Cast iron EN-GJL-250

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# DML - DMLF

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

**ELECTRICAL DATA TABLE DML(V) (2.2 - 3.7 kW)**

[P <sub>2</sub> ]		[kW]	2.2			3.7		
Resistance at 20°C		[Ω]	7.015			3.623		
GD <sup>2</sup>		[kg/m <sup>2</sup> ]	0.02			0.03		
Voltage		[V]	380	400	415	380	400	415
Full load	0%	Current	2.13	2.52	2.81	3.29	3.88	4.45
		Power	450	480	580	620	780	840
	75%	Current	4.33	4.21	4.32	6.79	6.77	6.95
		Efficiency	67.11	68.45	67.13	72.12	71.40	69.56
		Power factor	86.20	82.63	79.22	86.08	82.84	79.82
	100%	rpm	1428	1437	1442	1439	1443	1447
		Current	5.50	5.20	5.20	8.60	8.40	8.40
		Efficiency	67.56	69.50	68.98	72.79	72.71	71.61
		Power factor	89.53	87.56	85.08	89.58	87.44	85.44
Torque with rotor locked		[N·m]	182	204	221	203	226	244
Starting current		[A]	24.30	25.70	26.70	45.50	48.10	50.00
Poles			4					
Phases			3					
Frequency [Hz]			50					
Starts per hour			10					
Tolerance for voltage		[%]	-10 +6%			±10%		
Tolerance for frequency		[%]	±1%					
Insulation class			F					
Model			ZDMEU					

**ELECTRICAL DATA TABLE DML(V) (5.5 - 11 kW)**

[P <sub>2</sub> ]		[kW]	5.5			7.5			11		
Resistance at 20°C		[Ω]	1.920			1.326			0.862		
GD <sup>2</sup>		[kg/m <sup>2</sup> ]	0.059			0.076			0.120		
Voltage		[V]	380	400	415	380	400	415	380	400	415
Full load	0%	Current	5.56	6.67	7.64	6.93	8.41	9.70	8.49	10.15	11.85
		Power	900	1200	1330	1200	1300	1600	1100	1450	1800
	75%	Current	10.30	10.51	10.83	13.65	14.06	14.48	18.26	19.27	19.66
		Efficiency	73.72	72.26	71.38	75.24	76.86	71.60	81.12	75.49	74.70
		Power factor	82.50	78.43	74.23	83.20	75.16	75.46	84.63	81.87	78.15
	100%	rpm	1454	1456	1460	1461	1460	1466	1462	1461	1465
		Current	12.70	12.60	12.70	16.90	16.90	17.10	23.50	23.80	23.80
		Efficiency	75.37	74.50	74.06	76.89	79.01	74.60	81.65	77.41	77.06
		Power factor	87.04	84.27	81.03	87.39	80.89	81.76	87.68	85.82	83.31
Torque with rotor locked		[N·m]	227	252	272	231	256	278	154	170	184
Starting current		[A]	78.00	82.60	87.80	110.20	116.50	121.70	128.20	136.00	141.90
Poles			4								
Phases			3								
Frequency [Hz]			50								
Starts per hour			10						7		
Tolerance for voltage		[%]	±10%						±1%		
Tolerance for frequency		[%]	±1%								
Insulation class			F								
Model			ZDMEU								

# DML - DMLF

## SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

**ELECTRICAL DATA TABLE DML(V) (15 - 22 kW)**

[P <sub>2</sub> ]		[kW]	15			22			
Resistance at 20°C		[Ω]	0.563			0.308			
GD <sup>2</sup>		[kg/m <sup>2</sup> ]	0.16			0.34			
Voltage		[V]	380	400	415	380	400	415	
Full load	0%	Current	[A]	10.8	13.13	15.08	13.37	16.27	18.82
		Power	[W]	1220	1650	2000	1500	2000	2100
	75%	Current	[A]	24.86	25.03	25.59	33.90	33.38	34.04
		Efficiency	[%]	79.66	78.43	77.65	84.98	85.54	83.88
		Power factor	[%]	86.32	82.71	78.78	87.01	83.40	80.41
		rpm	[min <sup>-1</sup> ]	1465	1464	1467	1473	1475	1474
	100%	Current	[A]	31.50	31.00	31.00	43.50	42.00	42.00
		Efficiency	[%]	80.84	80.23	79.78	85.80	86.52	85.34
		Power factor	[%]	89.13	86.77	84.16	89.33	87.27	85.16
		rpm	[min <sup>-1</sup> ]	1449	1451	1455	1462	1466	1466
	Torque with rotor locked		[%]	176	195	211	155	172	185
	Starting current		[A]	199.80	211.90	220.90	299.80	318.50	332.70
Starts per hour			7						
Model			ZDMEU						

**ELECTRICAL DATA TABLE DMLF (1.4 - 1.9 kW)**

[P <sub>2</sub> ]		[kW]	1.4		1.5		1.9		
Resistance at 20°C		[Ω]	-		-		-		
GD <sup>2</sup>		[kg/m <sup>2</sup> ]	0.0011		0.0039		0.0078		
Voltage		[V]	230		230		230		
Full load	0%	Current	[A]	-	-	-	-	-	
		Power	[W]	-	-	-	-	-	
	75%	Current	[A]	-	-	-	-	-	
		Efficiency	[%]	72	72	72	73	73	
		Power factor	[%]	0.97	0.97	0.97	0.97	0.97	
		rpm	[min <sup>-1</sup> ]	-	-	-	-	-	
	100%	Current	[A]	-	-	-	-	-	
		Efficiency	[%]	73	73	73	73	73	
		Power factor	[%]	0.99	0.99	0.99	0.99	0.99	
		rpm	[min <sup>-1</sup> ]	-	-	-	-	-	
	Torque with rotor locked		[%]	-		-		-	
	Starting current		[A]	31.1		33.3		62.7	
Poles			2						
Phase			1						
Starts per hour			15						
Model			M272M-1.4-230/50NY-IE		M272M-1.5-230/50NY-IE		M272M-1.9-230/50NY-IE		
Type of pump			50DMLF51.4M2BG		65DMLF51.5M2AG		65DMLF51.9M2BG		