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OPTIMA

SUBMERSIBLE ELECTRIC PUMPS

in AISI 304 stainless steel



Submersible electric pumps for clear water with hydraulic equipment in AISI 304 stainless steel.

APPLICATIONS

- Draining wells, garages, cellars or other flooded enclosed areas
- Irrigation for gardens and vegetable gardens
- Handling infiltration water or drainage of unloaded water

TECHNICAL FEATURES

- Mechanical seal as standard supply
- Reliable, corrosion resistant
- Highly versatile
- Suited to fixed and mobile installations
- Equipped with 5 m power cable (H05 RN-F) for use indoors (10 m for outdoors applications), with/without float switch

TECHNICAL DATA

- Maximum submersion: 5 m
- Maximum fluid temperature: 50°C
- Maximum solid dimensions: 10 mm
- 2 pole asynchronous motor
- Insulation class F
- Protection rating IP68
- Single phase voltage 230V ±10% 50 Hz,
- Delivery connection G1¼

MATERIALS

- Pump body, suction grille, gasket disk and motor casing in AISI 304 stainless steel
- Impeller in PPE + PS reinforced with glass fibre
- Shaft made of AISI 303 stainless steel
- Standard mechanical seal (Carbon/ceramic/NBR)

SPECIAL VERSIONS

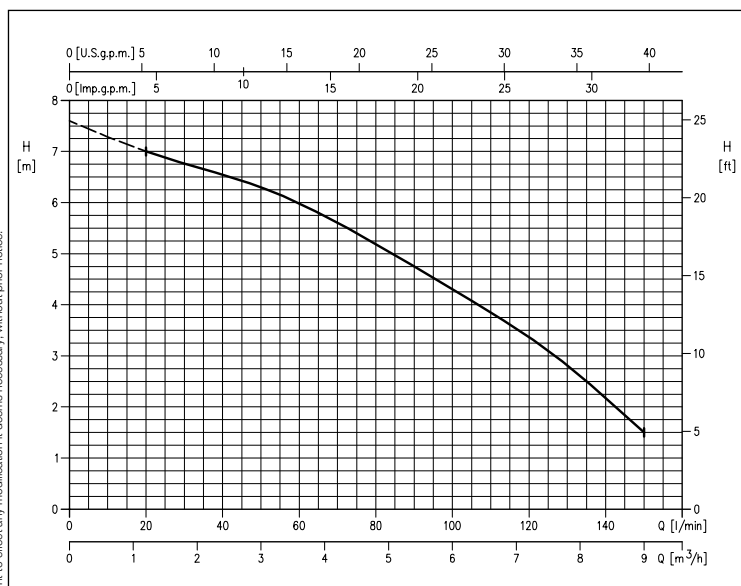
- MS version with MS vertical magnetic float switch (Magnetic Switch) and reduced footprint for clean water
- MA version with float switch

ACCESSORIES (on request)

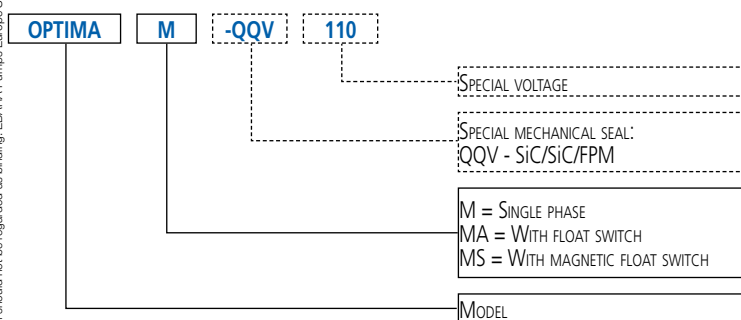
- Hose connection 1"¼ with hose clamp
- Minimum suction device to 3 mm

For accessories and electrical enclosures, see page 151 onwards

PERFORMANCE CURVE (per ISO 9906 Annex A)



IDENTIFICATION CODE



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OPTIMA

SUBMERSIBLE ELECTRIC PUMPS

in AISI 304 stainless steel

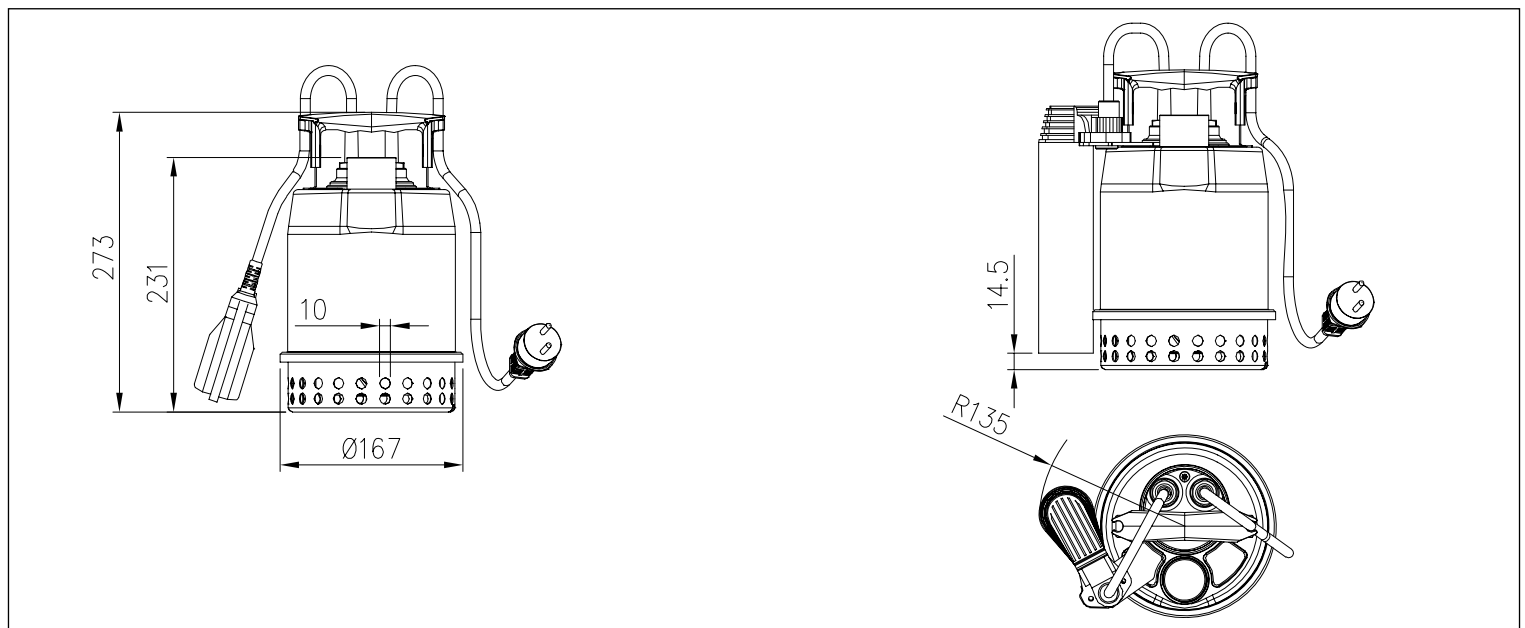
PERFORMANCE TABLE

Model	P.		Capacitor		Abs. Curr. [A]	Q=Flow rate						Weight [kg]
	[HP]	[kW]	μ F	Vc		l/min m ³ /h	20 1.2	50 3	75 4.5	100 6	125 7.5	
OPTIMA M	0.33	0.25	8	450	1.9	7.0	6.3	5.4	4.3	3.1	1.5	4.2
OPTIMA MA	0.33	0.25	8	450	1.9	7.0	6.3	5.4	4.3	3.1	1.5	4.4
OPTIMA MS	0.33	0.25	8	450	1.9	7.0	6.3	5.4	4.3	3.1	1.5	4.6

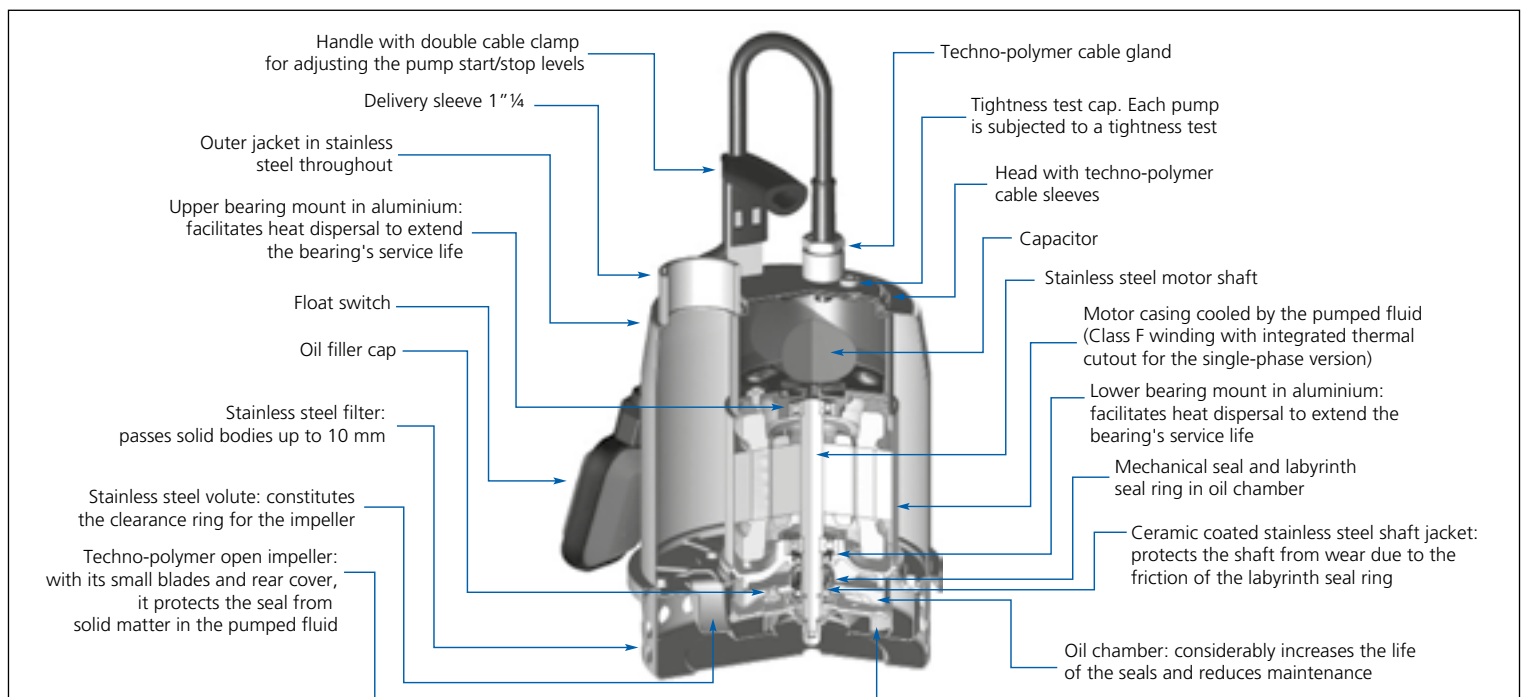
DIMENSIONS

OPTIMA MA

OPTIMA MS



SECTIONAL VIEW



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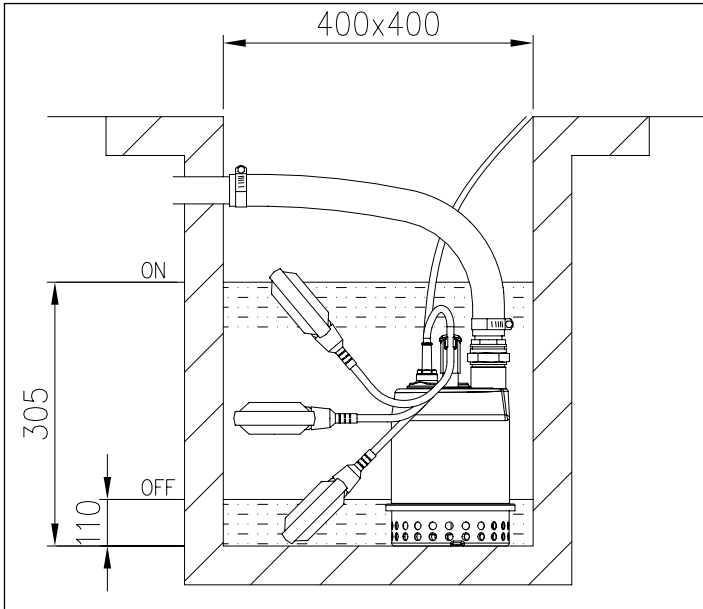
OPTIMA

SUBMERSIBLE ELECTRIC PUMPS

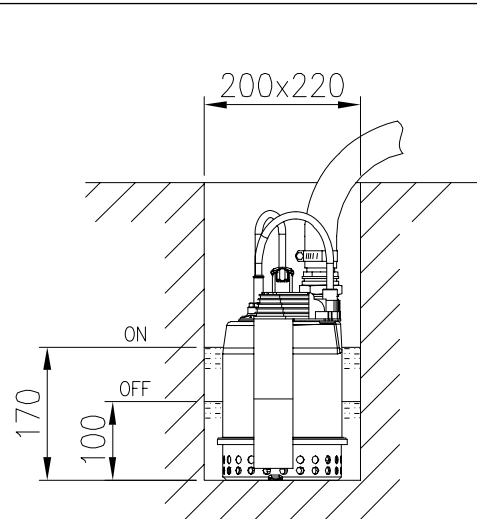
in AISI 304 stainless steel

INSTALLATION

OPTIMA MA



OPTIMA MS



OPTIONAL

MINIMUM SUCTION DEVICE



The minimum suction device draws the fluid up by as much as 3 mm from the ground (starting from at least 10 mm).

It pressure mounts to the OPTIMA.
The automatic operation of the pump with float switch prevents it from drawing the fluid up to 3 mm.

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BEST ONE

SUBMERSIBLE ELECTRIC PUMPS

in AISI 304 stainless steel



BEST ONE



BEST ONE VOX

Submersible electric pumps for clear water with hydraulic equipment in AISI 304 stainless steel.

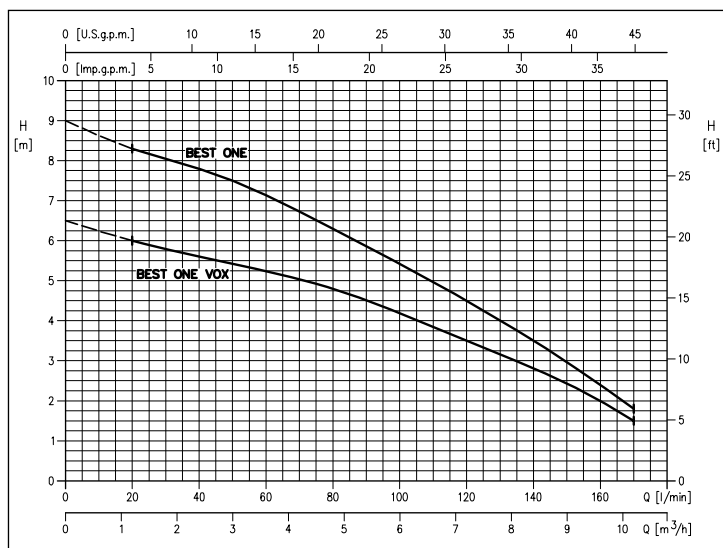
APPLICATIONS

- Draining basements, garages, cellars or other flooded enclosed areas
- Supply for garden fountains
- Easy draining of tanks and reservoirs

TECHNICAL FEATURES

- Mechanical seal as standard supply
- New design and renewed styling
- Technologically and mechanically optimised
- Very versatile and suited to fixed and mobile installations
- Equipped with 5 m power cable, type H05 RN-F (single phase) H07 RN-F (three-phase) for use indoors (10 m for use outdoors), with/without float switch

PERFORMANCE CURVES (per ISO 9906 Annex A)



TECHNICAL DATA

- Maximum submersion: 5 m
- Maximum fluid temperature: 50°C
- Maximum solid dimensions:
 - 10 mm
 - 20 mm for the VOX version (Vortex)
- 2 pole asynchronous motor
- Insulation class F
- Protection rating IP68
- Single phase voltage 230V ±10% 50Hz, three-phase voltage 400V ±10%, 50Hz
- Delivery connection: G1¼

MATERIALS

- External jacket, impeller, filter, motor cover, seal disk and motor casing in AISI 304 stainless steel
- Shaft made of AISI 303 stainless steel
- Mechanical seal made of Ceramics/Carbon/NBR

SPECIAL VERSIONS

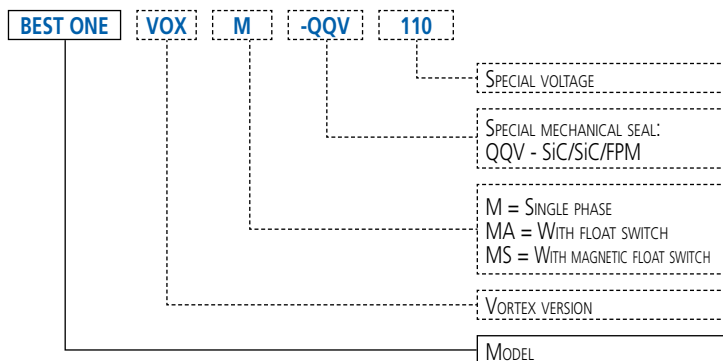
- MS version with magnetic float switch
- MA version with float switch
- VORTEX version (VOX)

ACCESSORIES (on request)

- Hose connection 1"¼ with hose clamp
- Minimum suction device to 3 mm (BEST ONE M, MA, T only)

For accessories and electrical enclosures, see page 151 onwards

IDENTIFICATION CODE



BEST ONE

SUBMERSIBLE ELECTRIC PUMPS in AISI 304 stainless steel

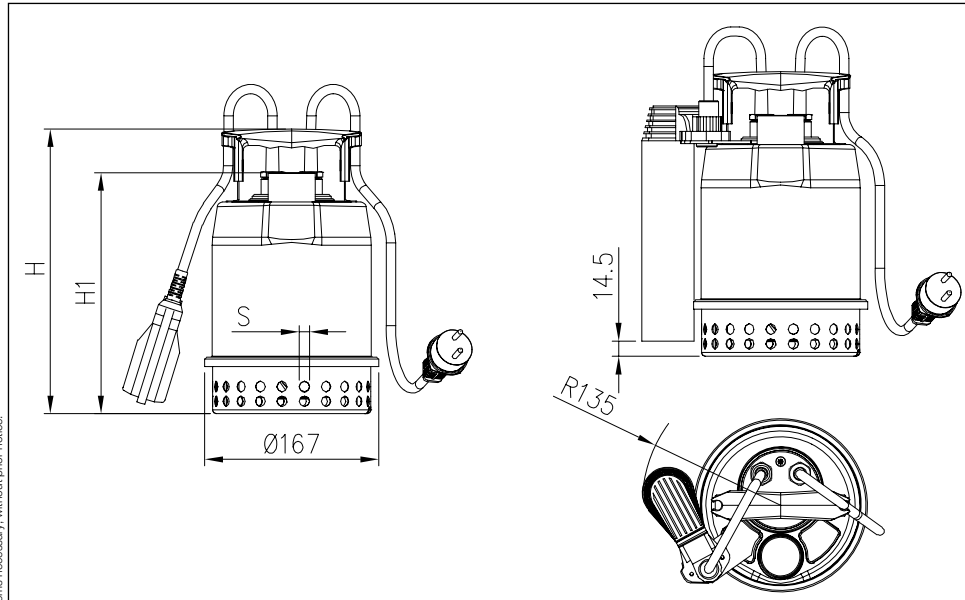
PERFORMANCE TABLE

Model		P ₂		Capacitor		Abs. Curr.		Q=Flow rate					
Single phase 230V	Three phase 400V	[HP]	[kW]	μF	Vc	[A]		l/min 20	40	80	120	160	170
						Single phase	Three phase						
H=Head [m]													
BEST ONE M	BEST ONE	0.33	0.25	8	450	2.3	0.8	8.3	7.8	6.3	4.5	2.4	1.8
BEST ONE VOX M	BEST ONE VOX	0.33	0.25	8	450	2.2	0.8	6.0	5.6	4.8	3.5	2.0	1.5

DIMENSIONS

BEST ONE MA / BEST ONE VOX MA

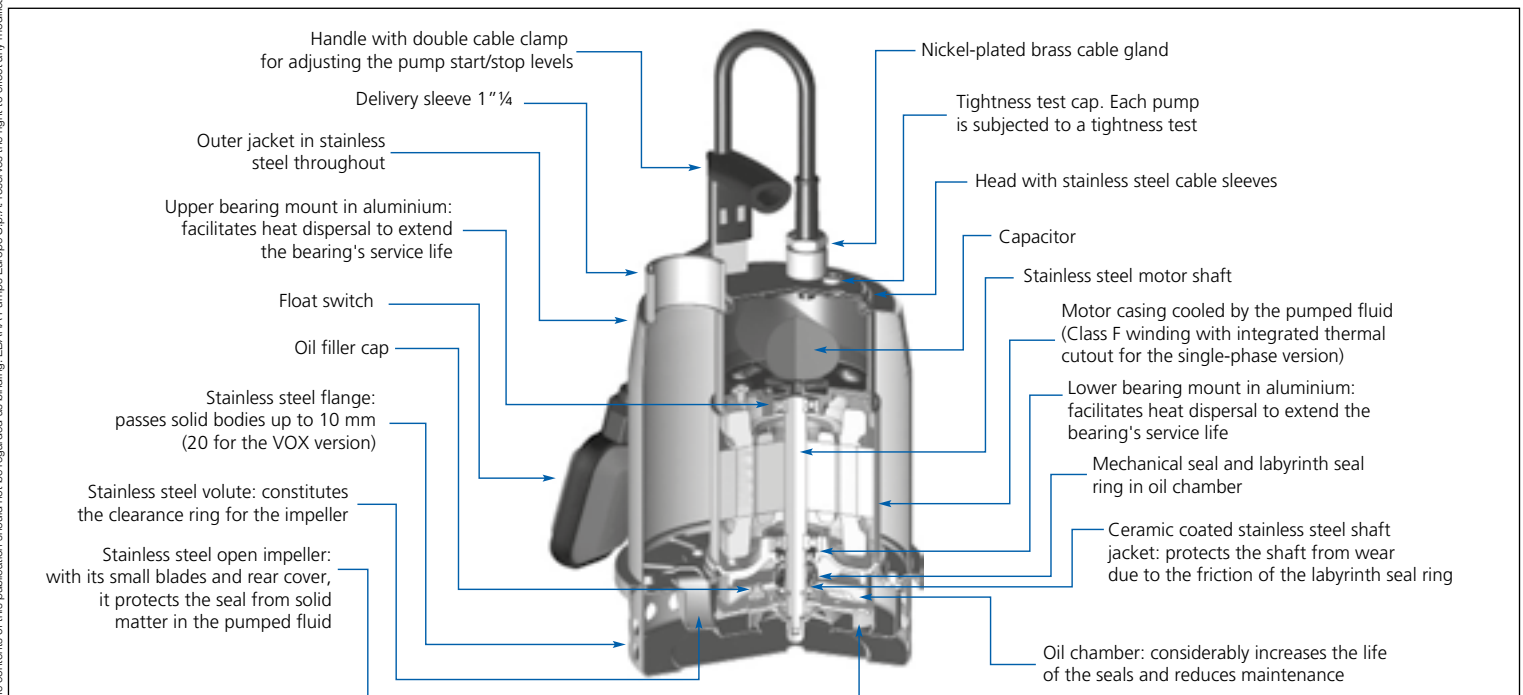
BEST ONE MS



DIMENSIONS CHART

Model	Dimensions [mm]			Weight [kg]
	H	H1	S	
BEST ONE	273	231	10	4.3
BEST ONE M	273	231	10	4.4
BEST ONE MA	273	231	10	4.6
BEST ONE MS	273	231	10	4.8
BEST ONE VOX	304	262	20	4.4
BEST ONE VOX M	304	262	20	4.5
BEST ONE VOX MA	304	262	20	4.7

SECTIONAL VIEW



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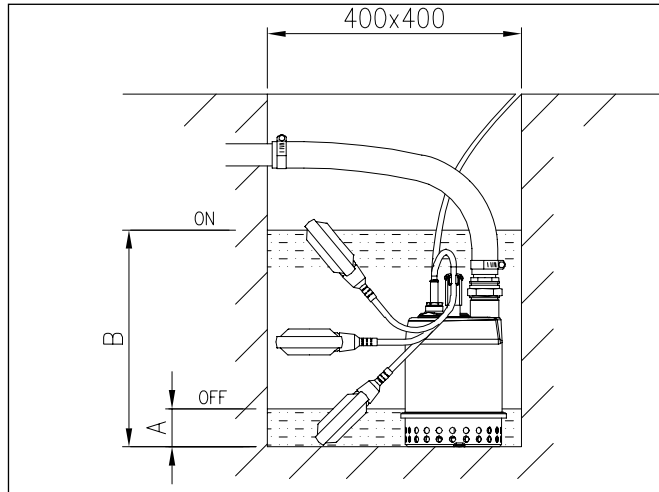
BEST ONE

SUBMERSIBLE ELECTRIC PUMPS

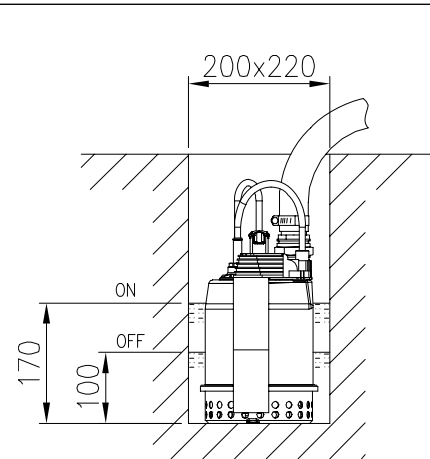
in AISI 304 stainless steel

INSTALLATION

BEST ONE MA / BEST ONE VOX MA



BEST ONE MS



INSTALLATION TABLE

Model	Dimensions [mm]	
	A	B
BEST ONE MA	110	305
BEST ONE VOX MA		330

OPTIONAL

MINIMUM SUCTION DEVICE



The minimum suction device draws the fluid up by as much as 3 mm from the ground (starting from at least 10 mm).

It pressure mounts to the BEST ONE.

The automatic operation of the pump with float switch prevents it from drawing the fluid up to 3 mm.

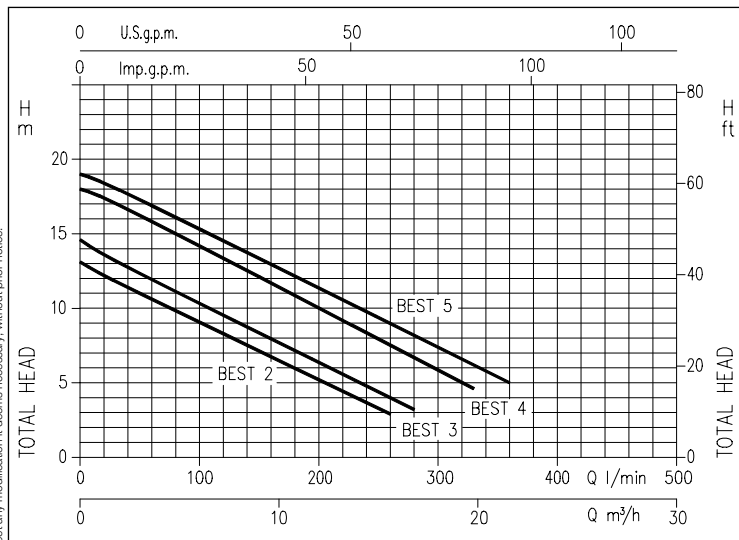
BEST 2-5

SUBMERSIBLE ELECTRIC PUMPS

in AISI 304 stainless steel



PERFORMANCE CURVES (per ISO 9906 Annex A)



Submersible electric pumps in AISI 304 stainless steel throughout.

APPLICATIONS

- Handling infiltration water
- Draining cellars, garages and submerged areas
- Draining small and medium size construction sites

TECHNICAL FEATURES

- Versatile
- Suited to fixed and mobile installations
- Fitted with 10 m power cable, type H07 RN-F
- Available with/without float switch

TECHNICAL DATA

- Maximum submersion: 7 m
- Maximum fluid temperature: 35°C
- Maximum solid dimensions: 10 mm
- 2 pole self-ventilating asynchronous motors
- Insulation class F
- Protection rating IP68
- 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

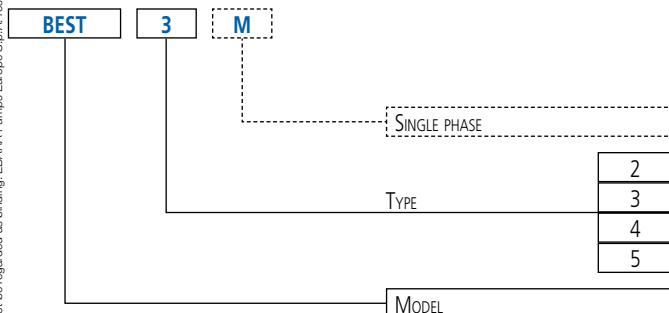
- Pump body, impeller, suction grille, motor cover, gasket disk and motor casing in AISI 304 stainless steel
- Shaft made of AISI 303 stainless steel (part in contact with liquid)
- Double mechanical seal with oil chamber:
 - upper seal in Carbon/Ceramic/NBR (motor side)
 - lower seal in SiC/SiC/NBR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

SPECIAL VERSIONS

- MA version with float switch

For accessories and electrical enclosures, see page 151 onwards

IDENTIFICATION CODE



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BEST 2-5

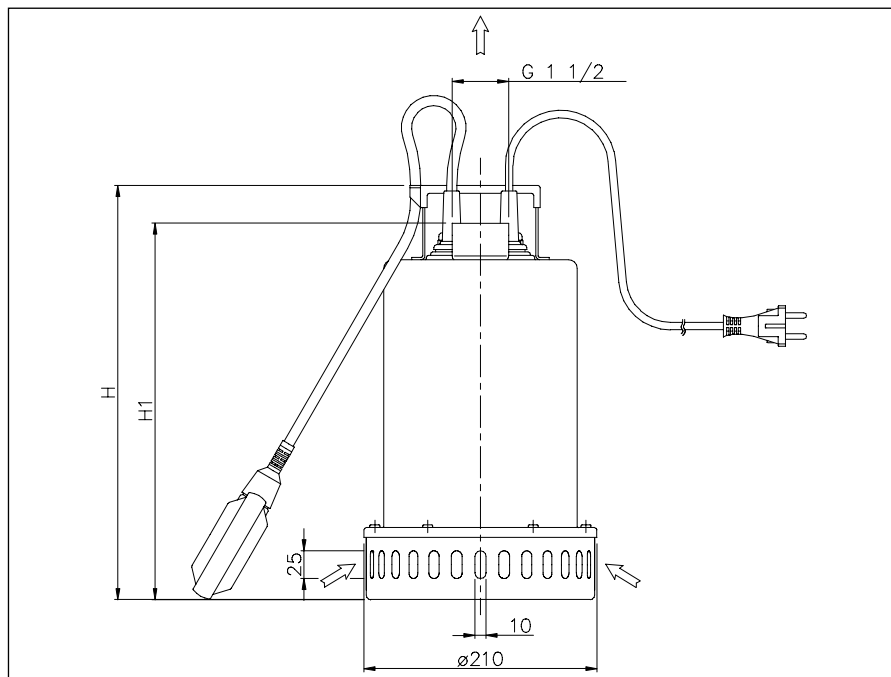
SUBMERSIBLE ELECTRIC PUMPS

in AISI 304 stainless steel

PERFORMANCE TABLE

Model		P ₁		Capacitor		Abs. Curr. [A]		Q=Flow rate													
Single phase 230V	Three phase 400V	[HP]	[kW]	μF	Vc	1~	3~	l/min m ³ /h	20 1.2	40 2.4	80 4.8	120 7.2	160 9.6	170 10.2	200 12	260 15.6	280 16.8	300 18	330 19.8	360 21.6	
								H=Head [m]													
BEST 2 M	BEST 2	0.75	0.55	16	450	4.4	2	12.2	11.4	9.8	8.3	6.7	6.3	5.0	2.9	-	-	-	-	-	-
BEST 3 M	BEST 3	1	0.75	20	450	5.6	2.4	13.6	12.7	11.1	9.5	7.9	7.6	6.4	4.0	3.2	-	-	-	-	-
BEST 4 M	BEST 4	1.5	1.1	30	450	7.3	3	17.4	16.6	15.0	13.4	11.7	11.3	10.0	7.5	6.7	5.9	4.6	-	-	-
	BEST 5	2	1.5	-	-	-	3.3	18.4	17.7	16.1	14.5	12.8	12.5	11.4	9.0	8.0	7.4	6.0	5.0	-	-

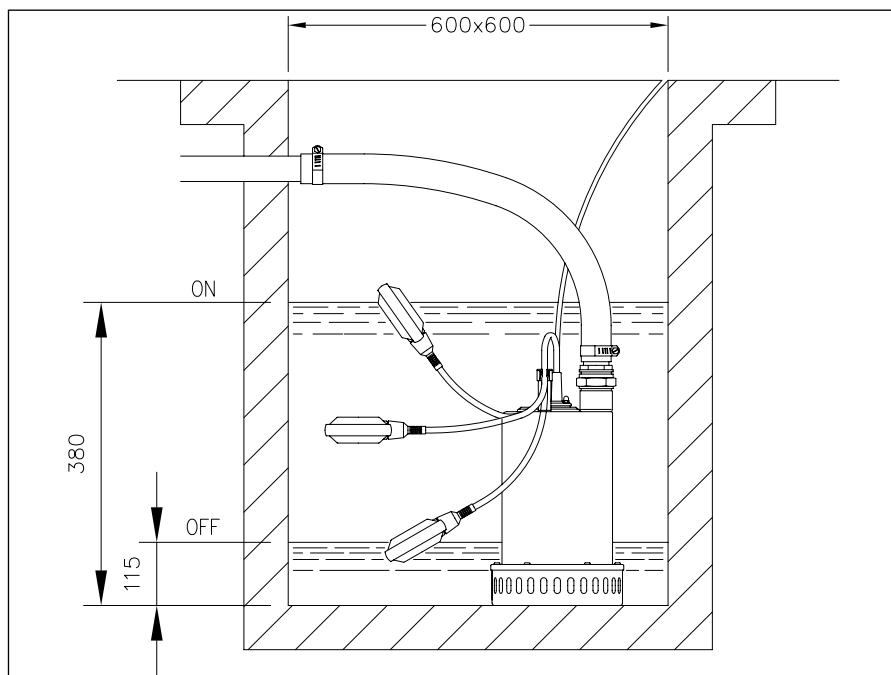
DIMENSIONS



DIMENSIONS CHART

Model	Dimensions [mm]		Weight [kg]
	H	H1	
BEST 2	352	315	12.0
BEST 3	352	315	12.7
BEST 4	377	340	13.8
BEST 5	377	340	13.5

INSTALLATION

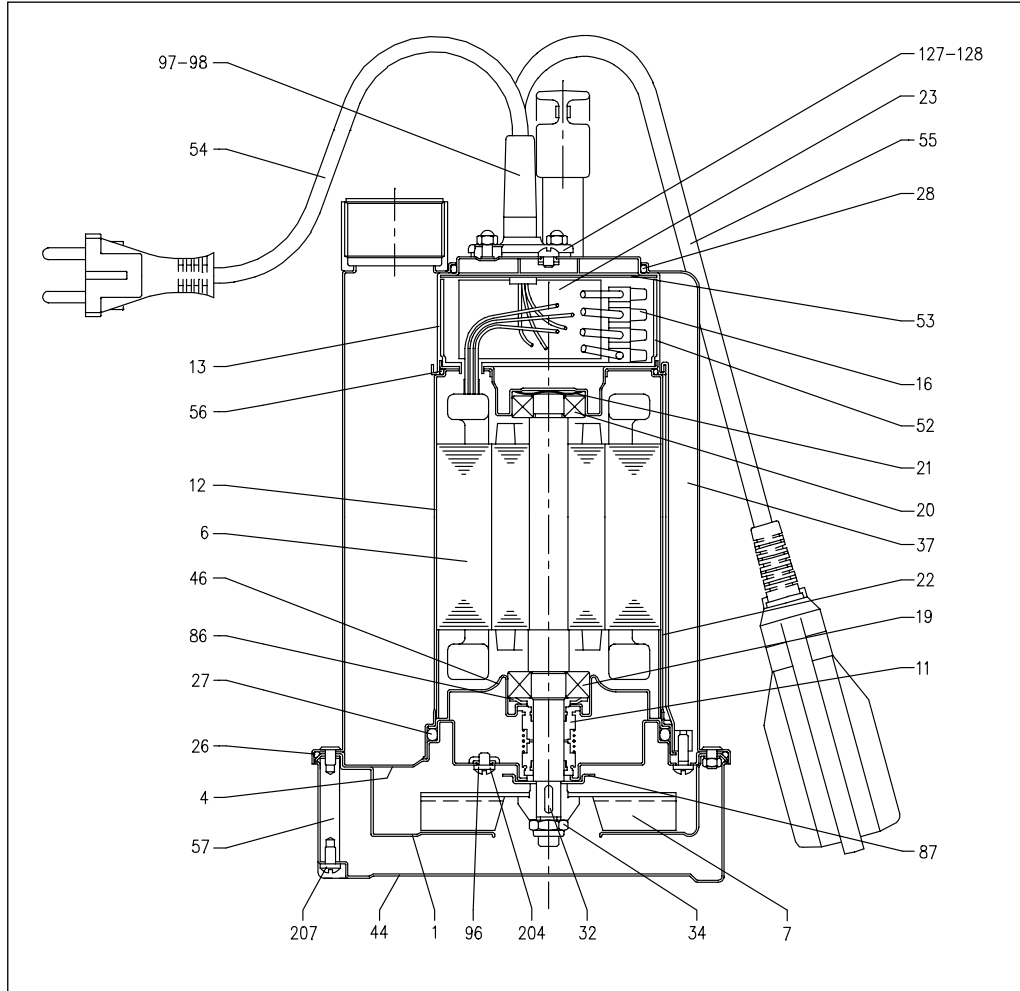


BEST 2-5

SUBMERSIBLE ELECTRIC PUMPS

in AISI 304 stainless steel

SECTIONAL VIEW



MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
1	Volute	AISI 304 stainless steel	37	External jacket	AISI 304 stainless steel
4	Motor mount	AISI 304 stainless steel	44	Filter	AISI 304 stainless steel
6	Shaft with rotor	AISI 303 stainless steel	46	Bearing mount	AISI 304 stainless steel
7	Impeller	AISI 304 stainless steel	52	Capacitor mount box	PA66 reinforced with glass fibre
11	Mechanical seal	NBR	53	Box cover	PA66
12	Motor casing	-	54	Cable	-
13	Motor cover	AISI 304 stainless steel	55	Float switch	-
16	Box	-	56	O-ring	NBR
19	Pump side bearing	-	57	Nut	AISI 303 stainless steel
20	Fan side bearing	-	86	Washer	AISI 304 stainless steel
21	Compensator ring	C70 steel	87	Clearance ring	AISI 304 stainless steel
22	Linkage	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	127	Cable gland	AISI 304 stainless steel
28	O-ring	NBR	128	Cable gland	AISI 304 stainless steel
32	Key	AISI 304 stainless steel	204	Bolt	Steel A2 UNI 7323
34	Impeller nut	AISI 304 stainless steel	207	Bolt	Steel A2 UNI 7323

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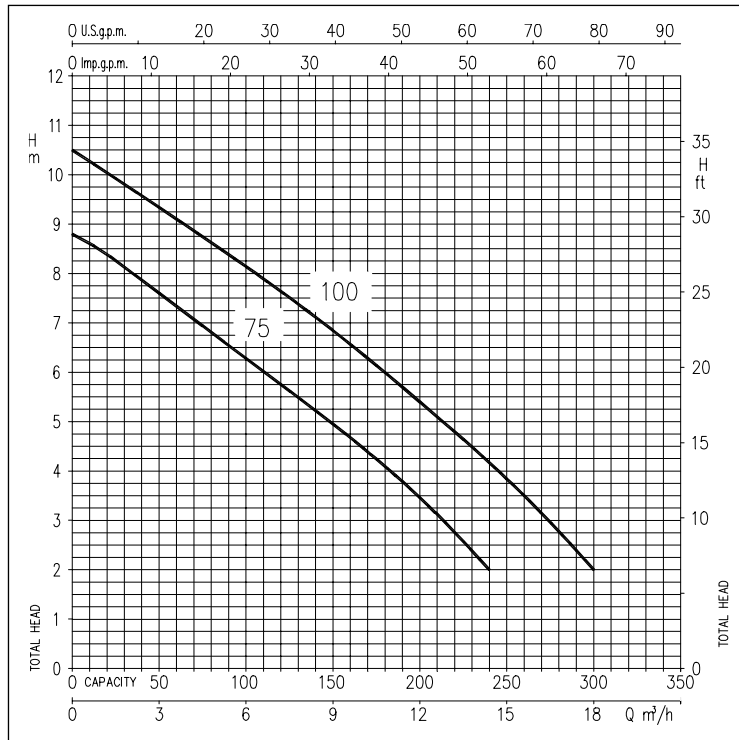
RIGHT

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

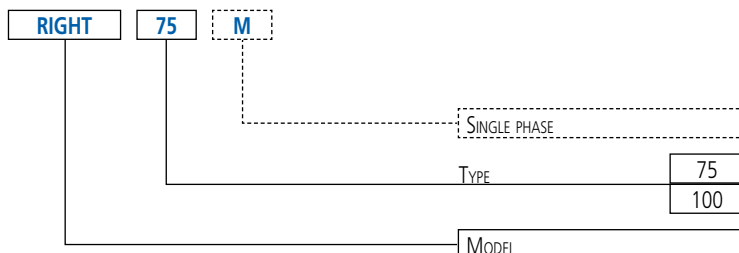
- Pump body, impeller, motor cover, gasket disk and motor casing in AISI 304 stainless steel
- Shaft made of AISI 303 stainless steel (part in contact with liquid)
- Double mechanical seal with oil chamber:
 - upper seal in Carbon/Ceramic/NBR (motor side)
 - lower seal in SiC/SiC/NBR (pump side)

SPECIAL VERSIONS

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

For accessories and electrical enclosures, see page 151 onwards

IDENTIFICATION CODE



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RIGHT

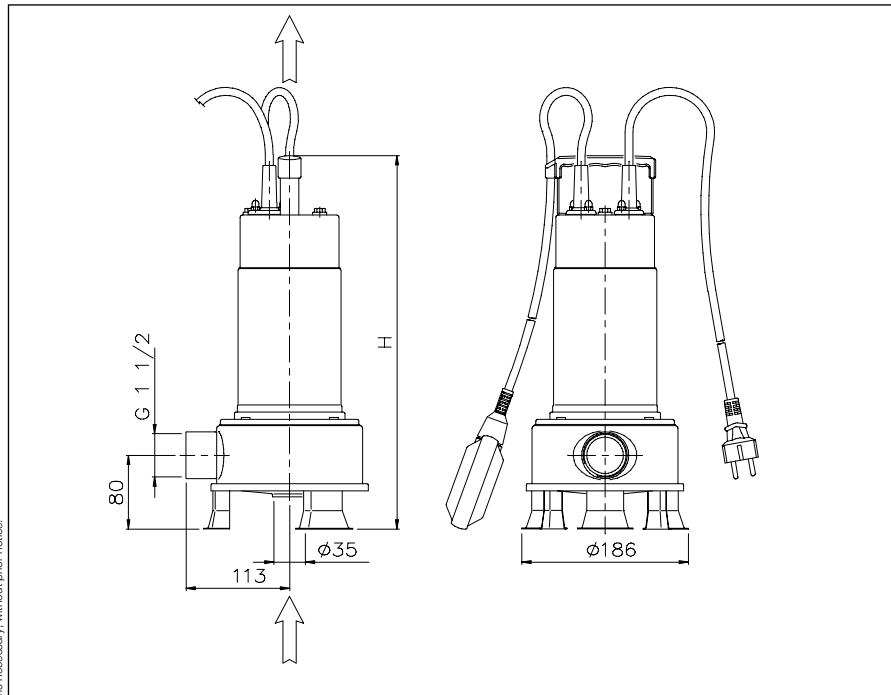
SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER

in AISI 304 stainless steel

PERFORMANCE TABLE

Model		P ₁		Capacitor		Abs. Curr. [A]		Q=Flow rate							
Single phase 230V	Three phase 400V	[HP]	[kW]	μF	Vc	1~	3~	l/min m ³ /h	40	80	120	160	200	240	300
								H=Head [m]							
								2	4.8	7.2	9.6	12	14.4	18	
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	

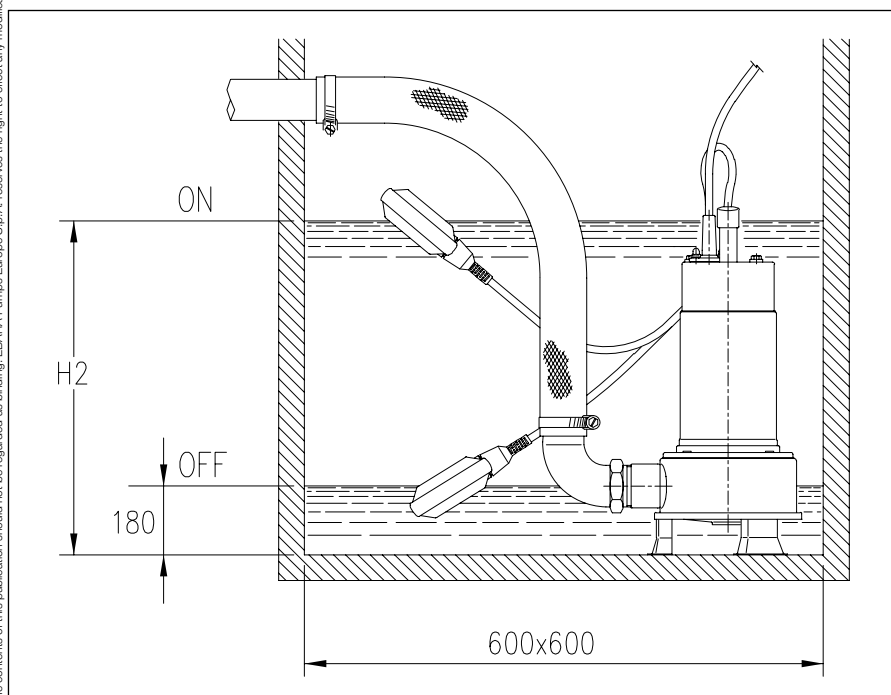
DIMENSIONS



DIMENSIONS CHART

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

INSTALLATION

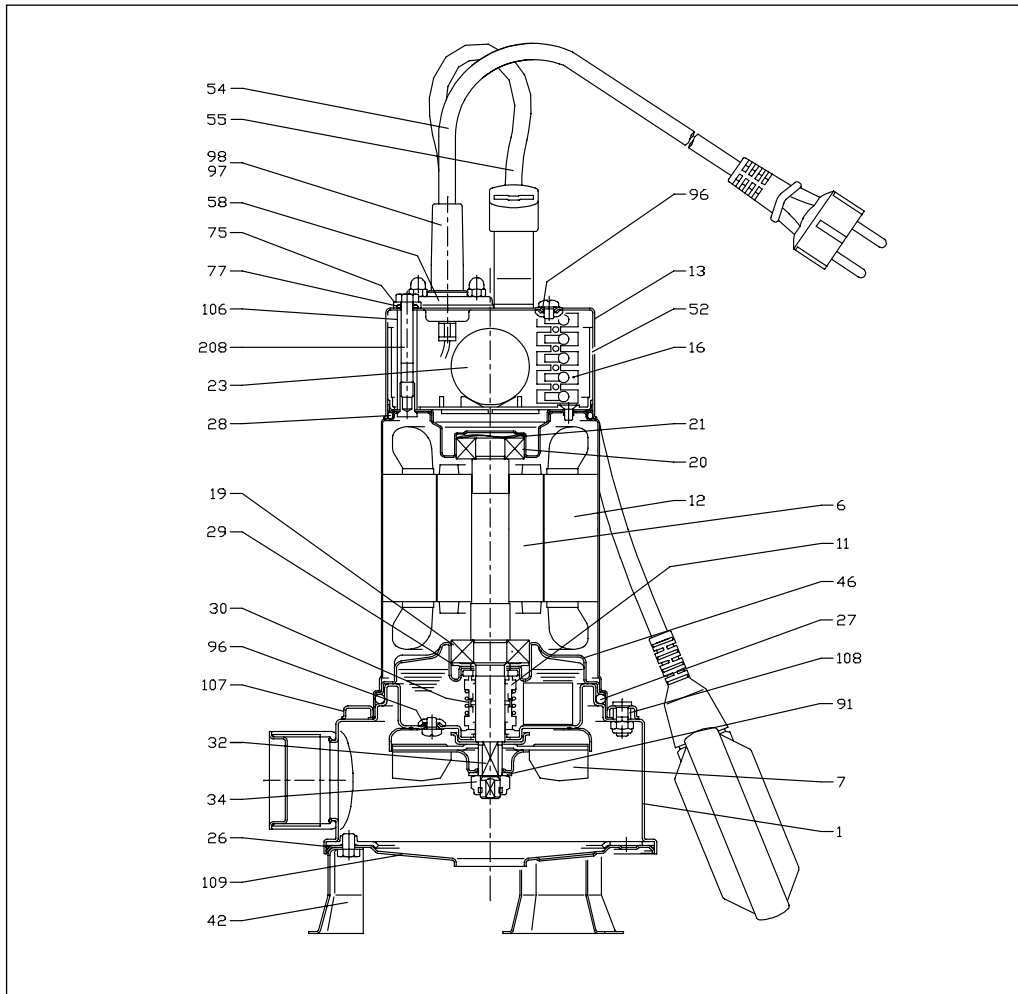


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SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER

in AISI 304 stainless steel

SECTIONAL VIEW



DIMENSIONS CHART

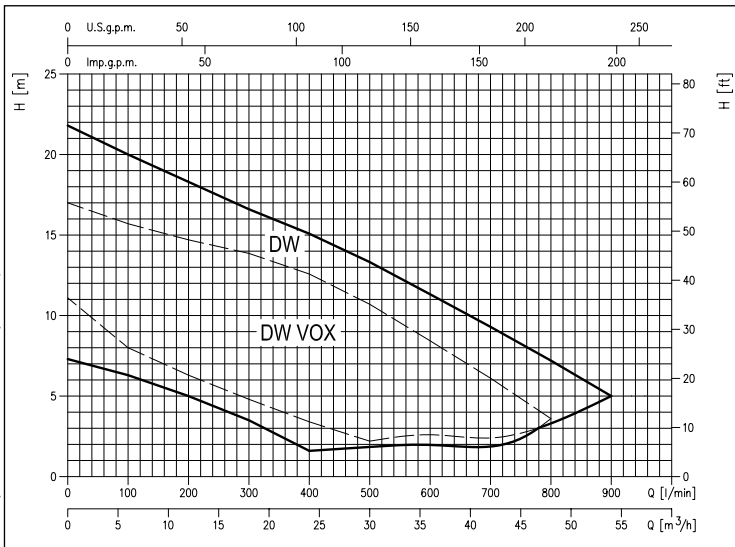
Ref.	Name	Material	Ref.	Name	Material
1	Pump body	AISI 304 stainless steel	42	Foot	AISI 304 stainless steel
6	Shaft with rotor	AISI 303 stainless steel	46	Lower bearing mount	AISI 304 stainless steel
7	Impeller	AISI 304 stainless steel	52	Capacitor housing	PA66 reinforced with glass fibre
11	Mechanical 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

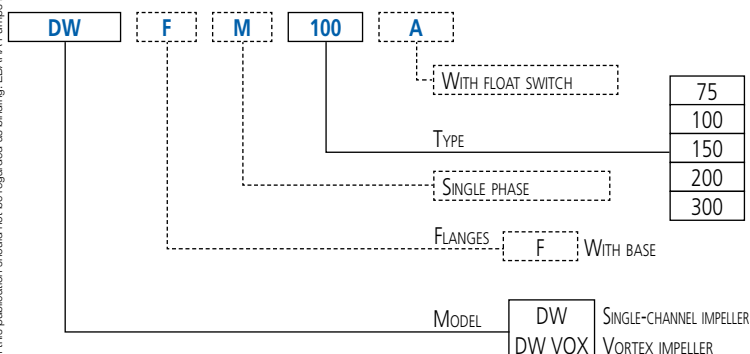
- VOX version (VORTEX impeller)

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

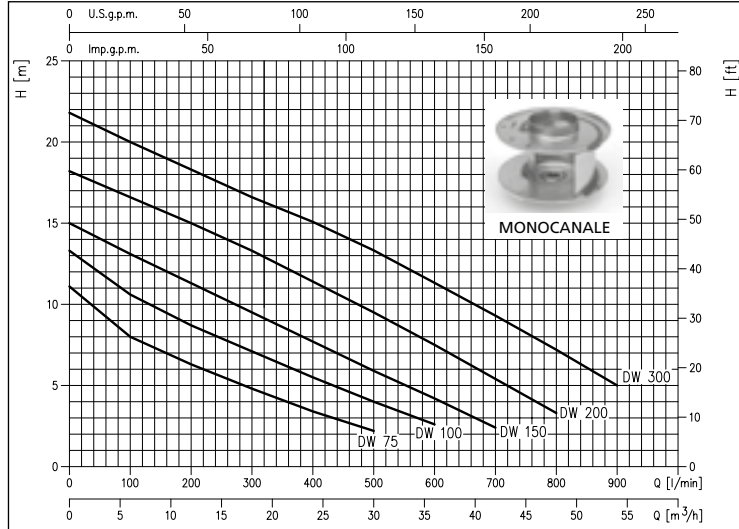


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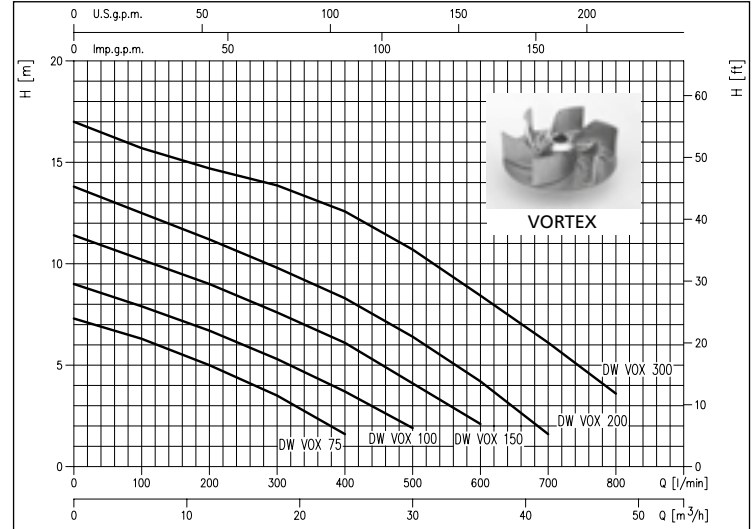
DW - DW VOX

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

PERFORMANCE CURVES DW (per ISO 9906 Annex A)



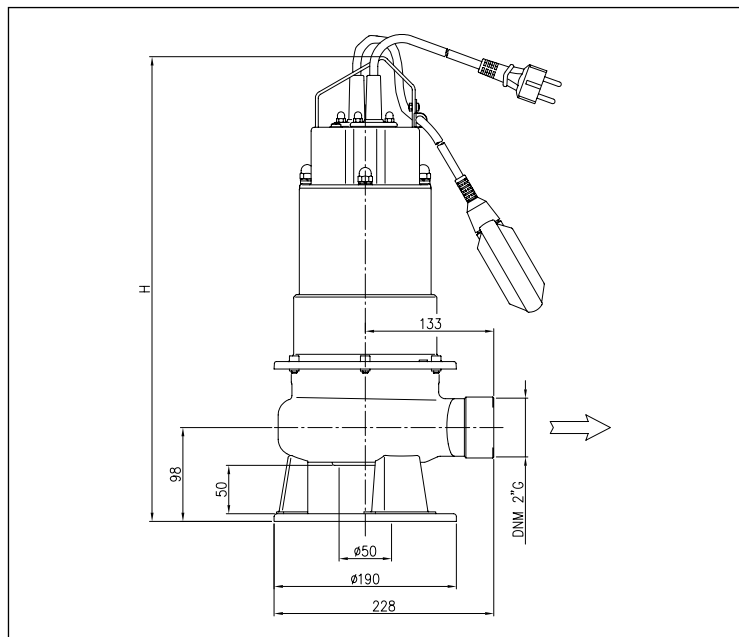
PERFORMANCE CURVES DW VOX (per ISO 9906 Annex A)



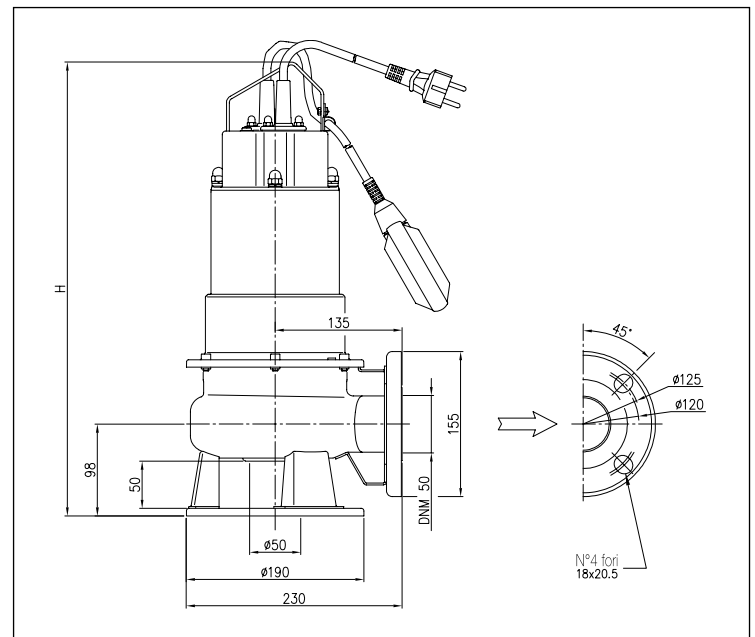
PERFORMANCE TABLE

Model		P ₁		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



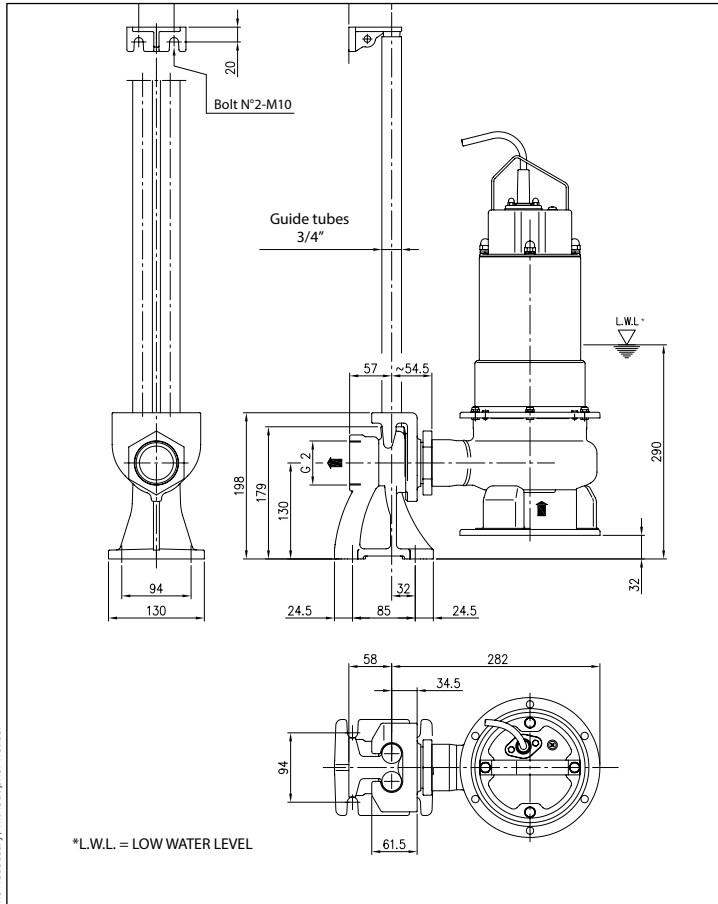
DIMENSIONS DWF - DWF VOX



DW - DW VOX

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

DIMENSIONS MOUNTING KIT DW-DW VOX

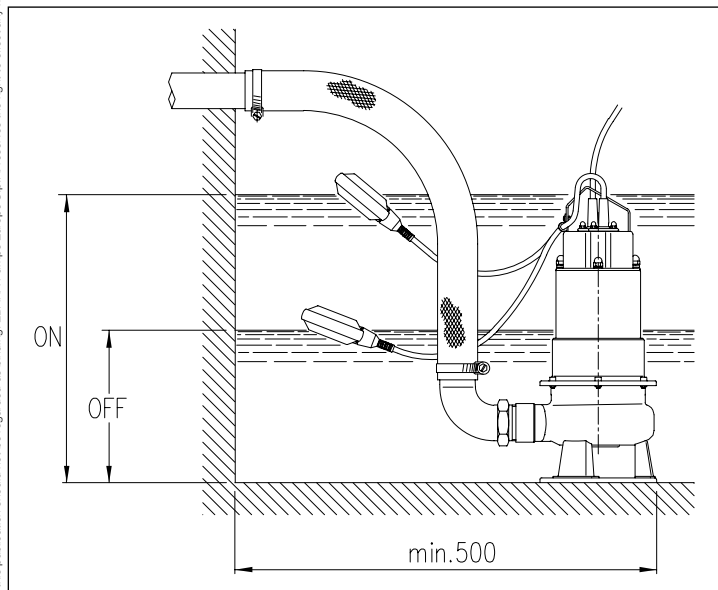


DIMENSIONS CHART

Model		Dimensions [mm]		Weight [kg]	
		H		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]	
		H		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)

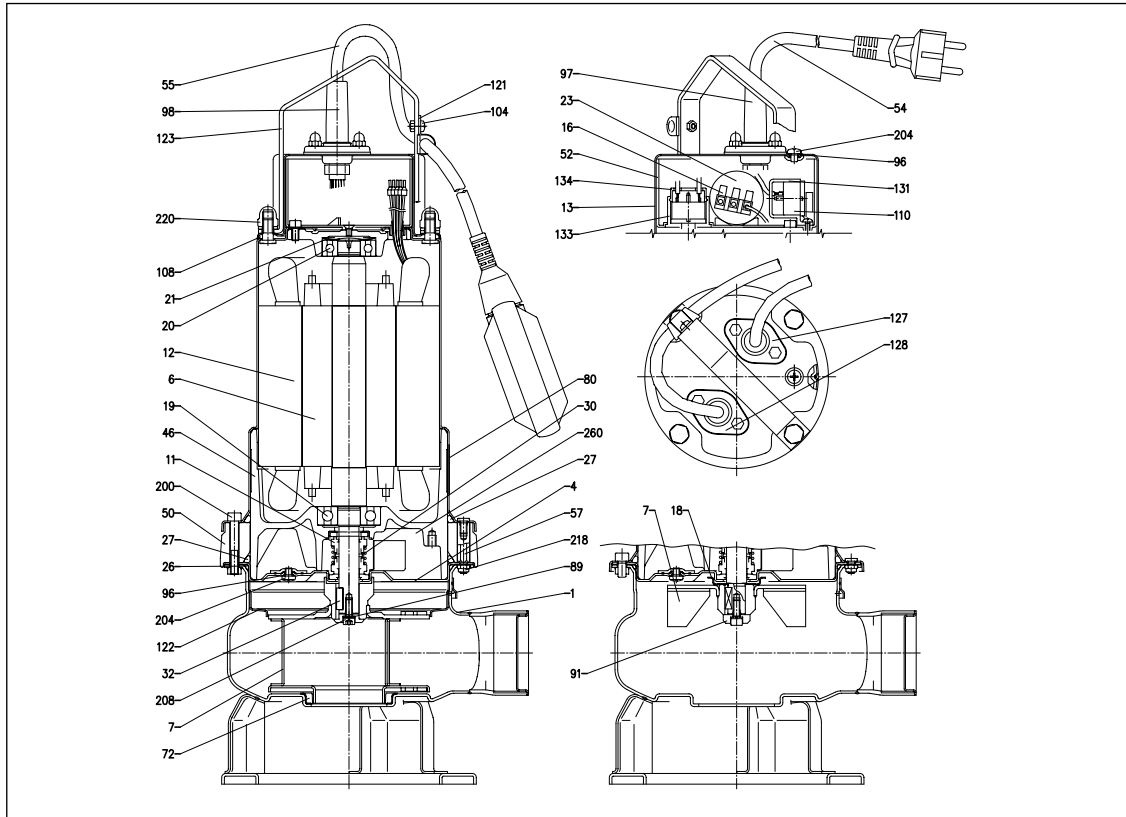
INSTALLATION



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

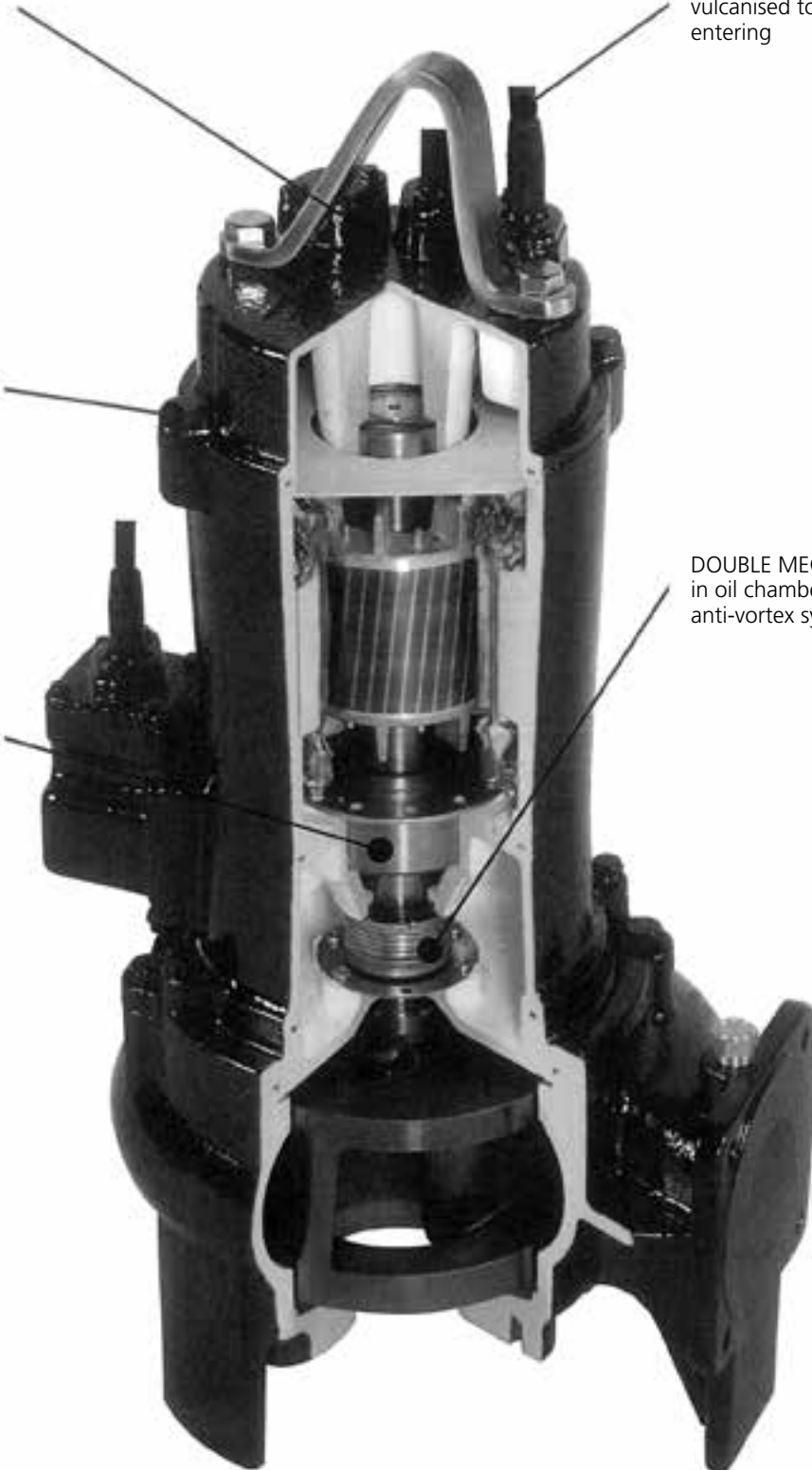
CABLE INLET
The power cable is vulcanised to prevent fluid entering

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

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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DS - DSF

SUBMERSIBLE ELECTRIC PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAR AND RAIN WATER

in cast iron



Submersible electric pumps with semi-open impeller for clear and rain water.

APPLICATIONS

- Drainage tanks
- Lifting rain water
- Lifting clear water and water with small suspended particles
- Draining reservoirs

TECHNICAL FEATURES

- High efficiency semi-open impeller
- Non-clogging filter
- Top and bottom seal ring (DS)

TECHNICAL DATA

- Maximum fluid temperature: 40°C
- Maximum solid dimensions: 5 mm (50DS)
6 mm (65DS) (40DSF 1.1, 1.8 kW)
7 mm (80DS) (40DSF 6 kW)
8 mm (100DS)
10 mm (65DSF)
- Maximum length of fibres: 50mm (all DS models)
- Sealed submersible motor
- Insulation class F (DS)
- Insulation class H (DSF)
- Protection rating IP68
- Voltage: three-phase 380-415±10%, 50Hz (DS)
single phase: 230±10%, 50Hz (DSF)
three-phase: 400/690±10%, 50Hz (DSF)
- Flanges: DN50, DN65, DN80, DN100 (DS)
- Flanges: DN40, DN 65 (DSF)
- Power up to 7.5 kW

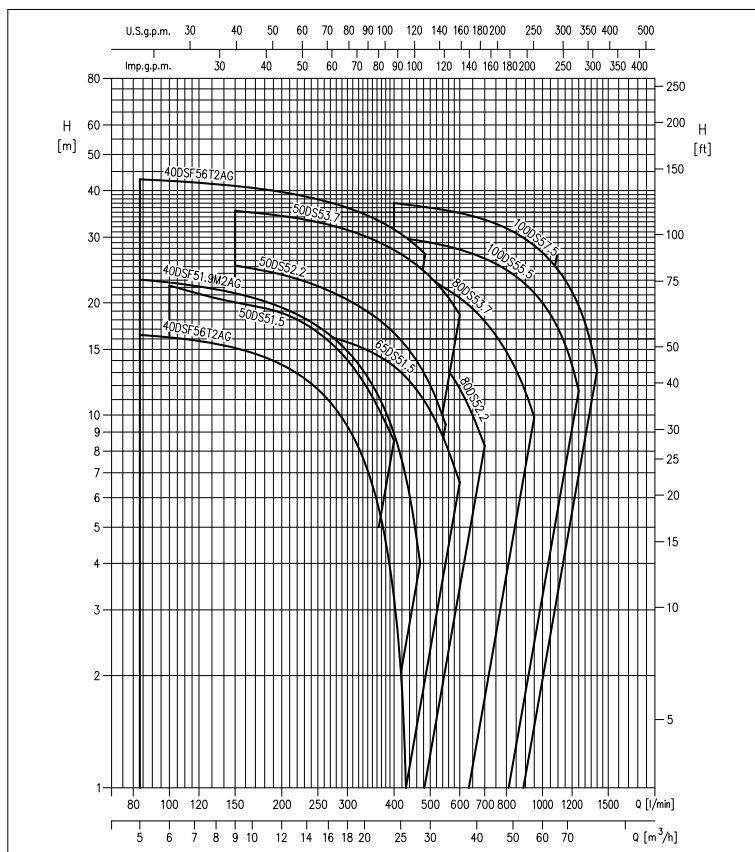
MATERIALS

- Pump body, semi-open impeller, elbow (bend) in cast iron
- Shaft in AISI 403 (DS) and AISI 420B (DSF)
- Mechanical seal: SiC/SiC/NBR (impeller side)
Carbon/Ceramic/NBR (motor side)
(6 kW and above for DSF)

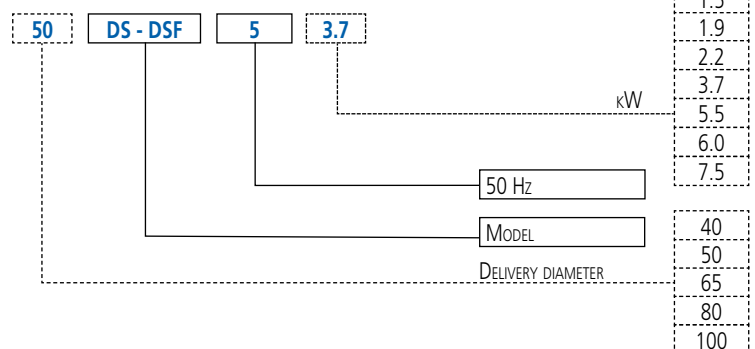
ACCESSORIES (on request)

For accessories, see page 151 onwards

PERFORMANCE RANGE (per ISO 9906 Annex A)



PUMP IDENTIFICATION CODE





DS - DSF

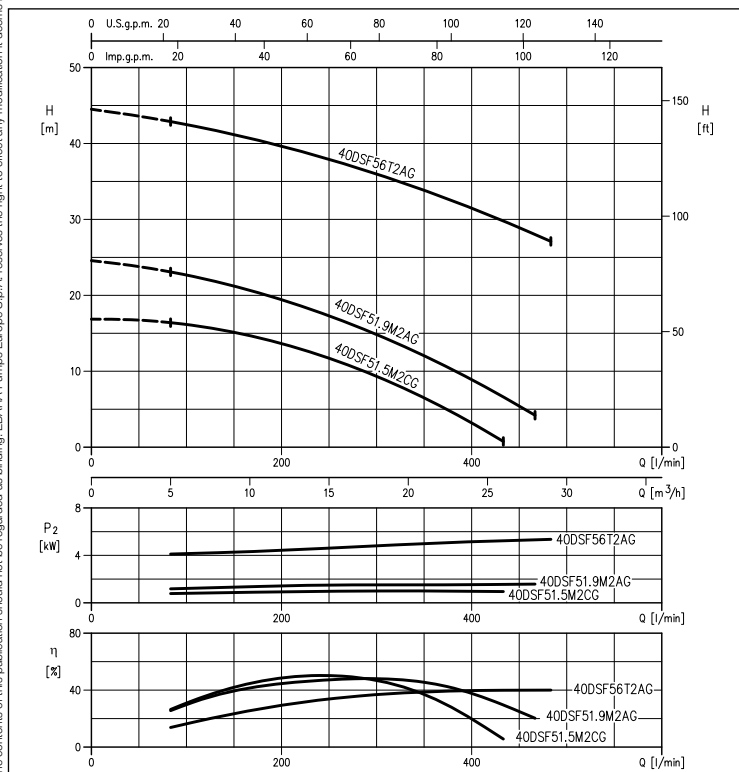
SUBMERSIBLE ELECTRIC PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAR AND RAIN WATER

in cast iron

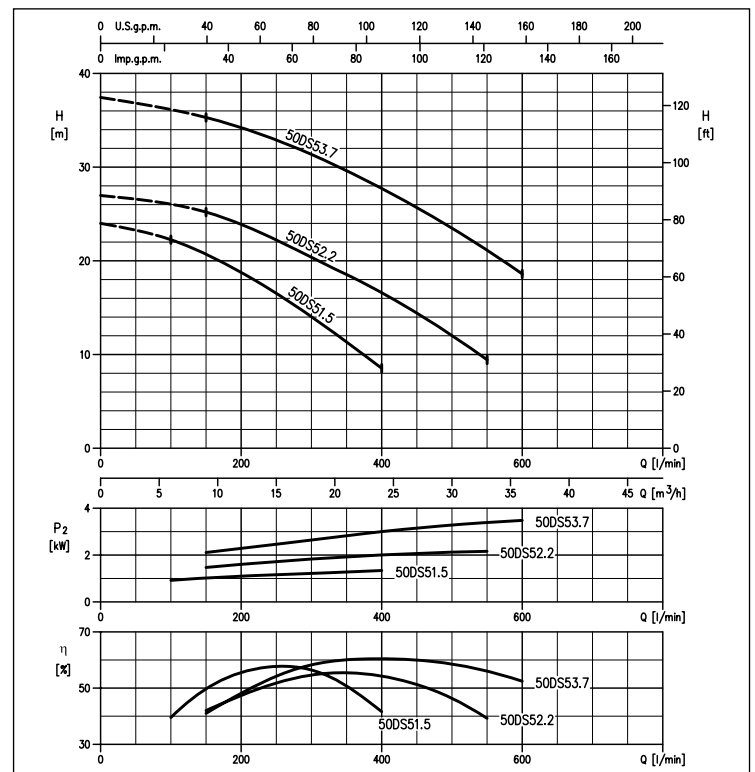
PERFORMANCE TABLE

Model	P ₂		Q=Flow rate																								
	[HP]	[kW]	l/min 83	100	150	200	250	300	400	433	450	467	473	483	500	550	580	600	700	800	950	1000	1170	1200	1250	1400	
			m ³ /h 5	6	9	12	15	18	24	26	27	28	28.4	29	30	33	34.8	36	42	48	57	60	70.2	72	75	84	
		H=Head [m]																									
40DSF51.5M2CG	2	1.5	16.4	16.2	15.1	13.6	11.7	9.3	3.2	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
40DSF51.9M2AG	2.5	1.9	23.1	22.7	21.2	19.4	17.3	14.8	8.9	6.6	5.4	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
40DSF56T2AG	8	6.0	43	42.5	41	39.6	37.9	36	31.5	30	28.9	28	27.7	27.1	-	-	-	-	-	-	-	-	-	-	-	-	
50DS51.5	2	1.5	-	22.3	20.7	18.8	16.5	14	8.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
50DS52.2	3	2.2	-	-	25.2	23.7	22.1	20.4	16.6	15.2	14.4	13.6	13.3	12.9	12	9.4	-	-	-	-	-	-	-	-	-	-	
50DS53.7	5	3.7	-	-	35.3	34.2	32.9	31.4	27.7	26.4	25.7	25.0	24.6	24.2	23.5	21.1	19.5	18.6	-	-	-	-	-	-	-	-	
65DS51.5	2	1.5	-	-	17.5	17.1	16.5	15.7	13.5	12.5	12	11	11.2	10.9	10.3	8.5	7.3	6.6	-	-	-	-	-	-	-	-	
80DS52.2	3	2.2	-	-	-	20.8	20.2	19.4	17.6	16.8	16.4	15.9	15.8	15.5	15	13.4	12.5	11.8	8.3	-	-	-	-	-	-	-	
80DS53.7	5	3.7	-	-	-	-	26.3	25.8	24.6	24.0	23.7	23.5	23.3	23.1	22.8	21.8	21.2	20.6	17.8	14.8	9.9	-	-	-	-	-	
100DS55.5	7.5	5.5	-	-	-	-	-	30.7	30	30	29.5	29.4	29.3	29.2	29	28.4	28	27.8	26.3	24.5	21.3	20.0	14.8	13.6	11.6	-	
100DS57.5	10	7.5	-	-	-	-	-	-	37	37	36.6	36.4	36.3	36.2	36	35.5	35.1	34.8	33.4	31.7	28.5	27.3	22.5	21.4	19.7	13.2	

PERFORMANCE CURVES series 40DSF51.5M2CG (1.5 kW) series 40DSF51.9M2AG (1.9 kW) series 40DSF56T2AG (6.0 kW)



PERFORMANCE CURVES series 50DS51.5 (1.5 kW) series 50DS52.2 (2.2 kW) series 50DS53.7 (3.7 kW)



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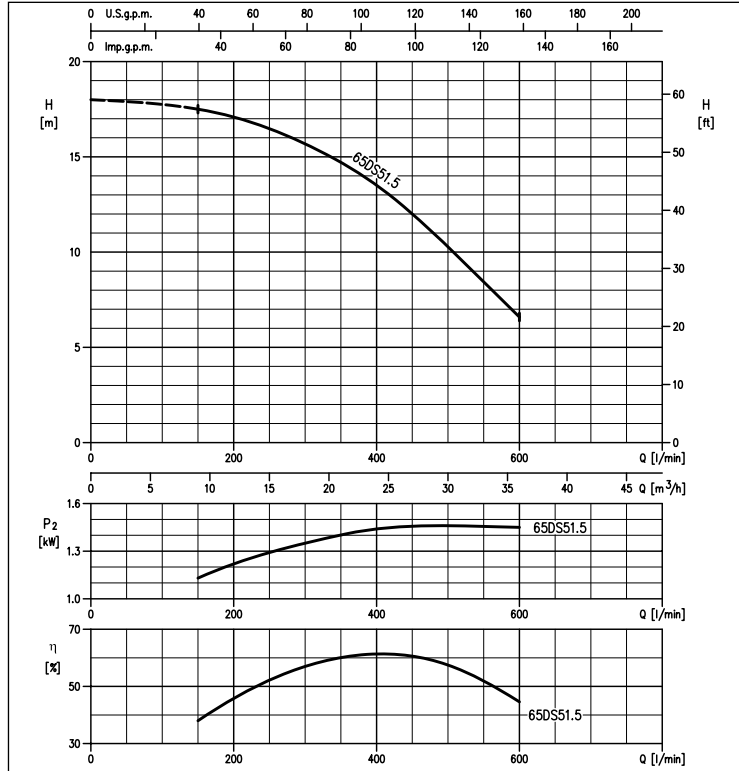
DS - DSF

SUBMERSIBLE ELECTRIC PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAR AND RAIN WATER

in cast iron

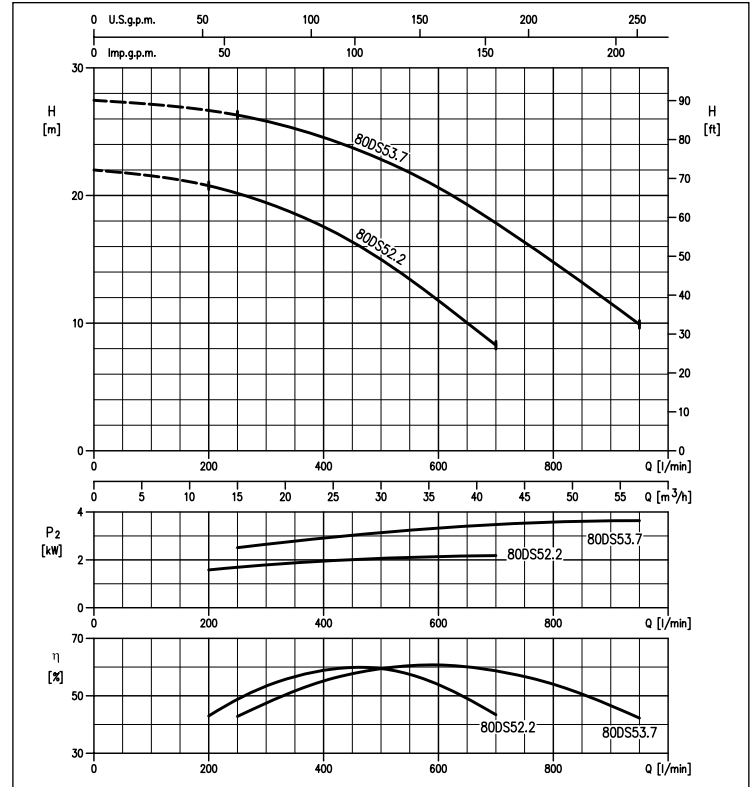
PERFORMANCE CURVES series 65DS51.5 (1.5 kW)

(per ISO 9906 Annex A)



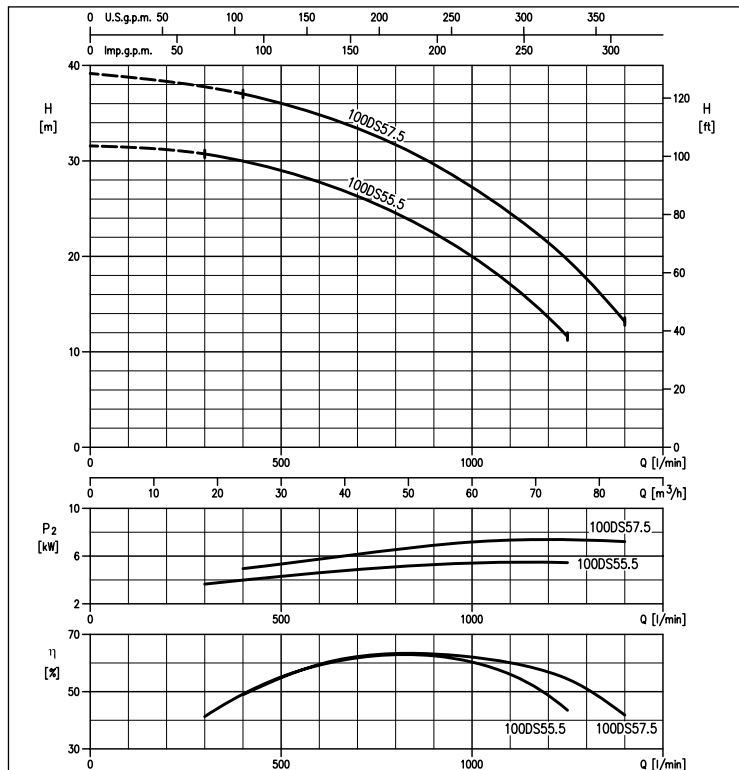
PERFORMANCE CURVES series 80DS52.2 (2.2 kW) series 80DS53.7 (3.7 kW)

(per ISO 9906 Annex A)



PERFORMANCE CURVES series 100DS55.5 (5.5 kW) series 100DS57.5 (7.5 kW)

(per ISO 9906 Annex A)



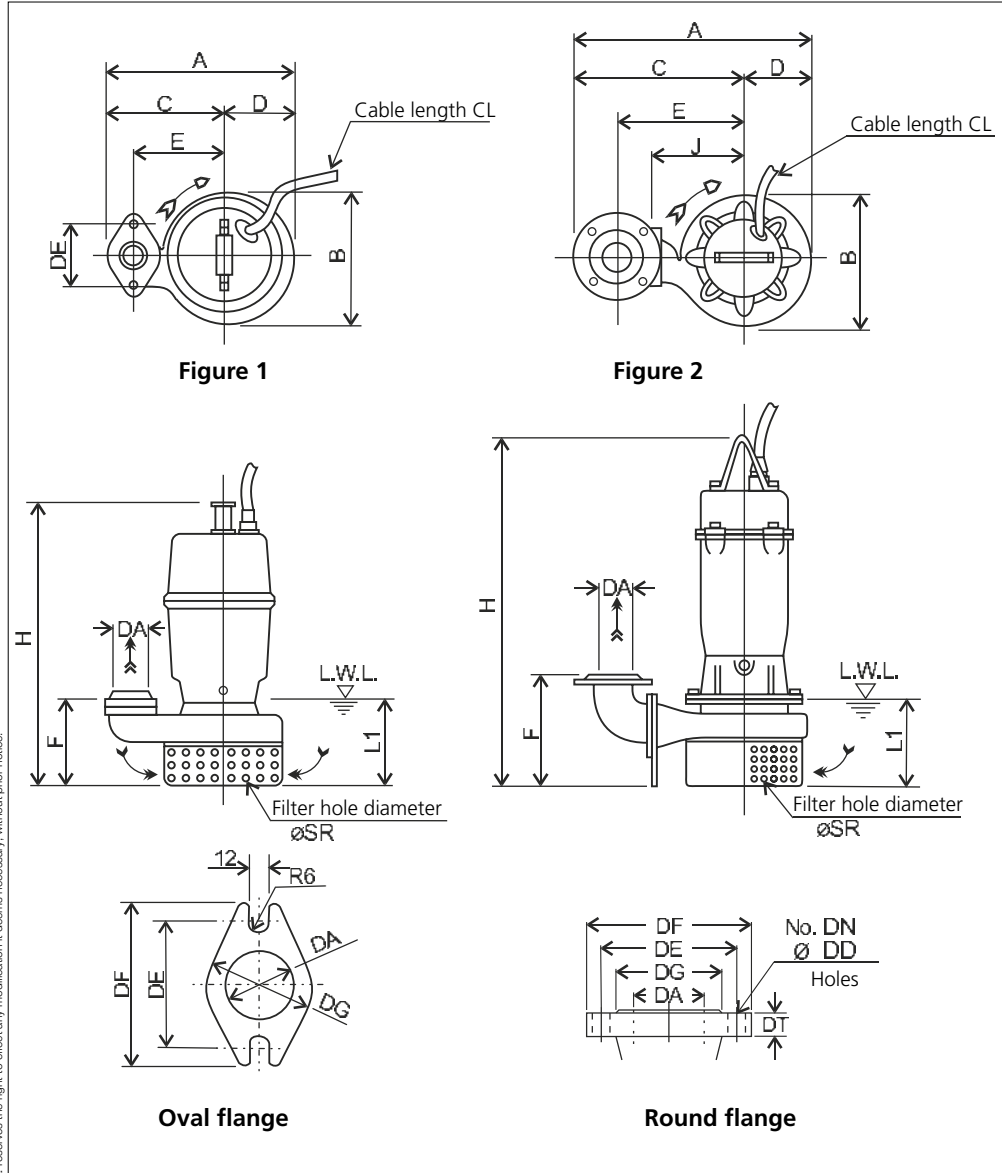
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DS - DSF

SUBMERSIBLE ELECTRIC PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAR AND RAIN WATER.

in cast iron

DIMENSIONS DS



Type	DA	DE	DF	DG	DT	DN	DD
Oval	50	96	114	76	-	-	-
Round	65	145	185	118	17	4	19
	80	160	220	132	19	8	
	100	180	220	156	21	8	
	100	180	220	156	21	8	

TABLE OF DIMENSIONS DS

DA	Model	Fig.	Flange type	[kW]	DA	A	B	C	D	E	F	H	DE	J	L1 (*)	øSR	CL [m]	Weight [kg]
50	50DS51.5	1	Oval	1.5	G2	266	200	168	98	130	115	450	96	-	120	10	6	25
	50DS52.2			2.2	50	433	245	313	120	235	198	619	-	180	160		10	55
	50DS53.7			3.7														61
65	65DS51.5	2	Round	1.5	65	407	210	303	104	215	197	503	-	150	120	10	6	35
	80DS52.2			2.2	80	503	268	368	135	275	215	625	-	200	160		10	59
	80DS3.7			3.7													64	
100	100DS55.5			5.5	100	615	309	460	155	355	257	730	-	250	200	13	10	92
	100DS57.5			7.5													104	

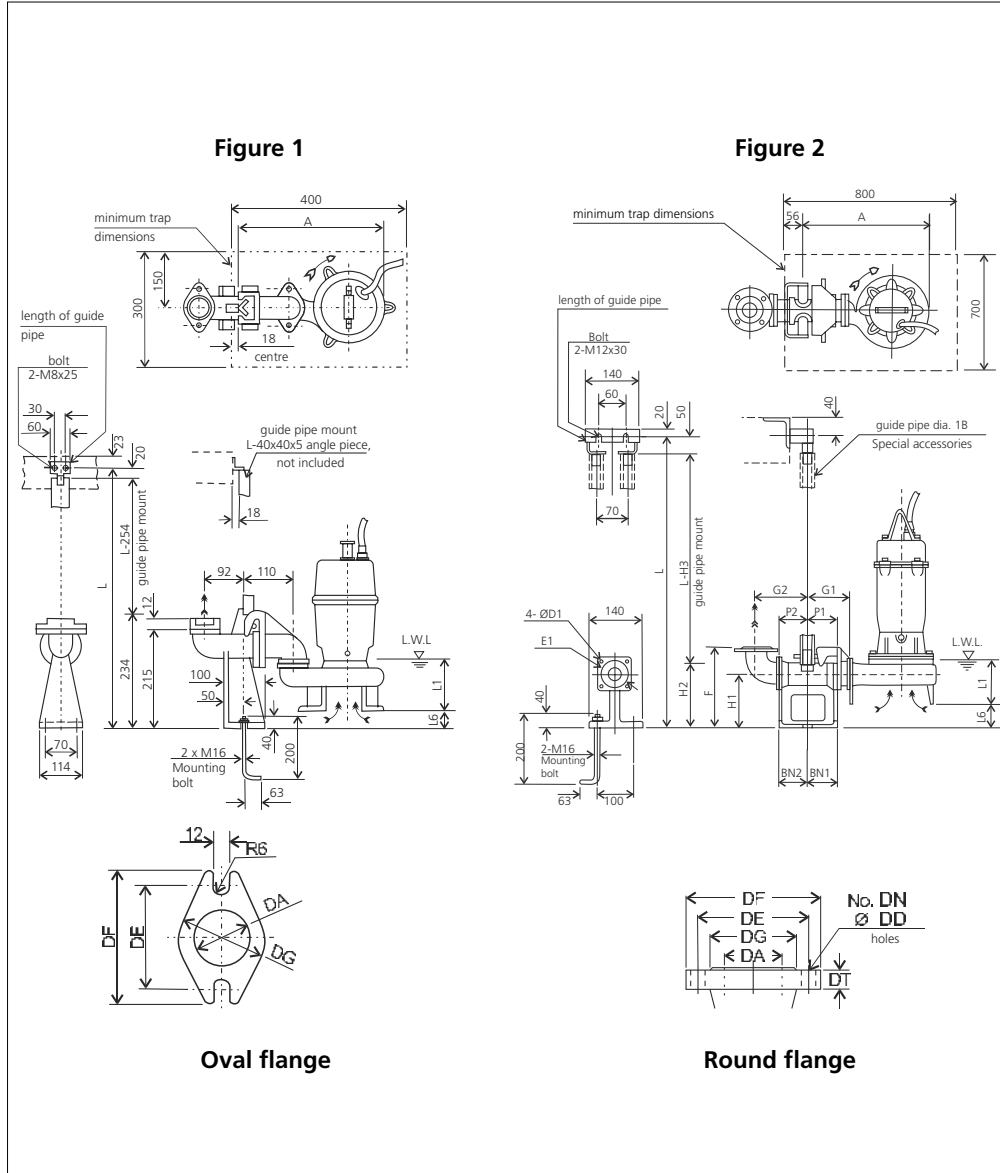
(*) - L.W.L. (minimum fluid level)

DS - DSF

**SUBMERSIBLE ELECTRIC PUMPS
WITH SEMI-OPEN IMPELLER FOR CLEAR AND RAIN WATER.**

in cast iron

DIMENSIONS DS with QDC (lowering device) (1.5 - 3.7 kW)



Type	DA	DE	DF	DG	DT	DN	DD
Oval	50	96	114	76	-	-	-
		125	165	99	17	4	19
Round	65	145	185	118	19	8	
	80	160	220	132			

TABLE OF DIMENSIONS DS with QDC (lowering device kit) (1.5 - 3.7 kW)

DA	Model	Fig.	Flange type	[kW]	DA	A	P1	P2	G1	G2	F	H1	H2	H3	L1 ^(*)	L6	BN1	BN2	D1	E1	QDC (lowering device kit) Model	Weight [kg]
50	50DS51.5	1	Oval	1.5	G2	-	-	-	-	-	-	-	-	-	120	25	-	-	-	-	LS50	9
	50DS52.2			2.2	50	415	75	80	115	135	230	135	165	215	160	32		80	12	120	LM50	11
	50DS53.7			3.7																		
65	65DS51.5	2	Round	1.5	65	374	75	95	120	160	250	145	190	240	120	53	75	95	12	140	LM65	14
	65DS52.2			2.2																		
80	80DS52.2	2	Round	2.2	80	460	75	90	125	165	285	175	230	280	160	70		90	15	155	LM80	17
	80DS3.7			3.7																		

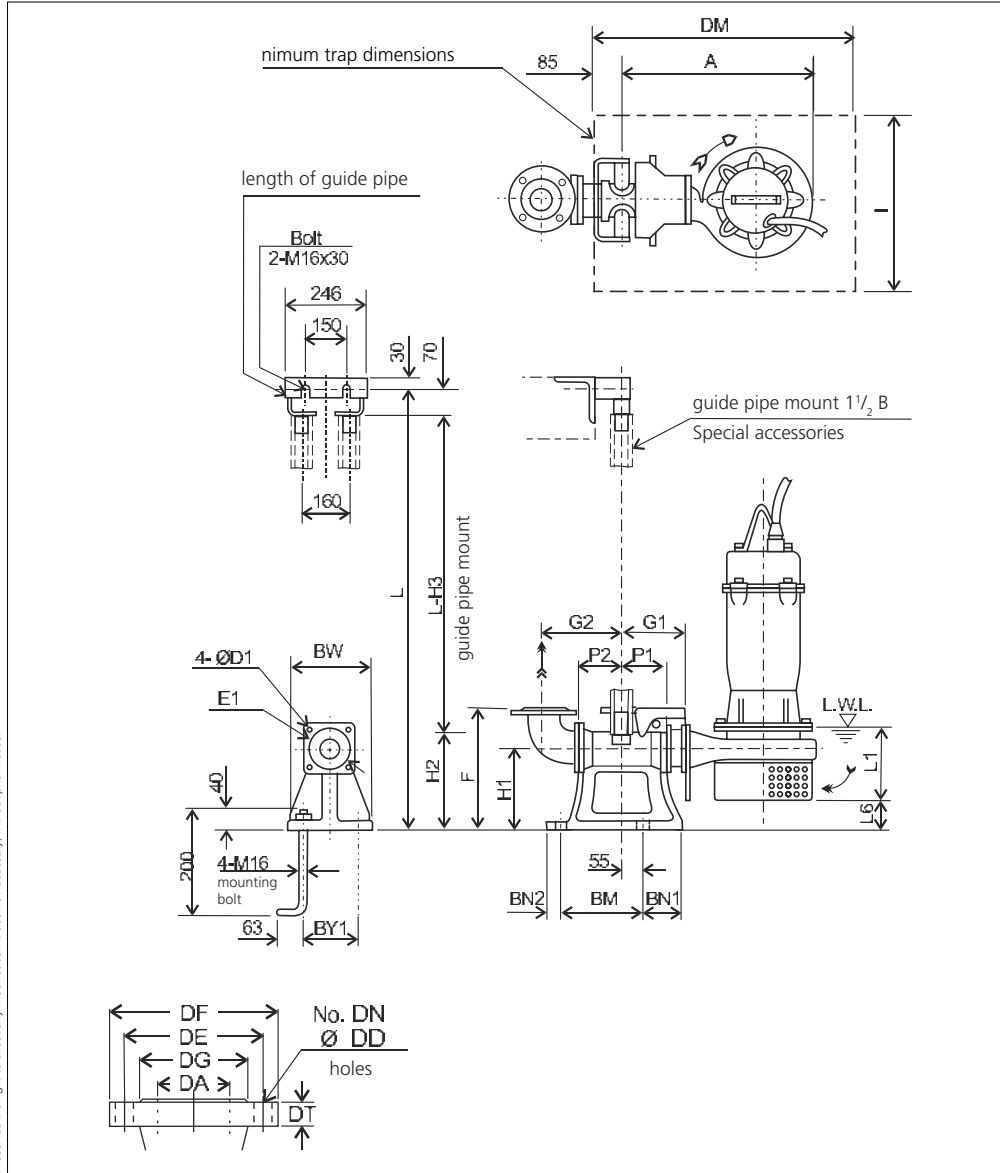
(*) - L.W.L. (minimum fluid level)

DS - DSF

**SUBMERSIBLE ELECTRIC PUMPS
WITH SEMI-OPEN IMPELLER FOR CLEAR AND RAIN WATER.**

in cast iron

DIMENSIONS DS with QDC (lowering device) (5.5 - 7.5 kW)



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

TABLE OF DIMENSIONS DS with QDC (lowering device kit) (5.5 - 7.5 kW)

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	100DS55.5 100DS57.5	5.5 7.5	590	105	105	185	210	365	240	265	335	200	108	100	40	220	180	230	800	700	19	175	LL100	46

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

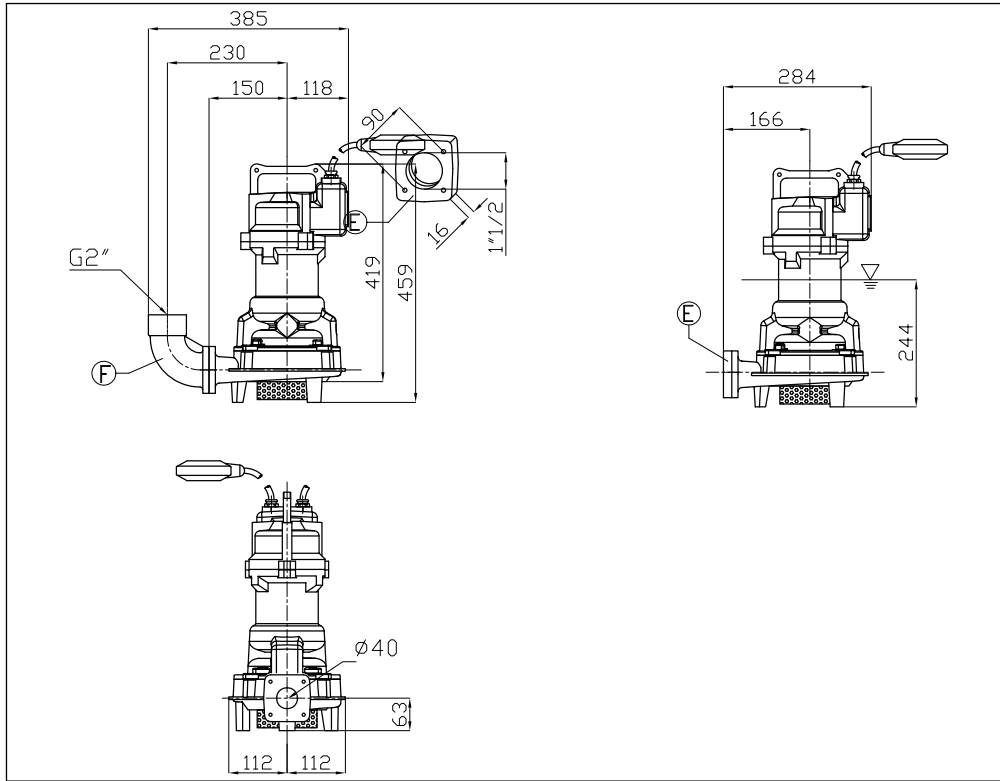
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DS - DSF

**SUBMERSIBLE ELECTRIC PUMPS
WITH SEMI-OPEN IMPELLER FOR CLEAR AND RAIN WATER.**

in cast iron

DIMENSIONS 40DSF/40DSF with QDC (1.5 - 1.9 kW)



DIMENSIONS CHART 40DSF/40DSF with QDC (1.5 - 1.9 kW)

DA	Model	[kW]	Weight [kg]
40	40DSF51.5M2CG	1.5	38
	40DSF51.9M2AG	1.9	38

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DS - DSF

**SUBMERSIBLE ELECTRIC PUMPS
WITH SEMI-OPEN IMPELLER FOR CLEAR AND RAIN WATER.**

in cast iron

DIMENSIONS 40DSF/40DSF WITH QDC (6.0 kW)

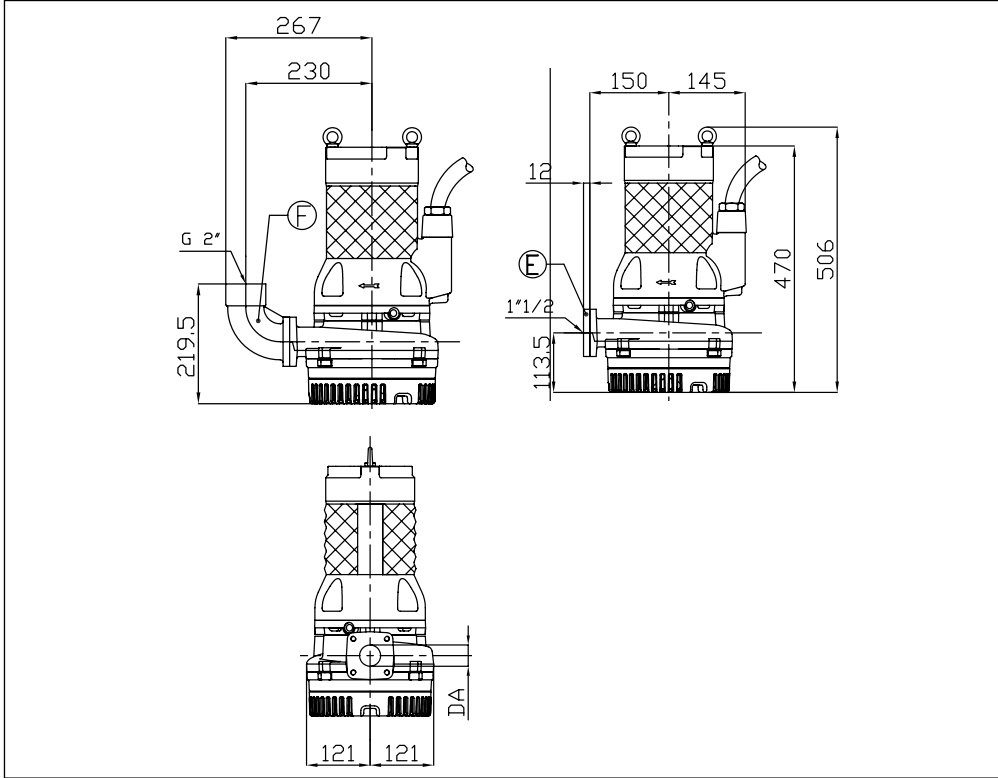
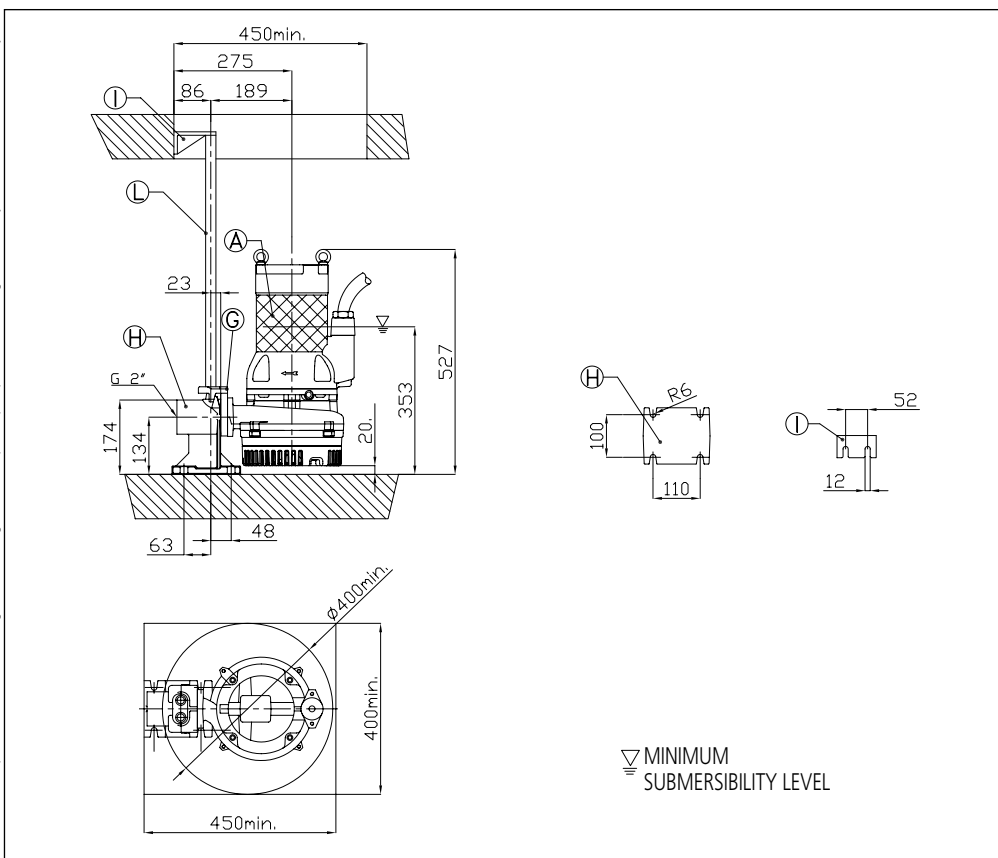


TABLE OF DIMENSIONS 40DSF (6.0 kW)

DA	Model	[kW]	Weight [kg]
40	40DSF56T2AG	6	68



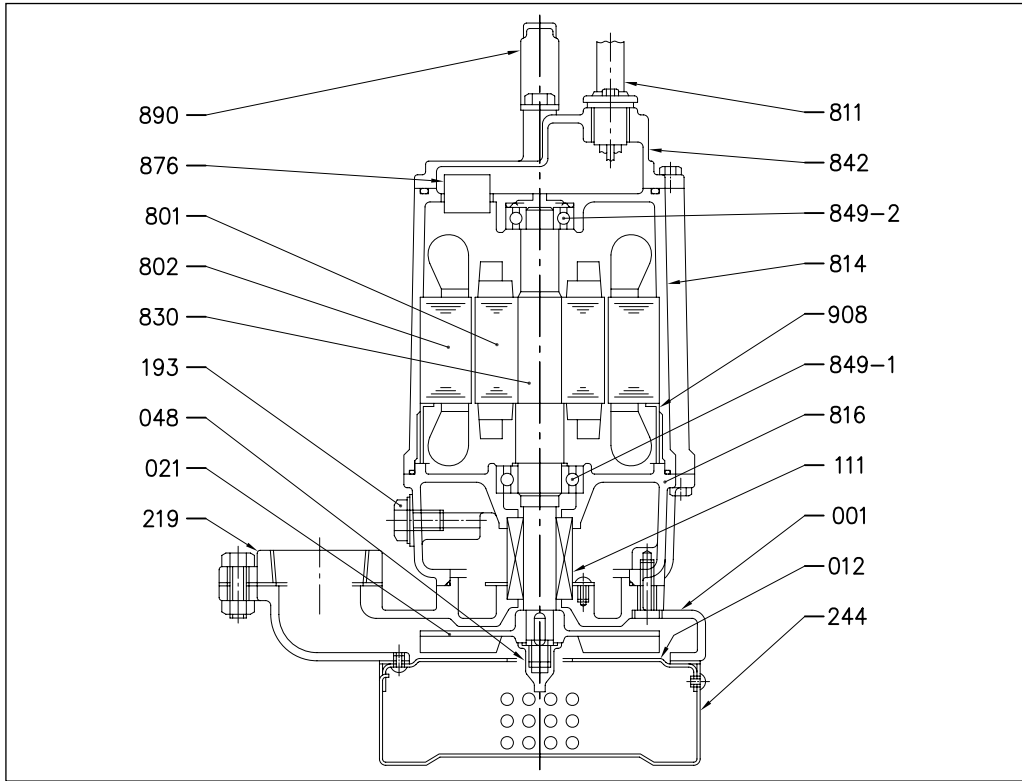
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DS - DSF

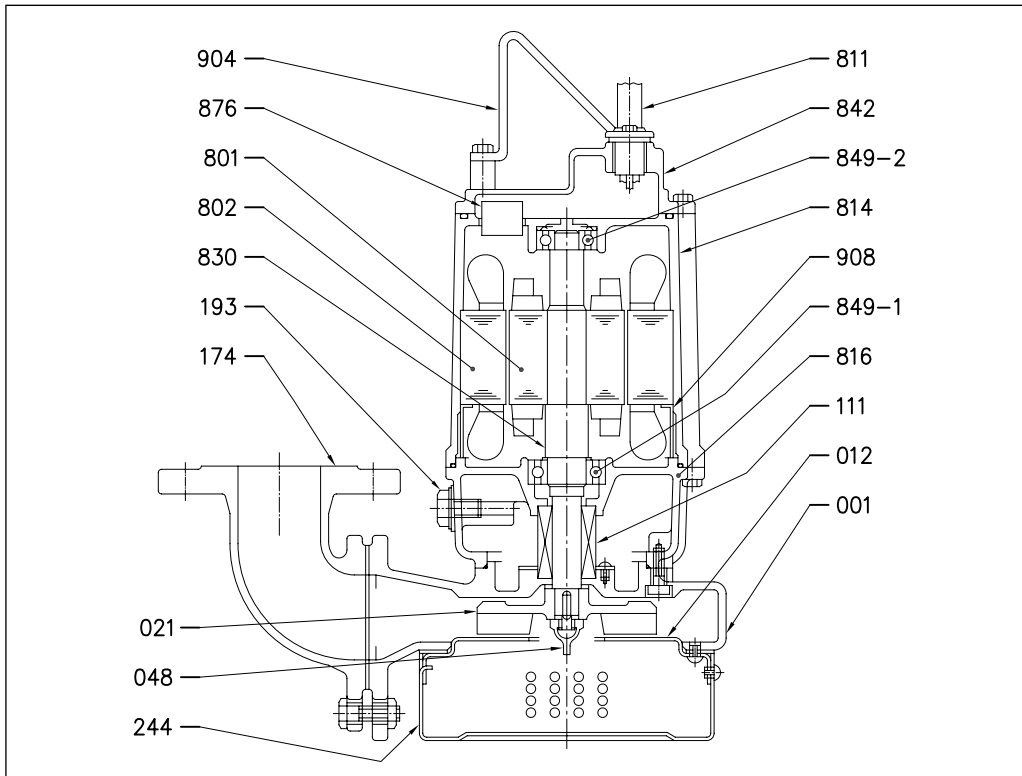
**SUBMERSIBLE ELECTRIC PUMPS
WITH SEMI-OPEN IMPELLER FOR CLEAR AND RAIN WATER.**

in cast iron

SECTIONAL VIEW 50 DS (1.5kW)



SECTIONAL VIEW 65 DS (1.5kW)



DS - DSF

SUBMERSIBLE ELECTRIC PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAR AND RAIN WATER.

in cast iron

SECTIONAL VIEW 50(80) DS (2.2 - 3.7 kW) - 100 DS (5.5 - 7.5 kW)

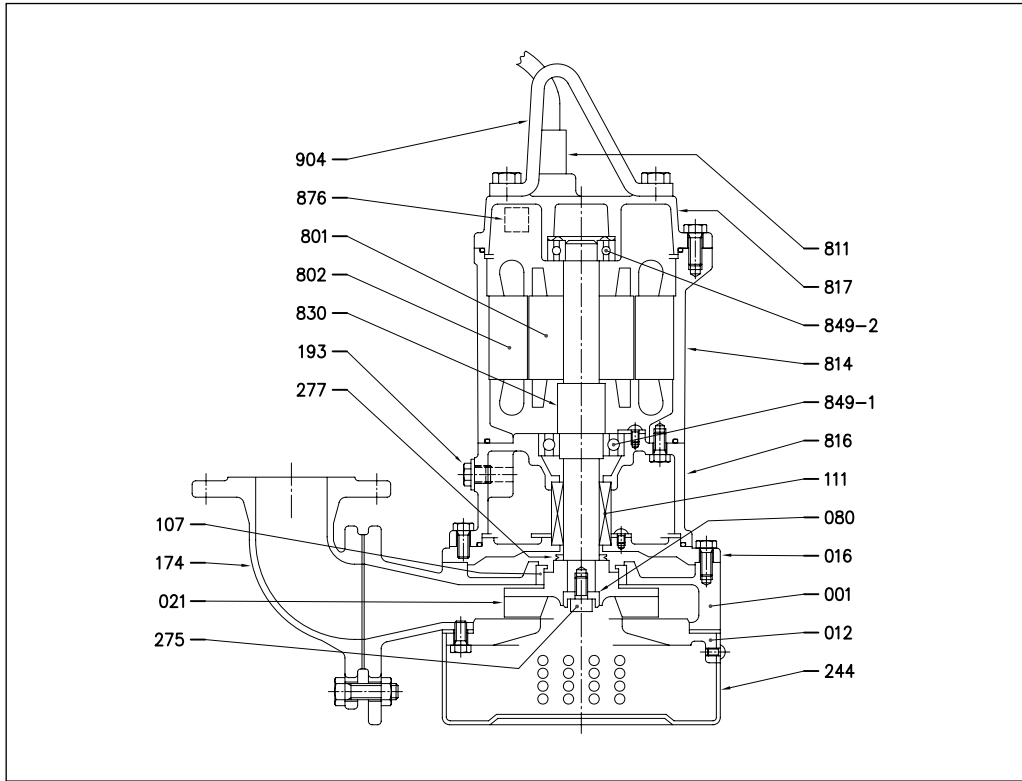


TABLE OF MATERIALS DS

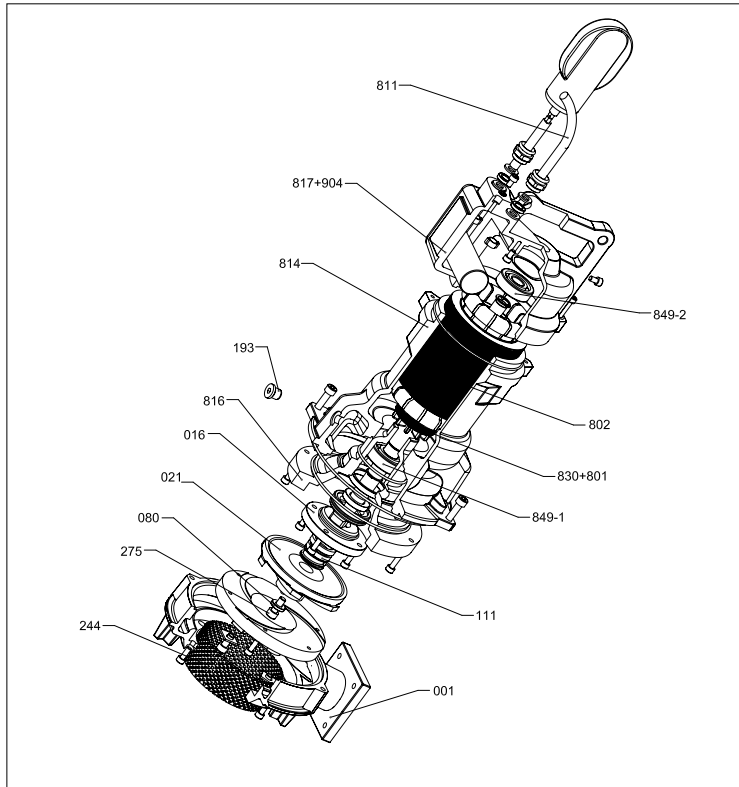
Ref.	Name	Material	Ref.	Name	Material
001	Pump body	Cast iron EN-GHJL-200-EN 1561	811	Cable	-
012	Suction side cover	EN 1.4301 (AISI 304 stainless steel)	814	Motor casing	Cast iron EN-GHJL-200-EN 1561
021	Impeller	Cast iron EN-GHJL-200-EN 1561	816	Motor mount	Cast iron EN-GHJL-200-EN 1561
048	Impeller nut	Brass	830	Shaft	EN 1.4006 (AISI403)
111	Mechanical seal	-	842	Motor cover	Cast iron EN-GHJL-200-EN 1561
174	Drain bend	Cast iron EN-GHJL-200-EN 1561	849-1	Ball bearing	-
193	Oil cap	NBR/EN 1.4301 (AISI 304 stainless steel)	849-2	Ball bearing	-
244	Filter	EN 1.4301 (AISI 304 stainless steel)	876	Motor cutout	-
801	Rotor	-	904	Lifting hook	Stainless steel
802	Stator	-	908	Spacer	Steel

DS - DSF

SUBMERSIBLE ELECTRIC PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAR AND RAIN WATER.

in cast iron

SECTIONAL VIEW 40 DSF (1.5 - 1.9 kW)



SECTIONAL VIEW 40 DSF (6 kW)

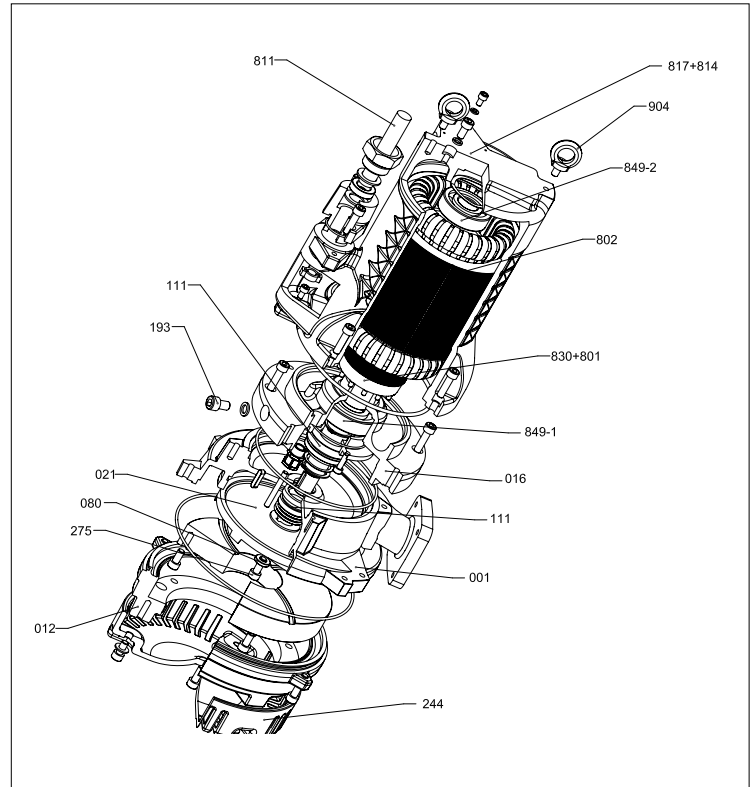


TABLE OF MATERIALS DSF

Ref.	Name	Material	Ref.	Name	Material
001	Pump body	Cast iron EN-GJL-250	811	Cable	-
012	Suction side cover	Cast iron EN-GJL-250	814	Motor casing	Cast iron EN-GJL-250
016	Mechanical seal cover	Cast iron EN-GJL-250	816	Upper mount	Cast iron EN-GJL-250
021	Impeller	Ductile cast iron GS400 UNI-EN1563	817	Lower bearing	Cast iron EN-GJL-250
080	Bushing	Steel	830	Shaft	AISI 420B
111	Mechanical seal	-	842-1	Motor cover	Cast iron EN-GJL-250
193	Oil cap	NBR/stainless steel	842-2	Motor cover	Cast iron EN-GJL-250
244	Filter	AISI 316L	849-1	Ball bearing	-
275	Impeller nut	Class A2 AISI 304 stainless steel	849-2	Ball bearing	-
801	Rotor	-	904	Lifting hook [1]	Cast iron EN-GJL-250
802	Stator	-	904	Lifting hook [2]	Steel

[1] - For models 40 DSF (1.5 - 1.9 kW)

[2] - For models 40 DSF (6 kW) and 40 DSF (15.9 kW)

DS - DSF

SUBMERSIBLE ELECTRIC PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAR AND RAIN WATER.

in cast iron

ELECTRICAL DATA TABLE DS (1.5 - 3.7 kW)

[P ₂]		[kW]	1.5			2.2			3.7			
Resistance at 20°C		[Ω]	11.973			4.942			2.647			
GD ²		[kg/m ²]	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
	100%	rpm	[min ⁻¹]	2872	2887	2898	2895	2901	2927	2890	2917	2922
		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	[%]	93.88	92.08	89.21	89.71	87.87	83.88	90.24	88.18	86.00
	rpm		[min ⁻¹]	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
Starts per hour			10									
Model			ZDSEU									

ELECTRICAL DATA TABLE DS (5.5 - 7.5 kW)

[P ₂]		[kW]	5.5			7.5			
Resistance at 20°C		[Ω]	2.001			1.345			
GD ²		[kg/m ²]	0.03			0.037			
Voltage		[V]	380	400	415	380	400	415	
Full load	0%	Current	[A]	3.00	2.70	2.70	3.65	3.20	3.27
		Power	[W]	340	800	340	400	800	400
	75%	Current	[A]	8.37	8.36	7.59	11.43	11.02	10.17
		Efficiency	[%]	82.89	77.34	83.68	83.36	79.51	84.44
		Power factor	[%]	90.37	92.05	90.40	89.70	92.68	91.14
	100%	rpm	[min ⁻¹]	2944	2932	2945	2941	2928	2942
		Current	[A]	10.80	10.80	9.80	14.80	14.30	13.20
		Efficiency	[%]	83.87	79.10	84.51	84.26	80.96	85.13
		Power factor	[%]	92.25	92.92	92.39	91.34	93.50	92.85
	rpm		[min ⁻¹]	2922	2905	2923	2917	2900	2918
	Torque with rotor locked		[%]	168	155	168	159	154	159
	Starting current		[A]	77.0	70.0	70.0	105.0	93.5	94.0
Starts per hour			10						
Model			ZDSEU						

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DS - DSF

SUBMERSIBLE ELECTRIC PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAR AND RAIN WATER.

in cast iron

ELECTRICAL DATA TABLE DSF (1.5 - 6 kW)

[P ₂]		[kW]	1.5	1.9	6	
Resistance at 20°C		[Ω]	-	-	-	
GD ²		[kg/m ²]	0.0021	0.0025	0.015	
Voltage		[V]	230	230	400/690	
Full load	0%	Current [A]	-	-	-	
		Power [W]	-	-	-	
	75%	Current [A]	-	-	-	
		Efficiency [%]	72	80	73	
		Power factor [%]	0.97	0.97	0.84	
		rpm [min ⁻¹]	-	-	-	
	100%	Current [A]	-	-	-	
		Efficiency [%]	73	73	90	
		Power factor [%]	0.99	0.99	0.88	
		rpm [min ⁻¹]	-	-	-	
	Torque with rotor locked		[%]	-	-	-
	Starting current		[A]	33.3	35	64.3
Phases			1		3	
Starts per hour			15			
Model			M271M-1.5-230/50NY-IE	M271M-1.9-230/50NY-IE	M210T-6-400/50YY-IE3	
Type of pump			40DSF51.5M2CG	40DSF51.9M2AG	40DSF56T2AG	

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

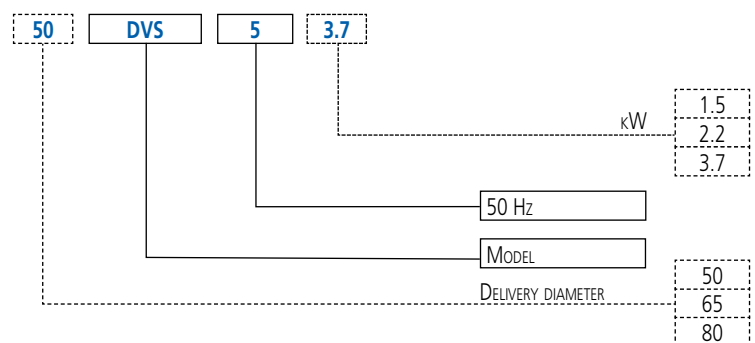
MATERIALS

- 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)

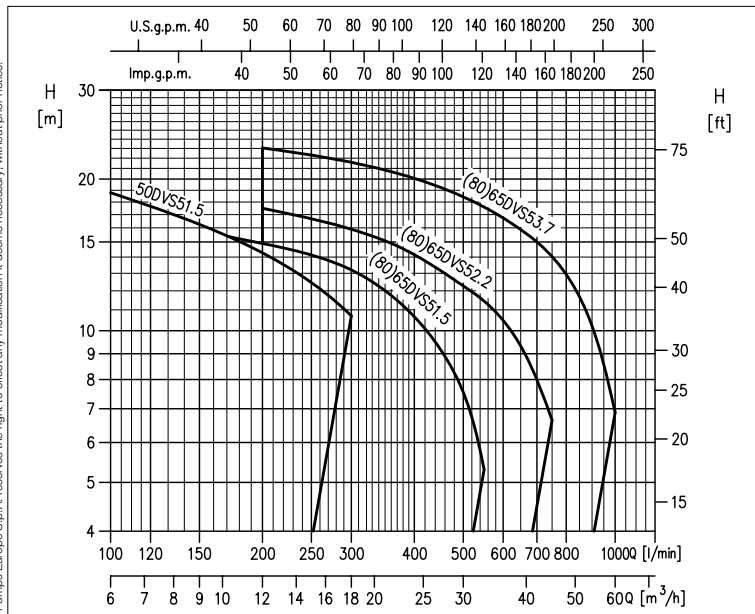
ACCESSORIES (on request)

For accessories, see page 151 onwards

PUMP IDENTIFICATION CODE



PERFORMANCE RANGE (per ISO 9906 Annex A)



PERFORMANCE TABLE

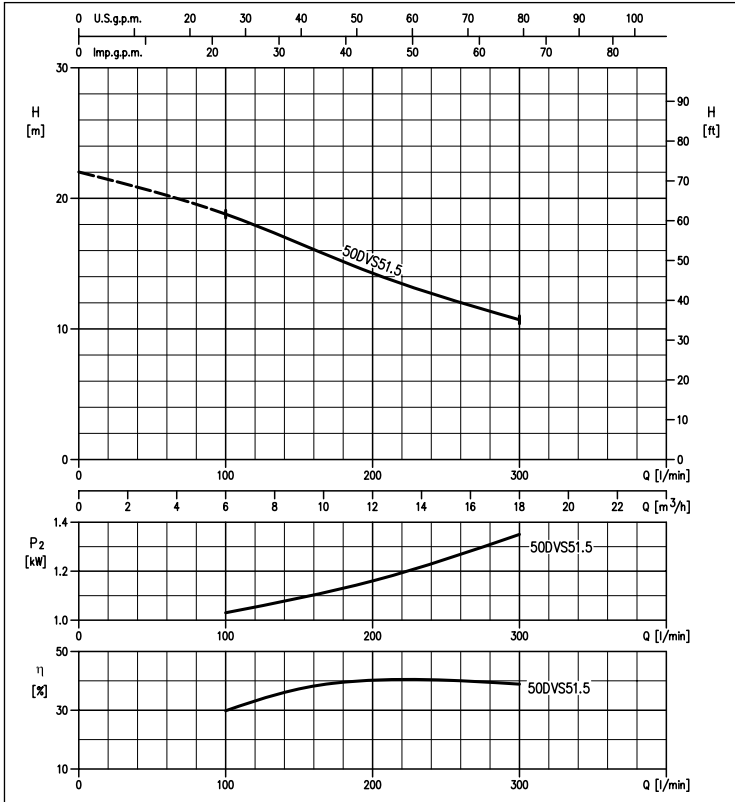
Model	P ₂		Q = Flow rate												
	[HP]	[kW]	l/min m³/h	100	150	200	300	400	500	550	600	700	750	900	1000
50DVS1.5	2	1.5		18.8	16.6	14.3	10.7	-	-	-	-	-	-	-	-
(80)65DVS51.5	2	1.5		-	15.8	14.9	13.2	10.9	7.6	5.3	-	-	-	-	-
(80)65DVS52.2	3	2.2		-	-	17.5	15.9	14.2	12.3	11.5	10.5	8.1	6.6	-	-
(80)65DVS53.7	5	3.7		-	-	23.0	21.6	20.1	18.4	17.6	16.7	15.0	14.0	10.4	6.9



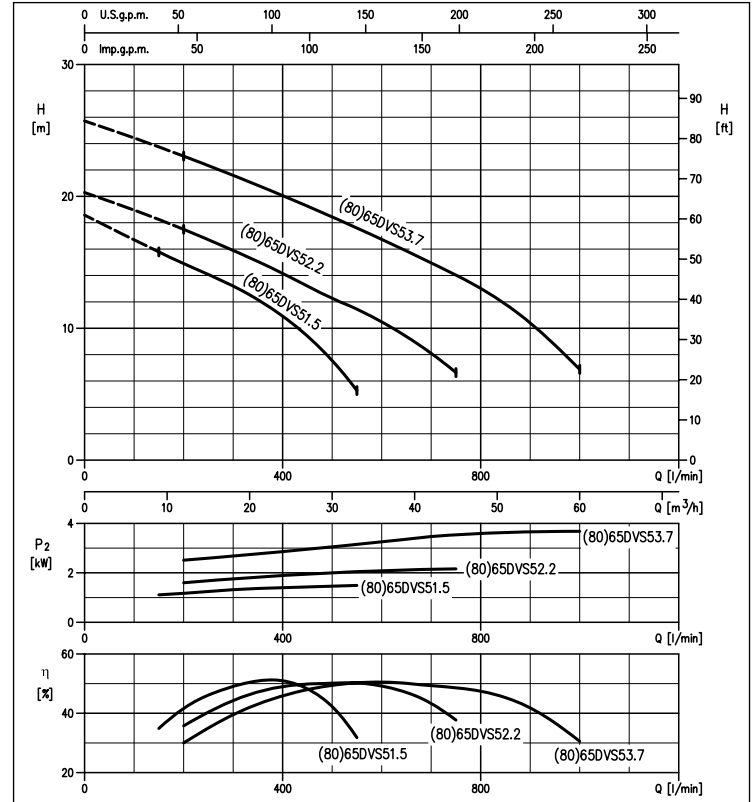
DVS

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

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



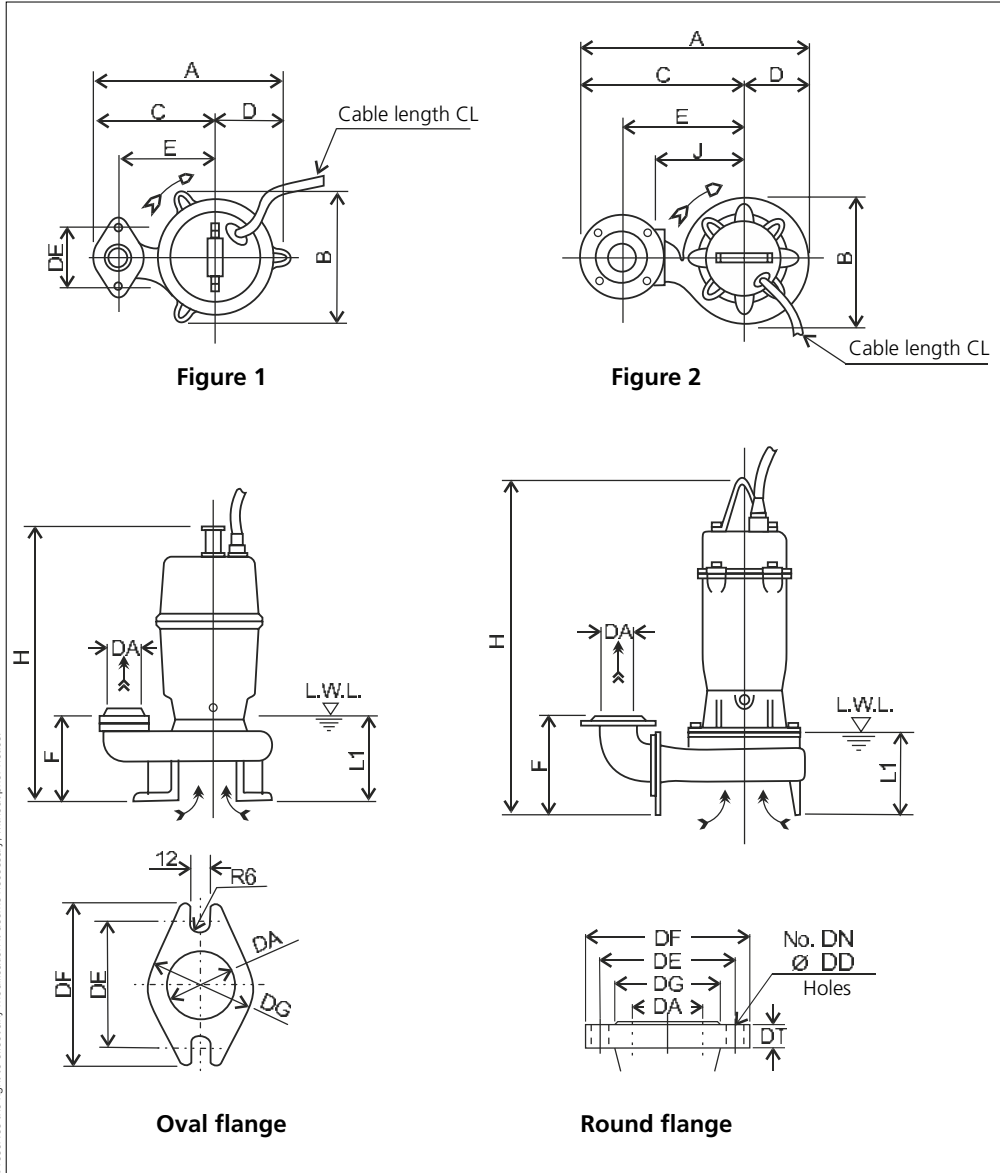
PERFORMANCE CURVES series (80)65DVS51.5 (1.5 kW)
series (80)65DVS52.2 (2.2 kW)
series (80)65DVS53.7 (3.7 kW)
(per ISO 9906 Annex A)



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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
	1.5			34													
65	65DVS51.5	2	Round	1.5	65	396	195	298	98	210	178	519	-	145	125	10	50
	2.2			59													
	3.7			35													
80	80DVS51.5	2	Round	1.5	80	411	195	313	98	220	183	519	-	145	125	6	35
	2.2			51													
	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)

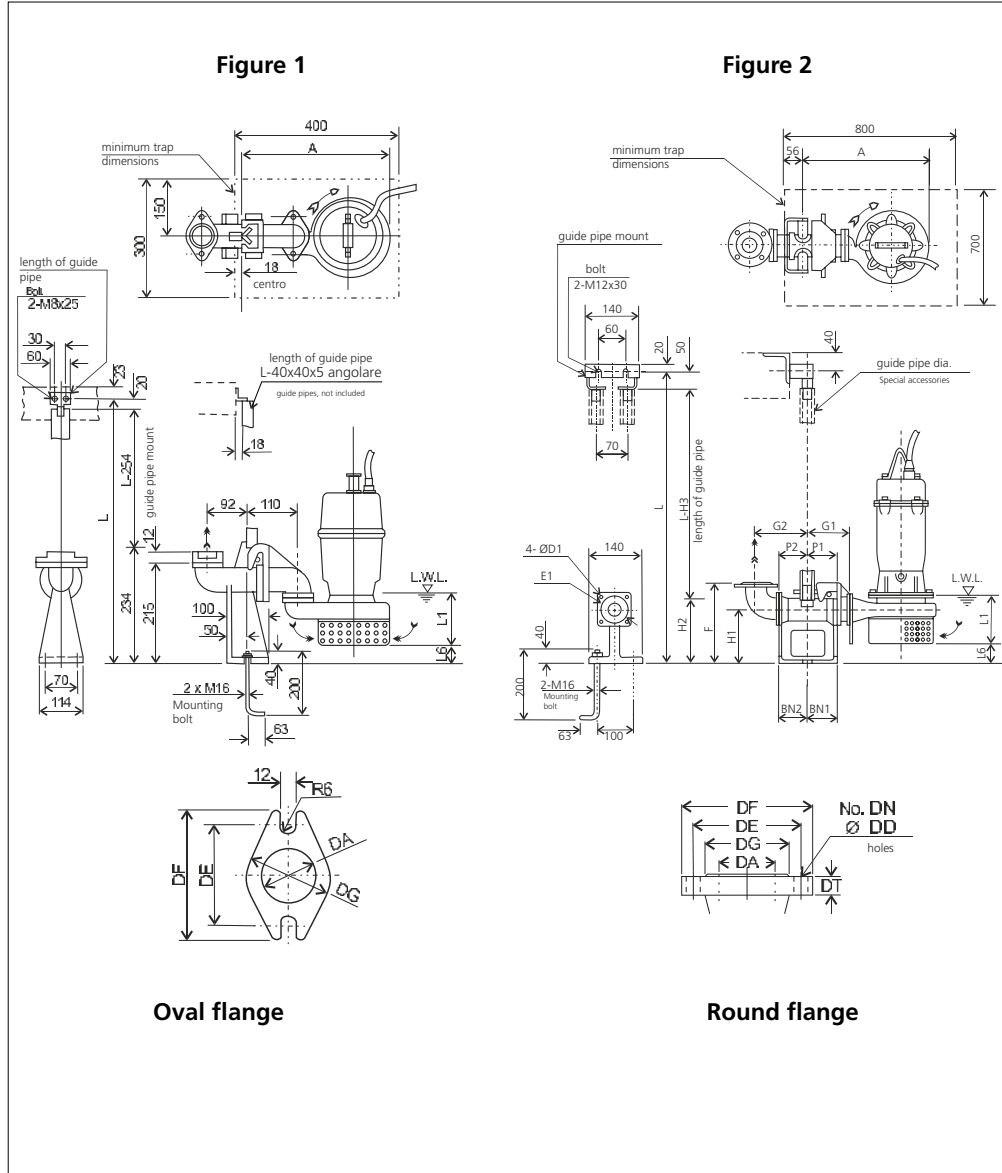


TABLE OF DIMENSIONS DVS with QDC (lowering device kit)

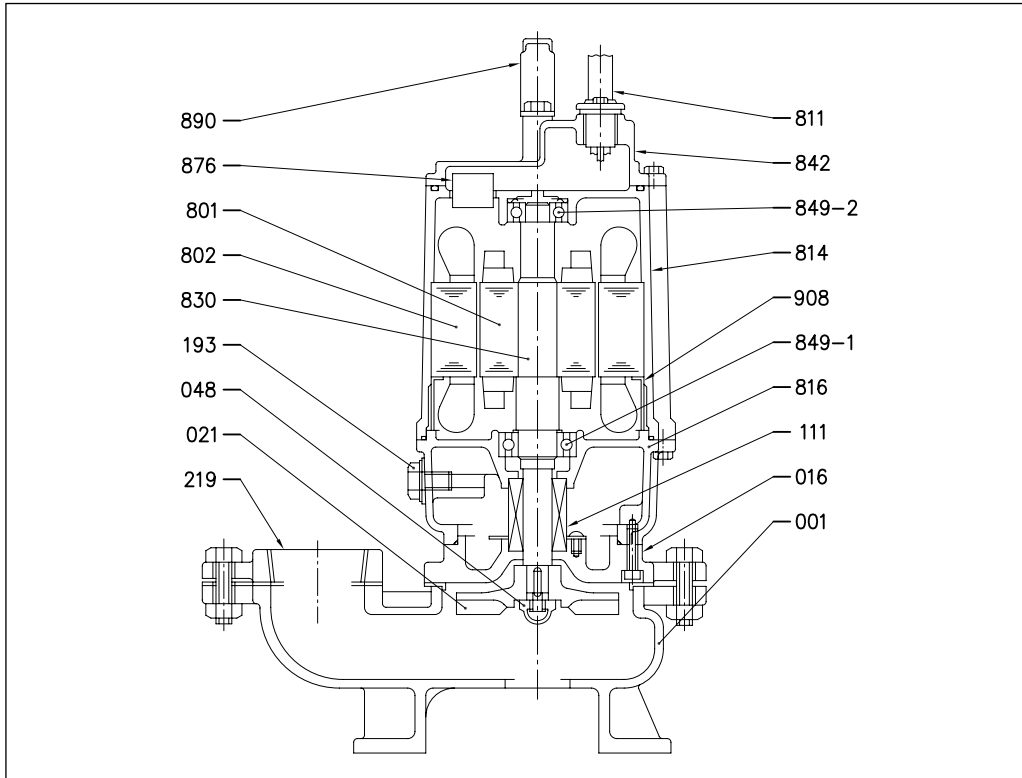
DA	Model	Fig.	Type Flange	[kW]	A	P1	P2	G1	G2	F	H1	H2	H3	L ¹ (*)	L6	BN1	BN2	D1	E1	QDC (lowering device kit) Model	Weight [kg]
50	50DVS51.5	1	Oval	1.5	311	-	-	-	-	-	-	-	-	105	58	-	-	-	-	LS50	9
65	65DVS51.5	2	Round	1.5	363	75	95	120	160	250	145	190	240	125	72	75	95	12	140	LM65	14
	2.2			394	155								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

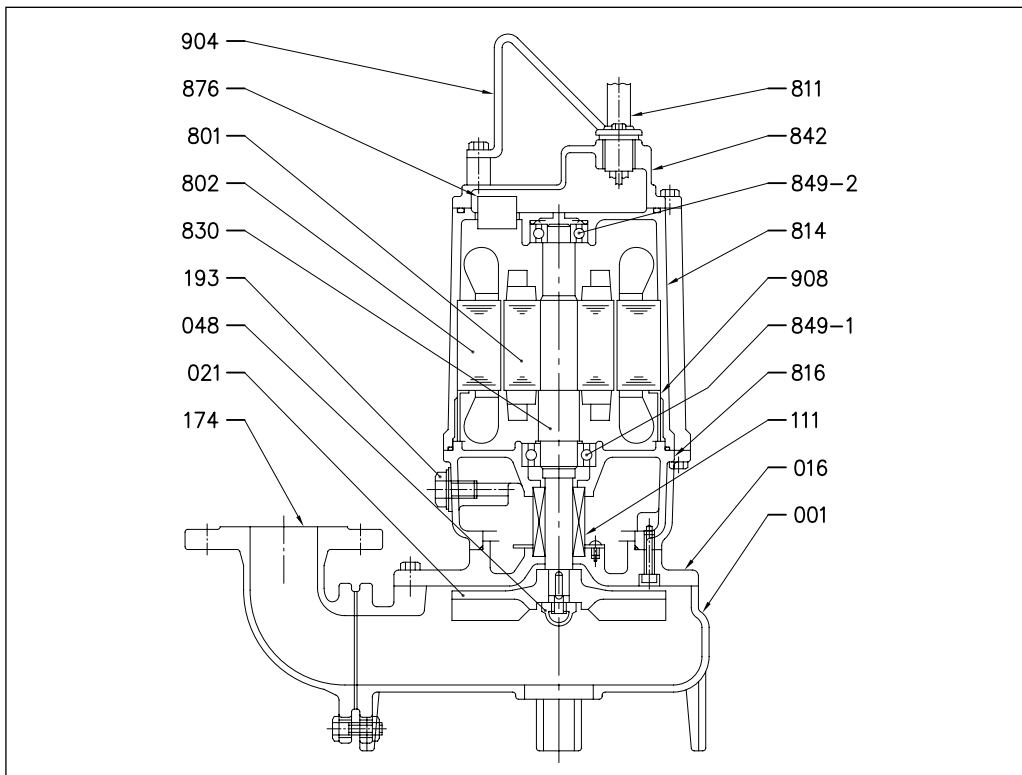
SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER SEMI-VORTEX

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)

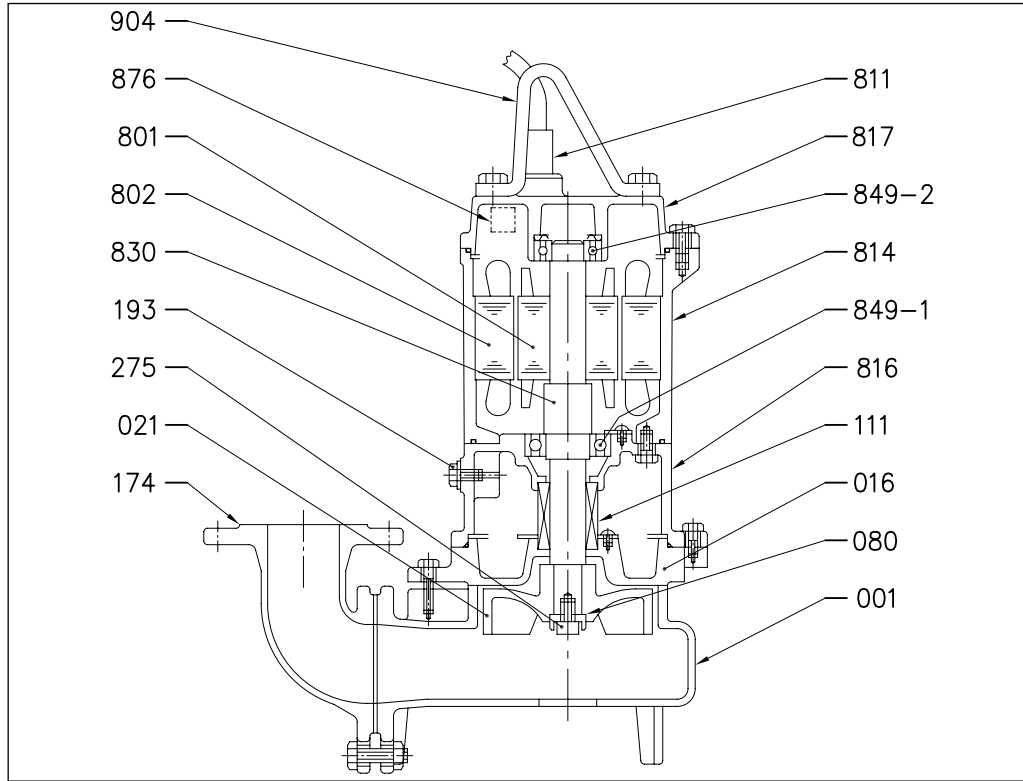


TABLE OF MATERIALS DVS

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

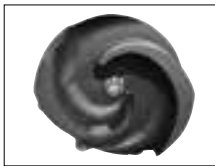
ELECTRICAL DATA TABLE DVS (1.5 - 3.7 kW)

[P ₂]		[kW]	1.5			2.2			3.7			
Resistance at 20°C		[Ω]	11.973			4.942			2.647			
GD ²		[kg/m ²]	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 ⁻¹]	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 ⁻¹]	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									

DL - DL W/C

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

in cast iron



**IMPELLER
TWO-CHANNEL OPEN**

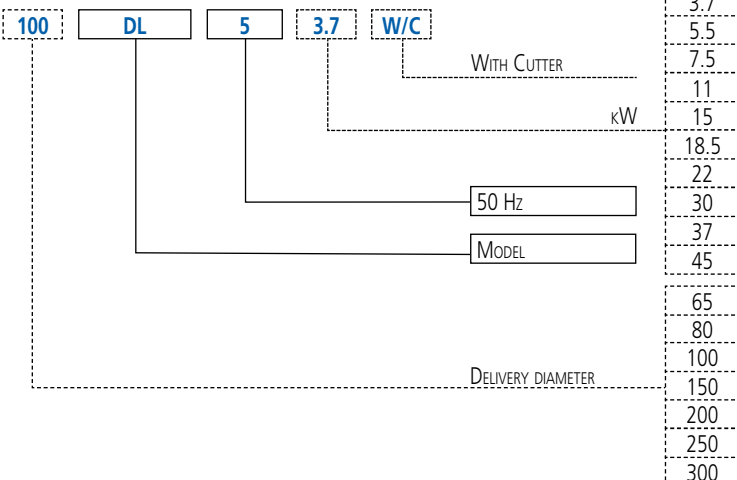


**IMPELLER
SINGLE CHANNEL OPEN WITH
CUTTING ACTION**



**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

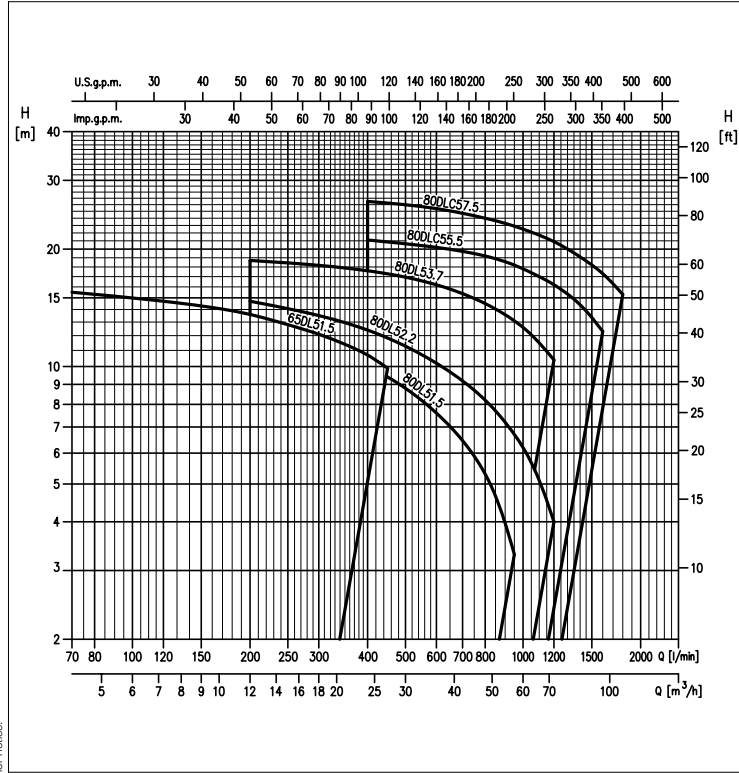


DL - DL W/C

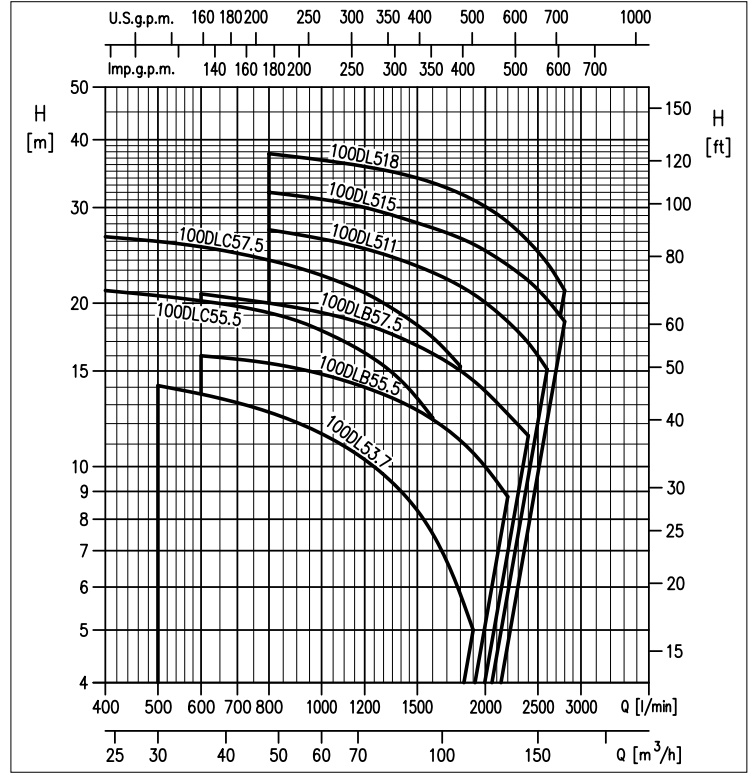
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)
in cast iron

PERFORMANCE RANGE

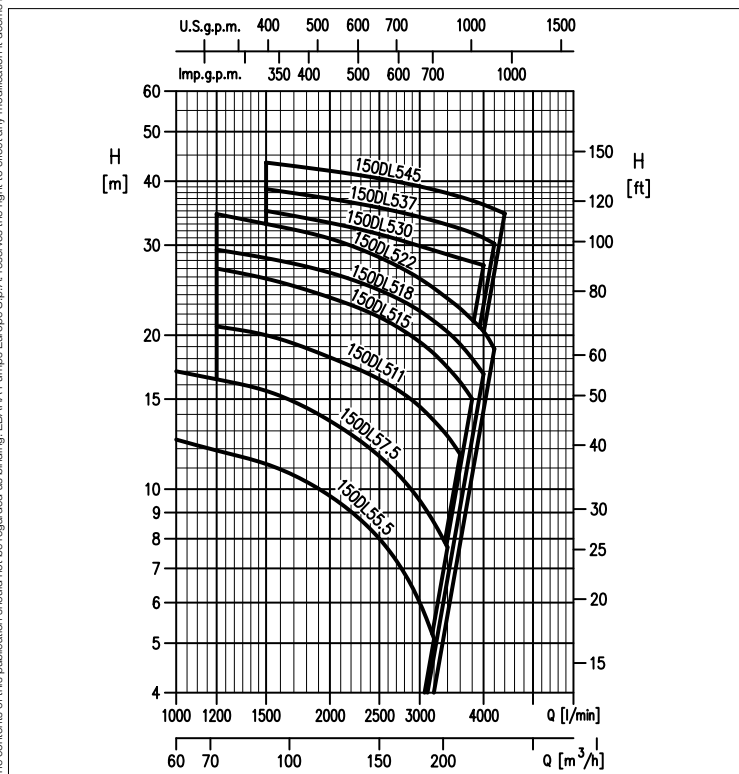
65-80DL (per ISO 9906 Annex A)



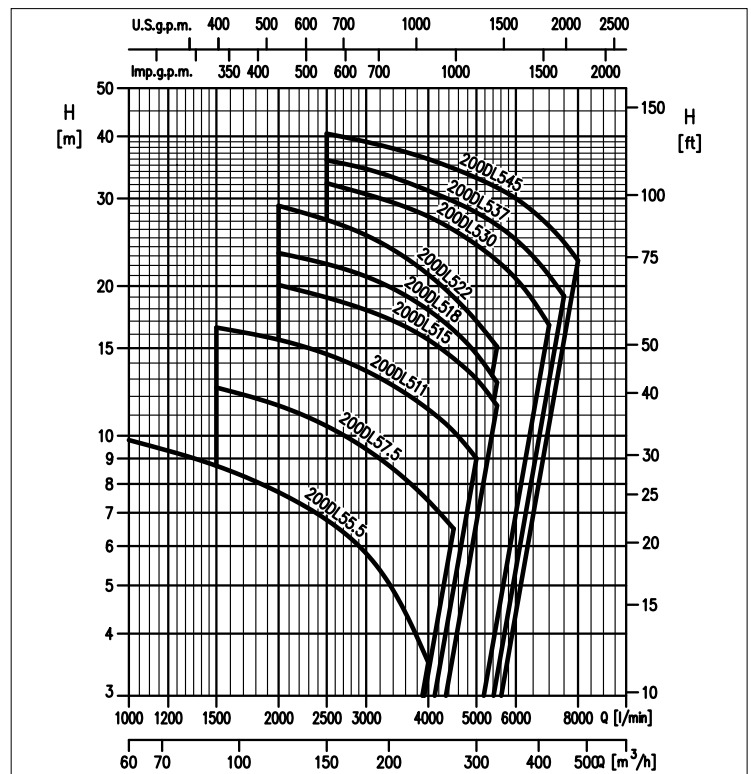
100DL (per ISO 9906 Annex A)



150DL (per ISO 9906 Annex A)



200DL (per ISO 9906 Annex A)



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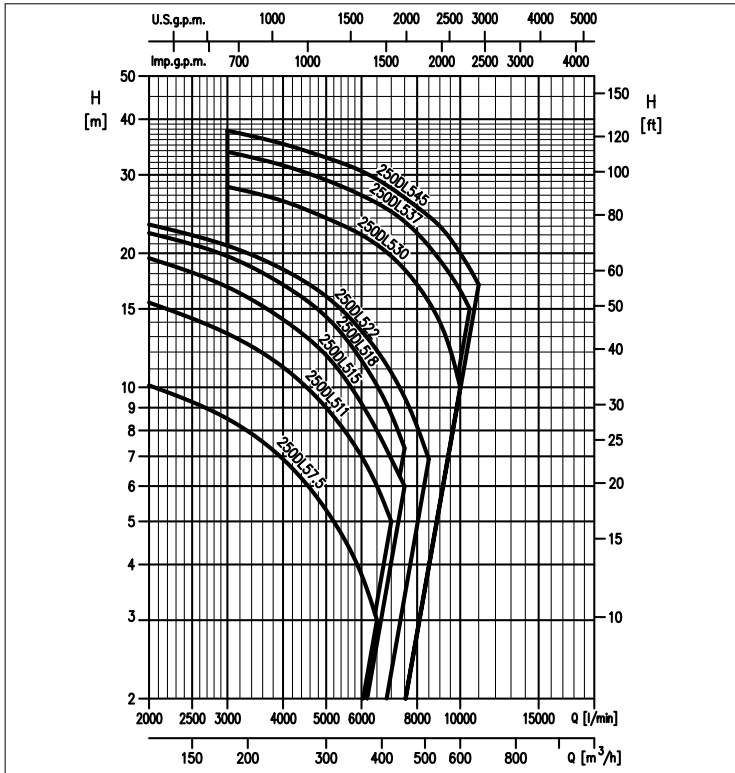


DL - DL W/C

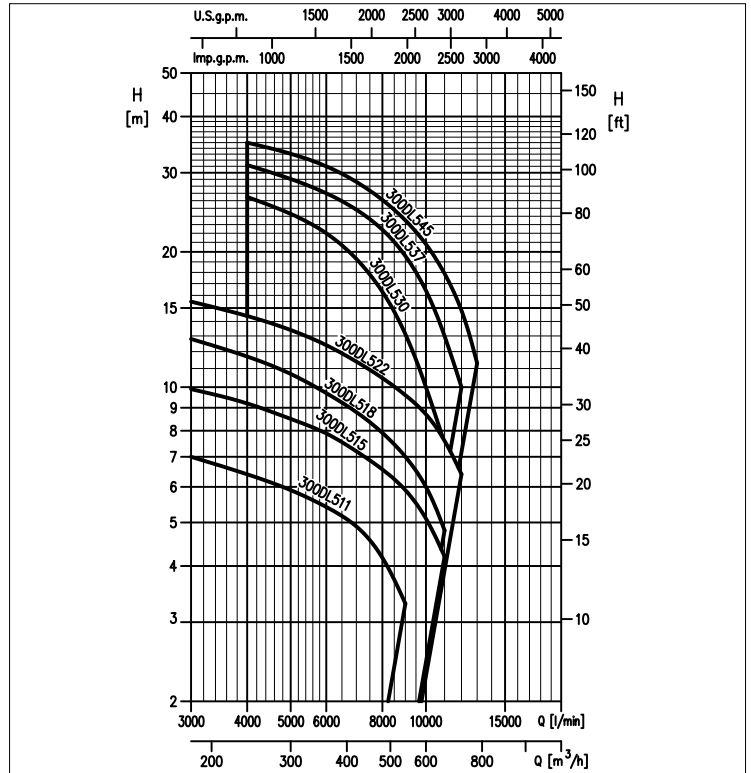
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WATER (DL) WITH CUTTER (DL W/C)
in cast iron

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 ₂		Q = Flow rate													
	[HP]	[kW]	l/min	70	150	200	400	450	600	800	950	1000	1200	1400	1600	1800
			m ³ /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 ₂		Q = Flow rate													
	[HP]	[kW]	l/min	400	500	600	800	1200	1500	1600	1800	1900	2200	2400	2600	2800
			m ³ /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 ₂		Q = Flow rate										l/min					
	2500 [HP]	3000 [kW]	3200	3400	3500	3600	3800	4000	4200	4400								
			m ³ /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 ₂		Q = Flow rate													
	[HP]	[kW]	l/min	1000	1500	2000	2500	3000	4000	4500	5000	5500	6000	7000	7500	8000
			m ³ /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 ₂		Q = Flow rate														
	[HP]	[kW]	l/min	2000	3000	4000	5000	6000	6500	7000	7500	8000	8500	9000	10000	10500	11000
			m ³ /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

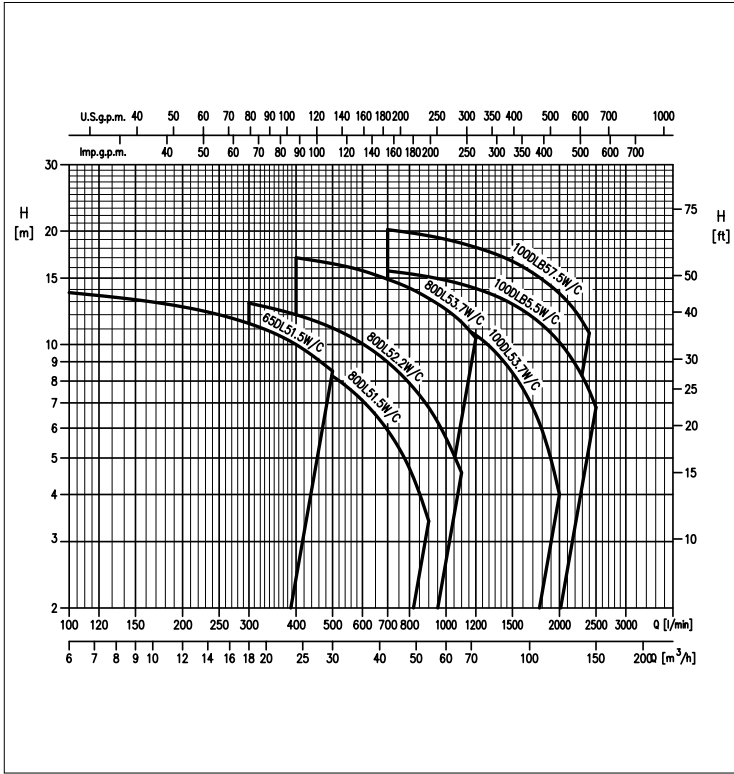
Model	P ₂		Q = Flow rate											
	[HP]	[kW]	l/min	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000	13000
			m ³ /h	180	240	300	360	420	480	540	600	660	720	780
H = Head [m]														
300DL511	15	11	7.0	6.4	5.9	5.5	4.9	4.2	3.3	-	-	-	-	-
300DL515	20	15	9.9	9.2	8.5	8.0	7.2	6.6	5.9	5.1	4.2	-	-	-
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 ₂		Q = Flow rate																
	[HP]	[kW]	l/min m ³ /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	-	-	-

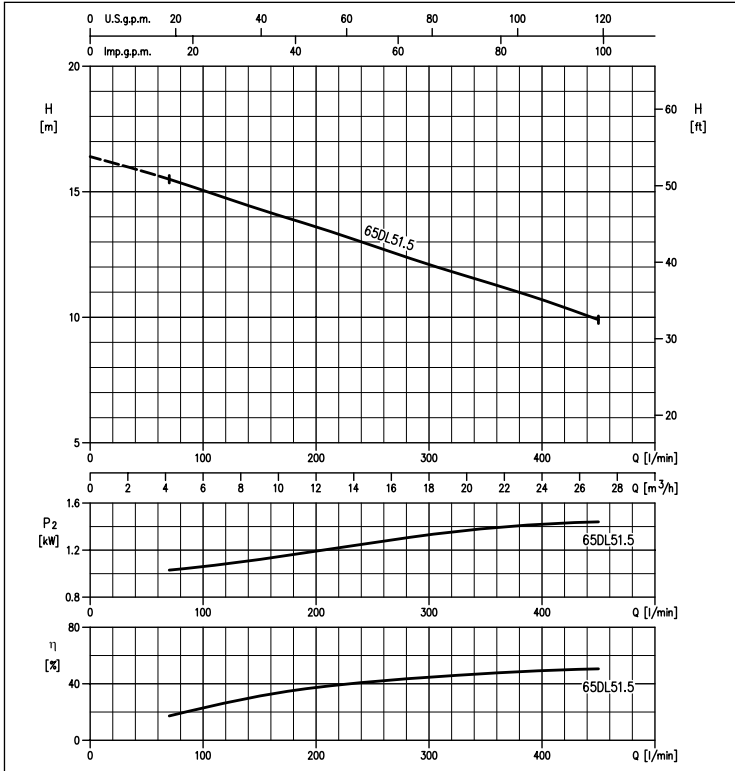
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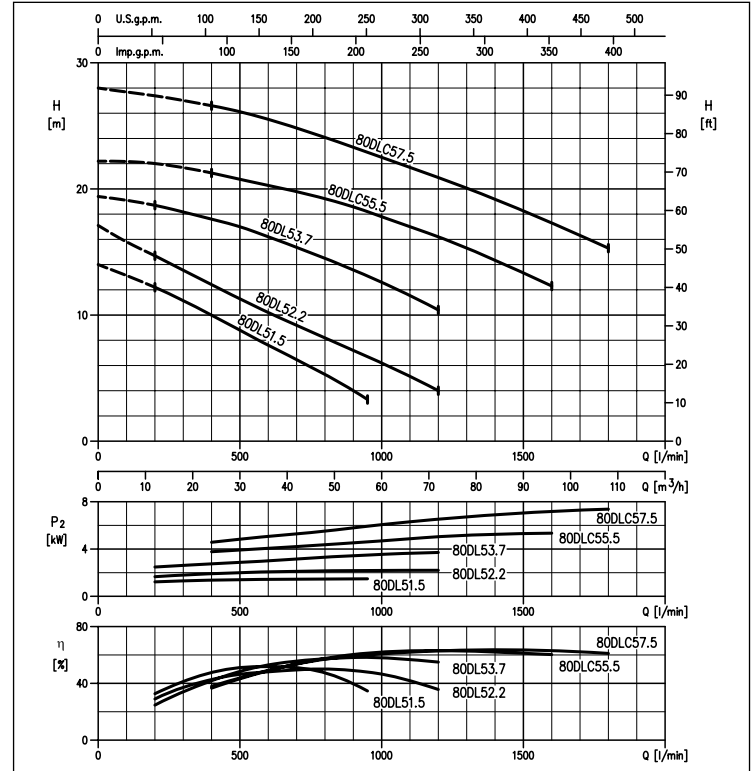
DL - DL W/C

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

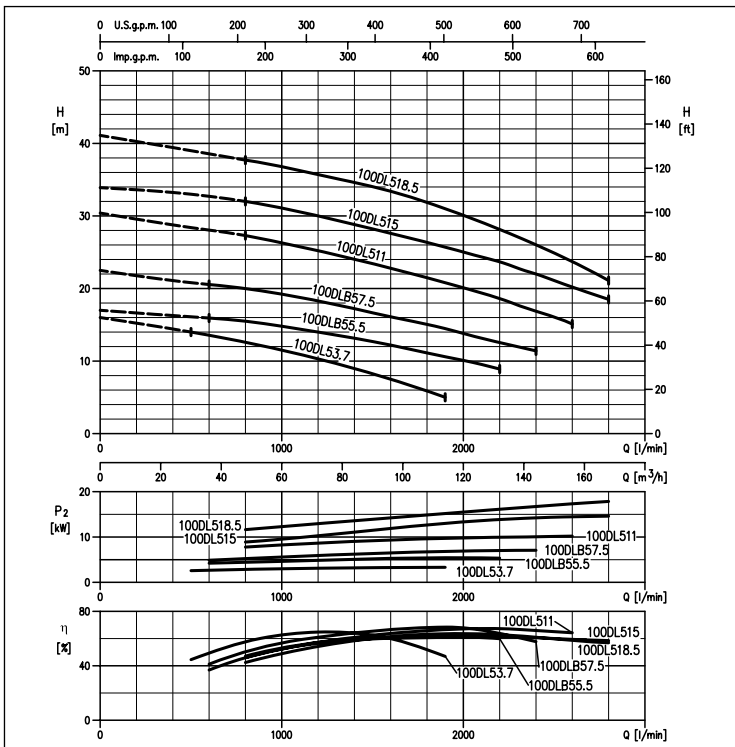
PERFORMANCE CURVES series 65DL51.5 (1.5 kW)
(per ISO 9906 Annex A)



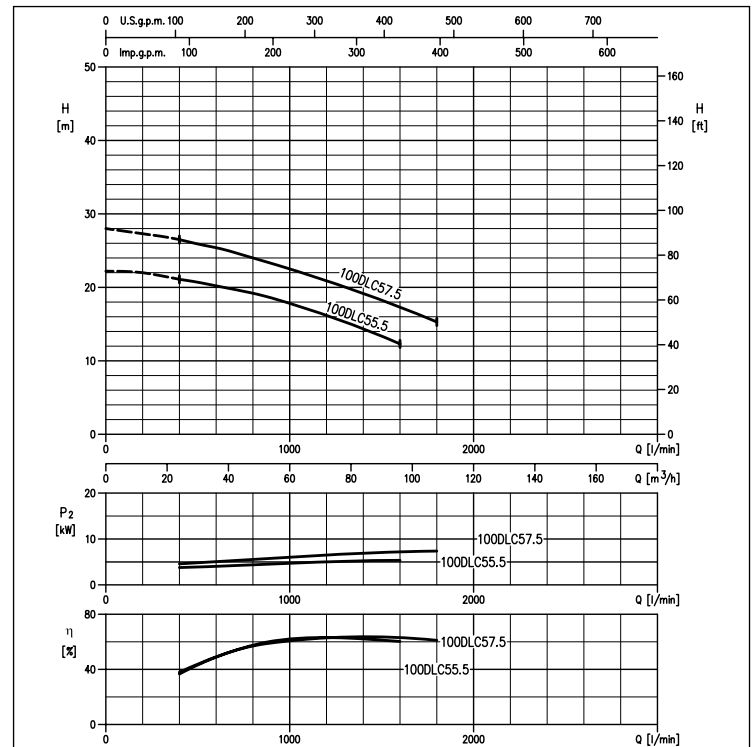
PERFORMANCE CURVES 80DL51.5 (1.5 kW) 80DL52.2 (2.2 kW)
80DL53.7 (3.7 kW) 80DLC55.5 (5.5 kW)
80DLC57.5 (7.5 kW)
(per ISO 9906 Annex A)



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)



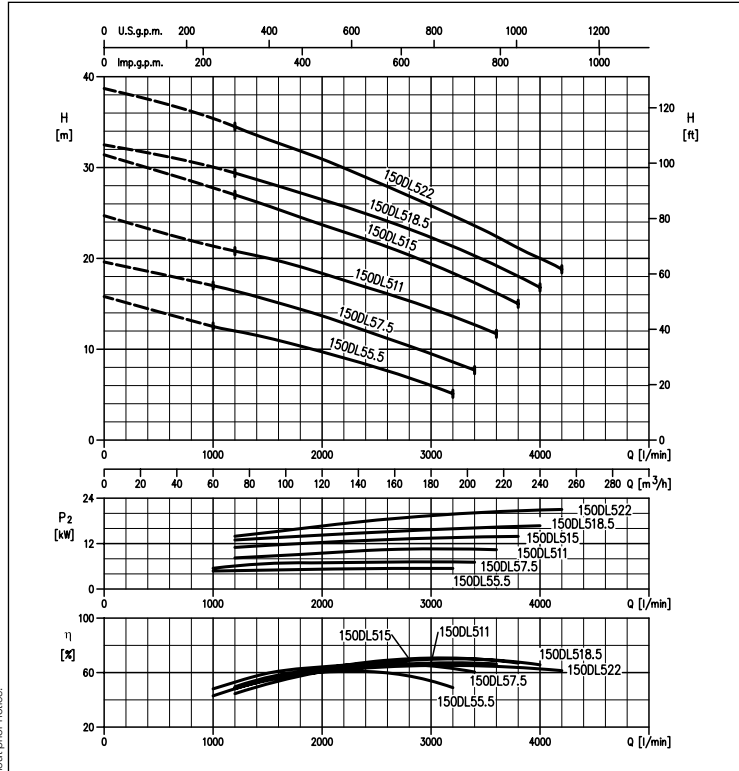
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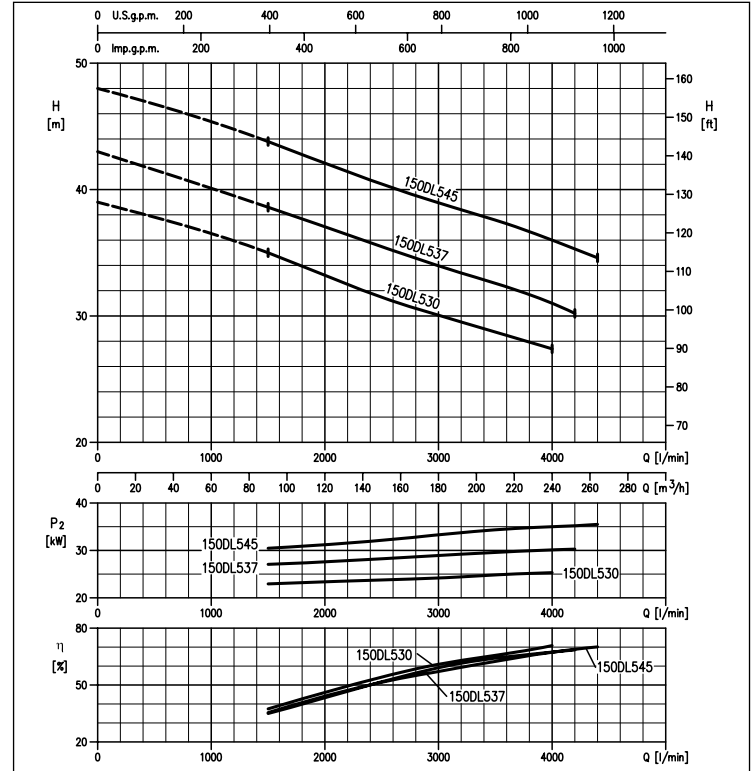
DL - DL W/C

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

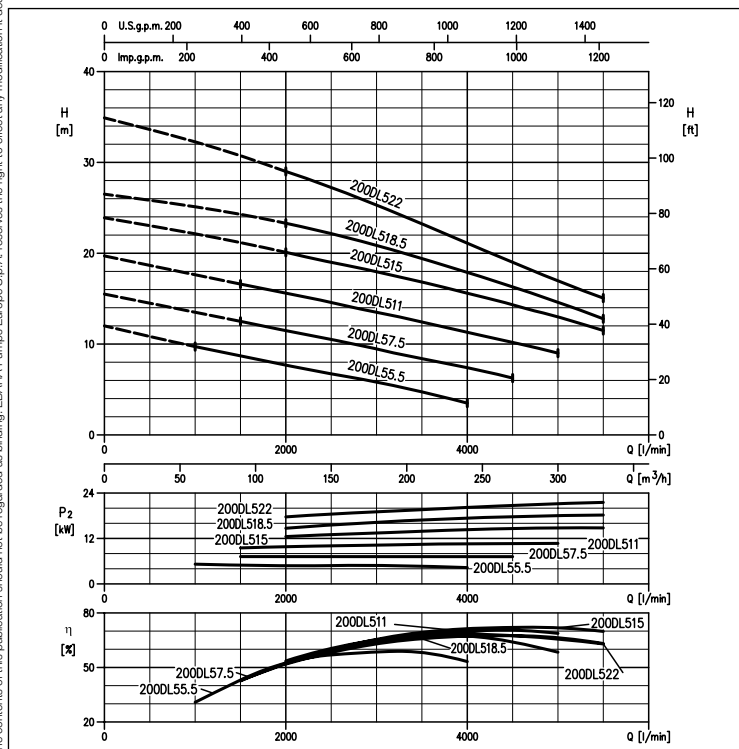
PERFORMANCE CURVES 150DL55.5 (5.5 kW) 150DL57.5 (7.5 kW)
 (per ISO 9906 Annex A) **150DL511 (11 kW) 150DL515 (15 kW)**
150DL518.5 (18.5 kW) 150DL522 (22 kW)



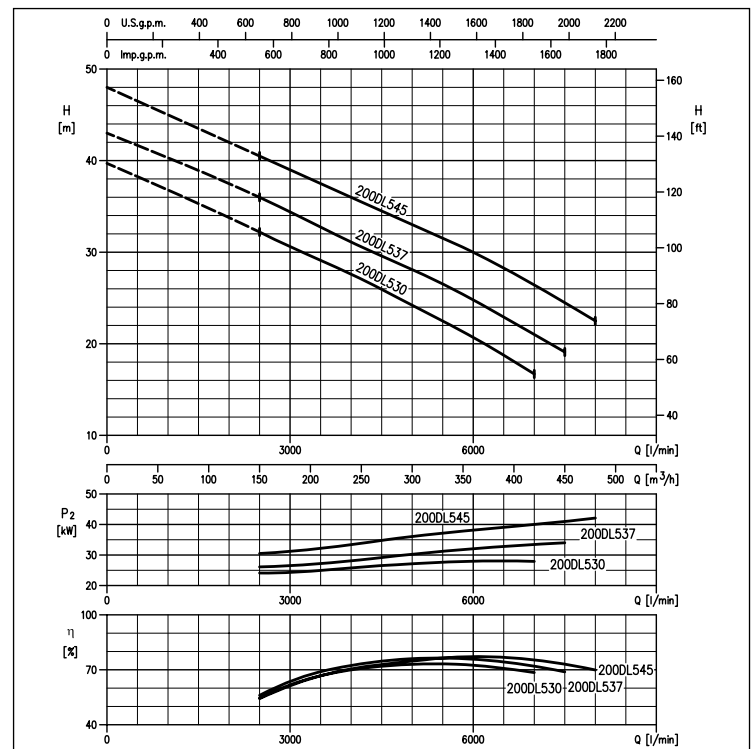
PERFORMANCE CURVES 150DL530 (30 kW)
 (per ISO 9906 Annex A) **150DL537 (37 kW)**
150DL545 (45 kW)



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)



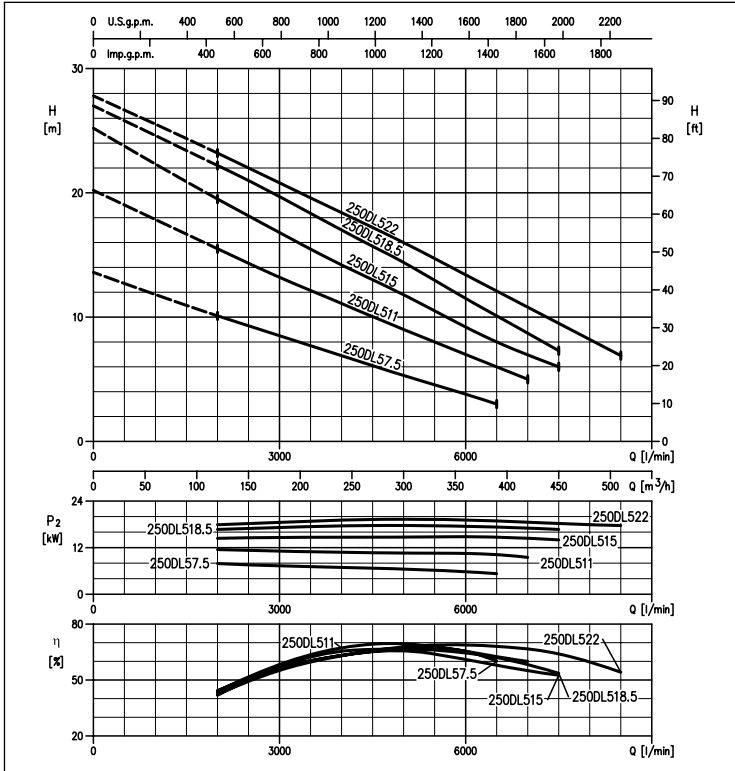
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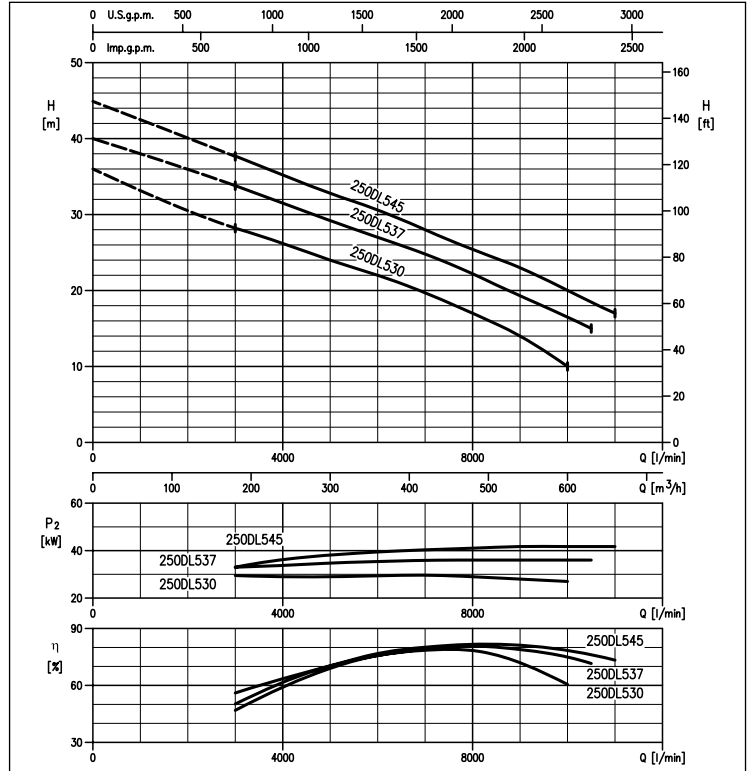
DL - DL W/C

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

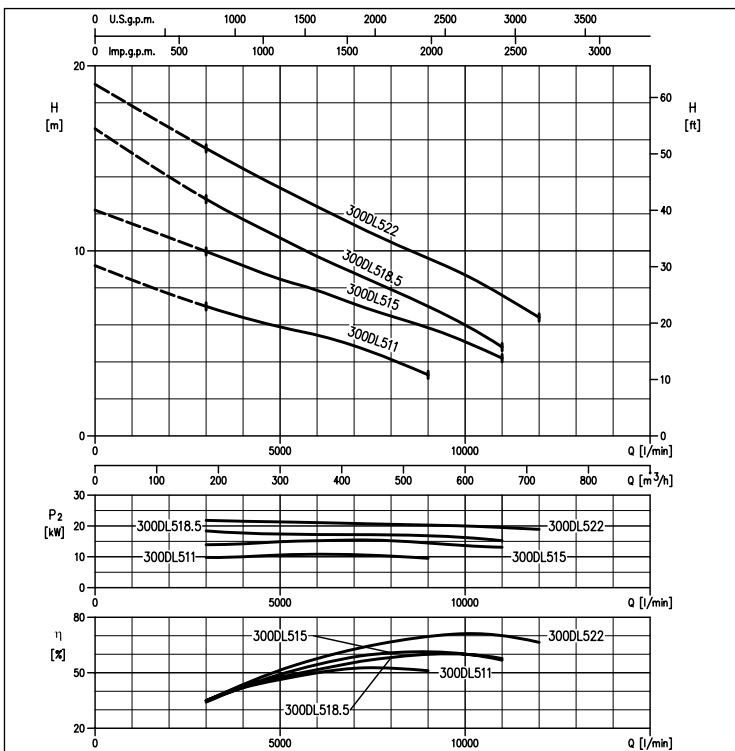
PERFORMANCE CURVES 250DL57.5 (7.5 kW) 250DL 511 (11 kW)
(per ISO 9906 Annex A) **250DL515 (15 kW) 250DL 518.5 (18.5 kW)**
250DL522 (22 kW)



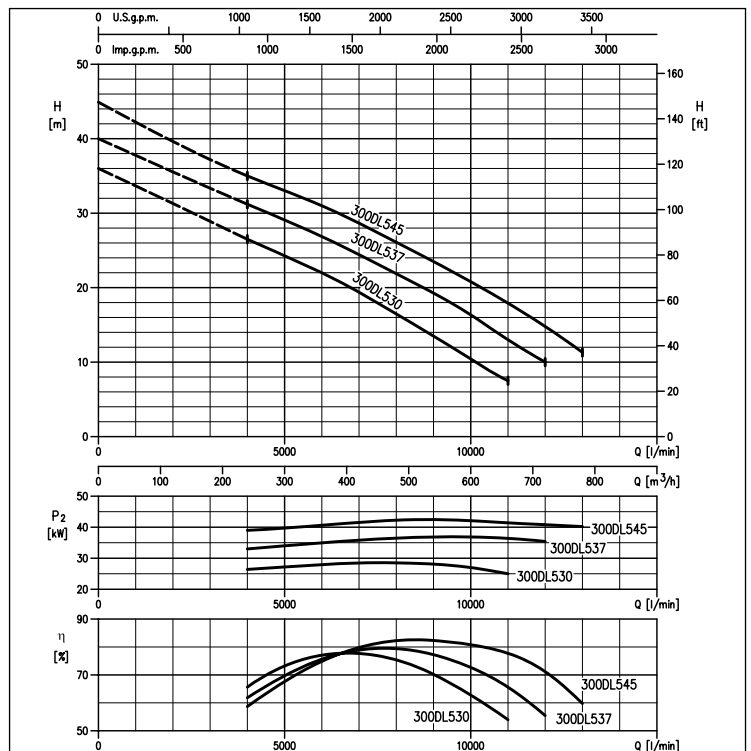
PERFORMANCE CURVES 250DL530 (30 kW) 250DL537 (37 kW)
(per ISO 9906 Annex A) **250DL545 (45 kW)**



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)**



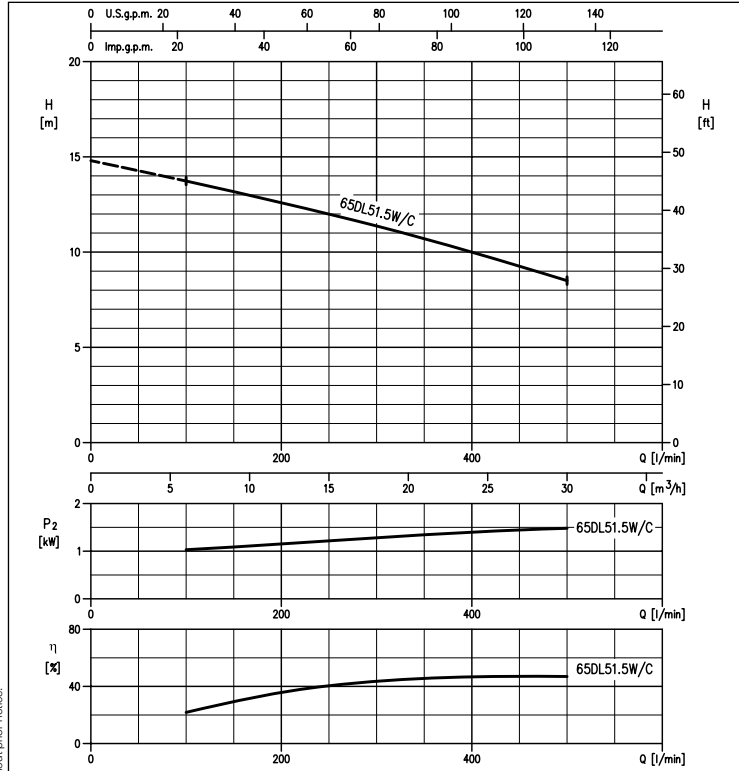
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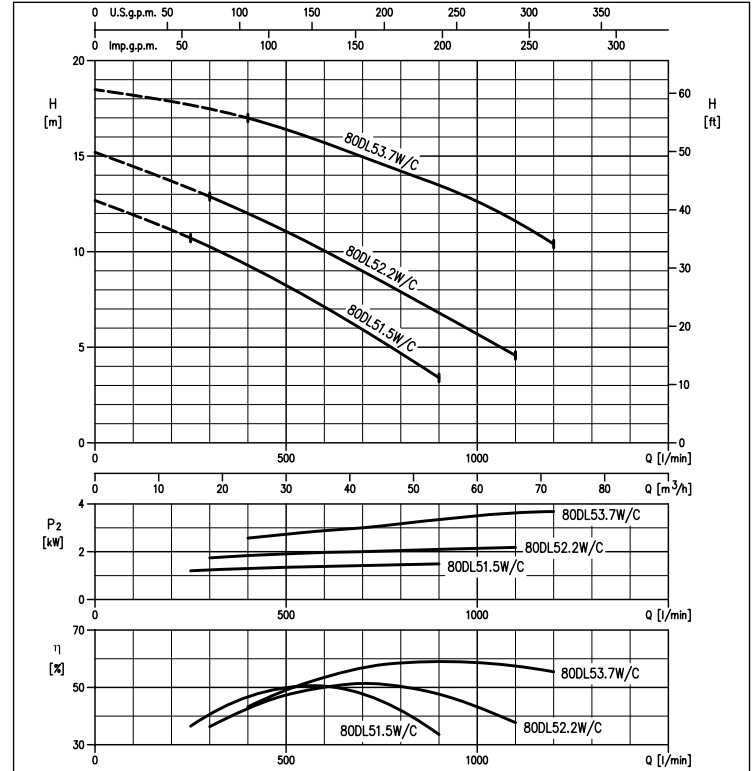
DL - DL W/C

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

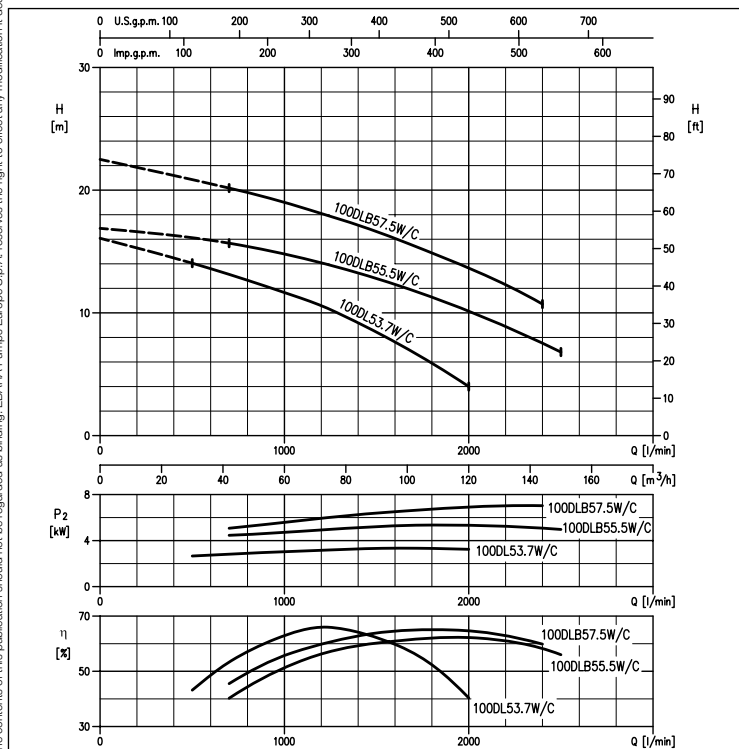
PERFORMANCE CURVES 65DL51.5 W/C (1.5 kW)
(per ISO 9906 Annex A)



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)



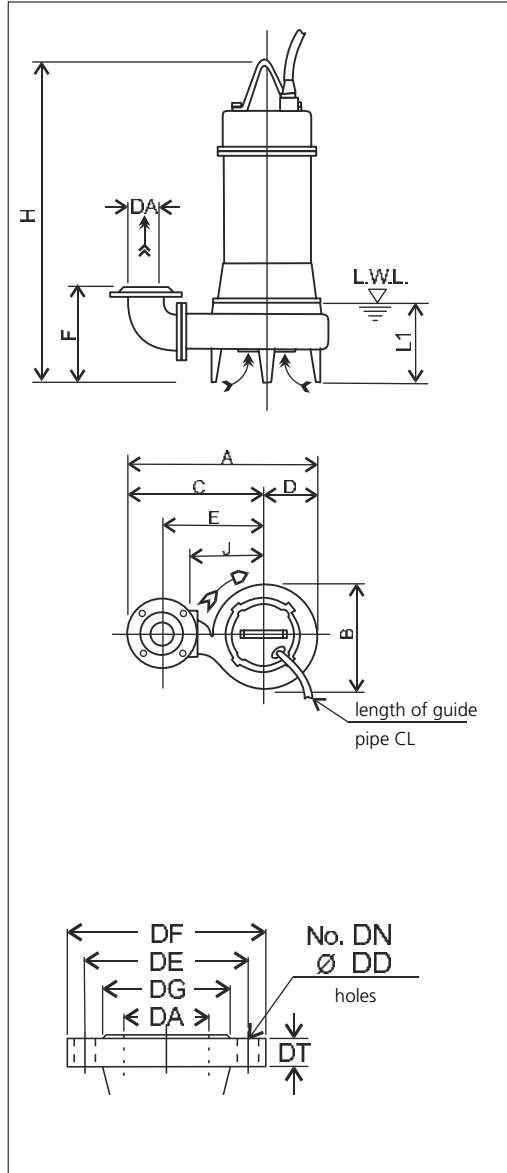
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DL - DL W/C

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	205		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		450		199
	300DL515	15	1100	588	798	302	575	671					
	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							1475	460			

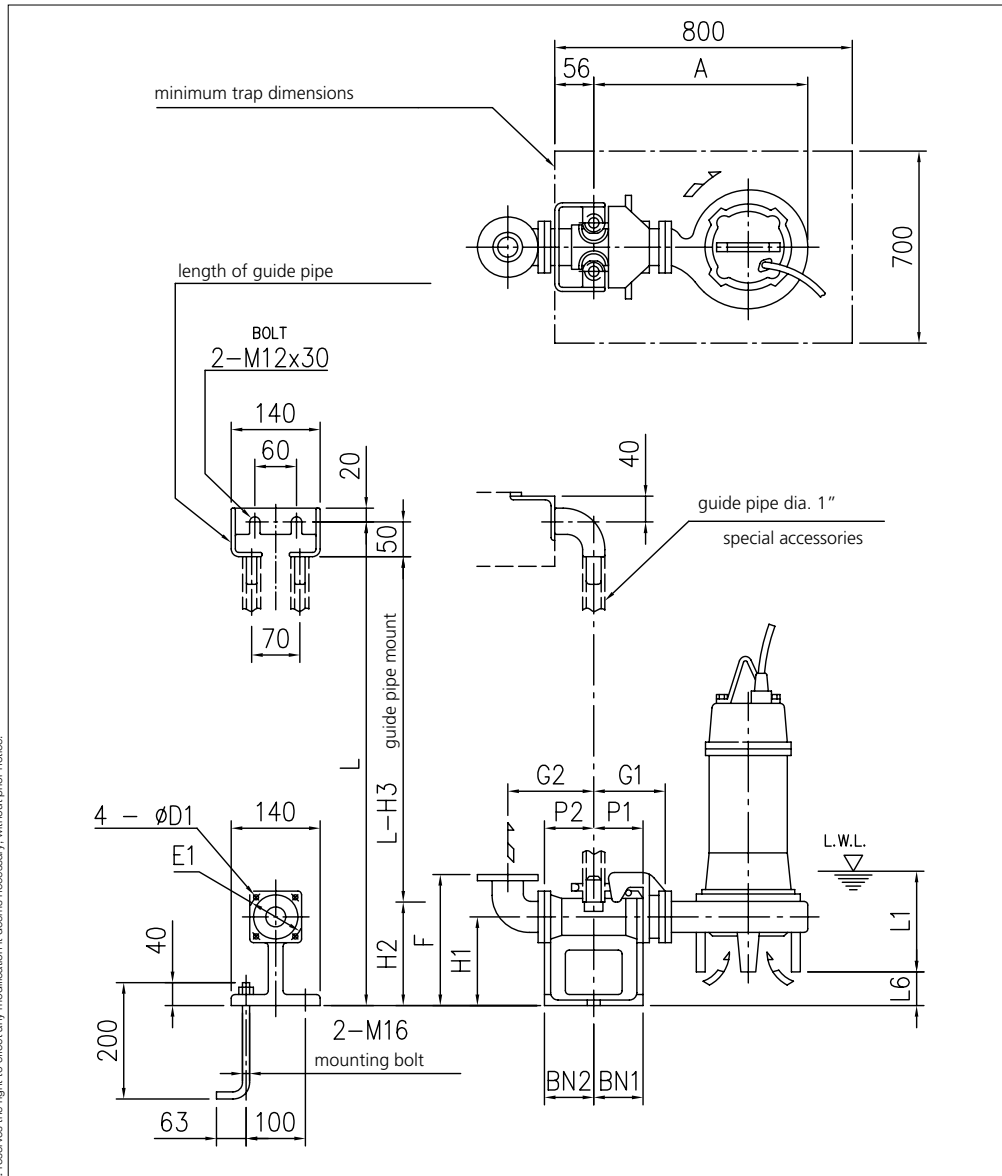
(*) - L.W.L (minimum fluid level)

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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, 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

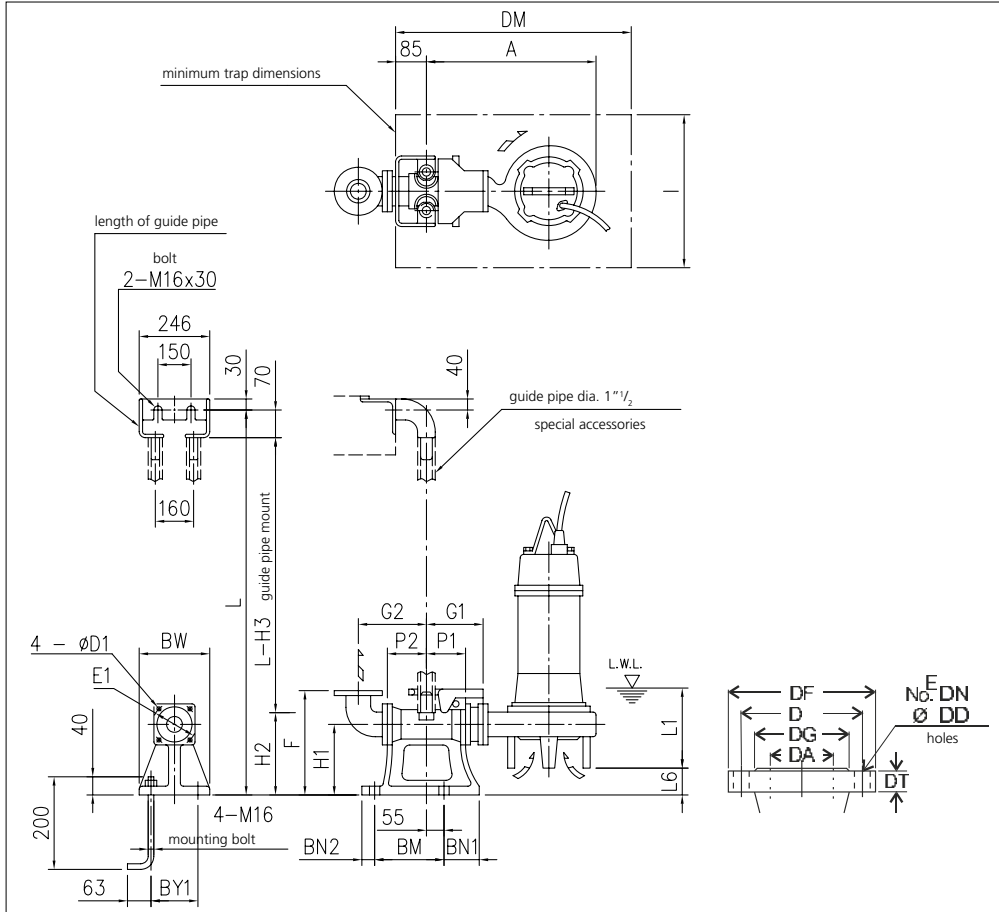
(*) - L.W.L (minimum fluid level)

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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)



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

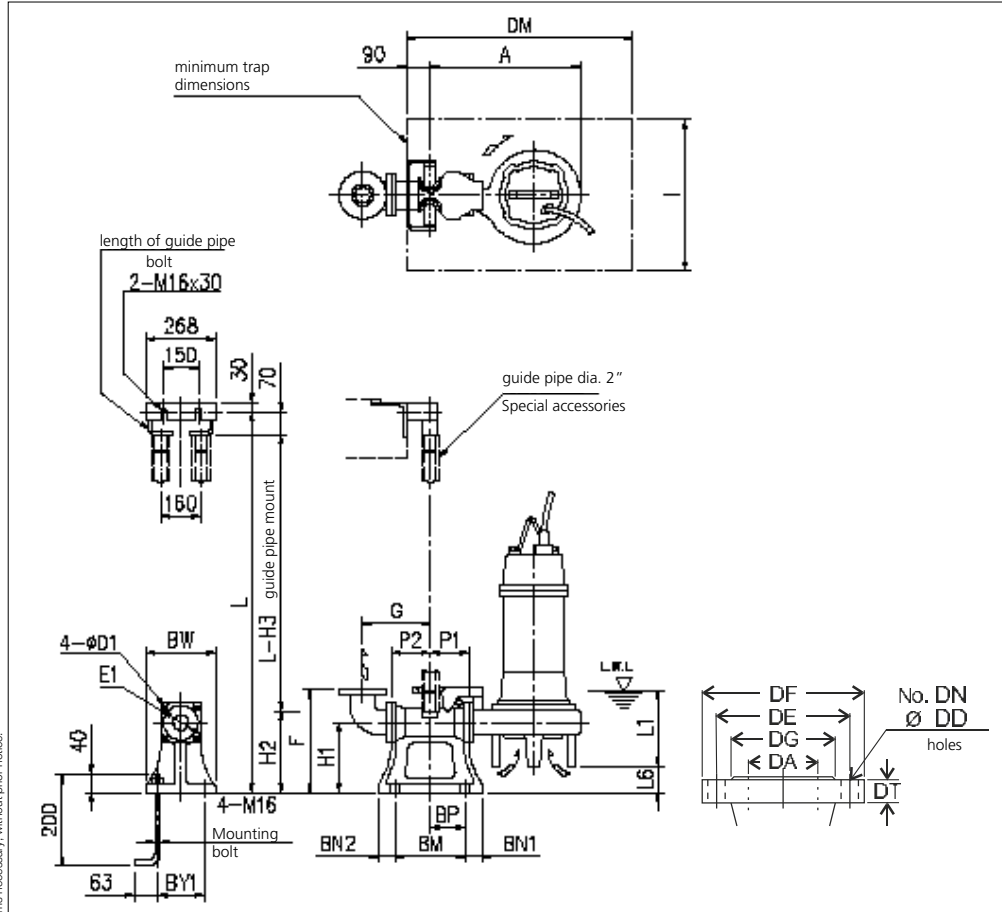
DA	Model	[kW]	A	P1	P2	G1	G2	F	H1	H2	H3	L1 (*)	L6	BN1	BN2	BM	BY1	BW	DM	I	D1	E1	QDC (lowering device kit) Model	Weight [kg]																								
80	80DLC55.5	5.5	635		120		195	350		255	325	205	43									15	155	LL80	44																							
	80DLC57.5	7.5	665																							45																						
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																							42																						
	100DL518.5	18.5	716																							35																						

(*) - 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			

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

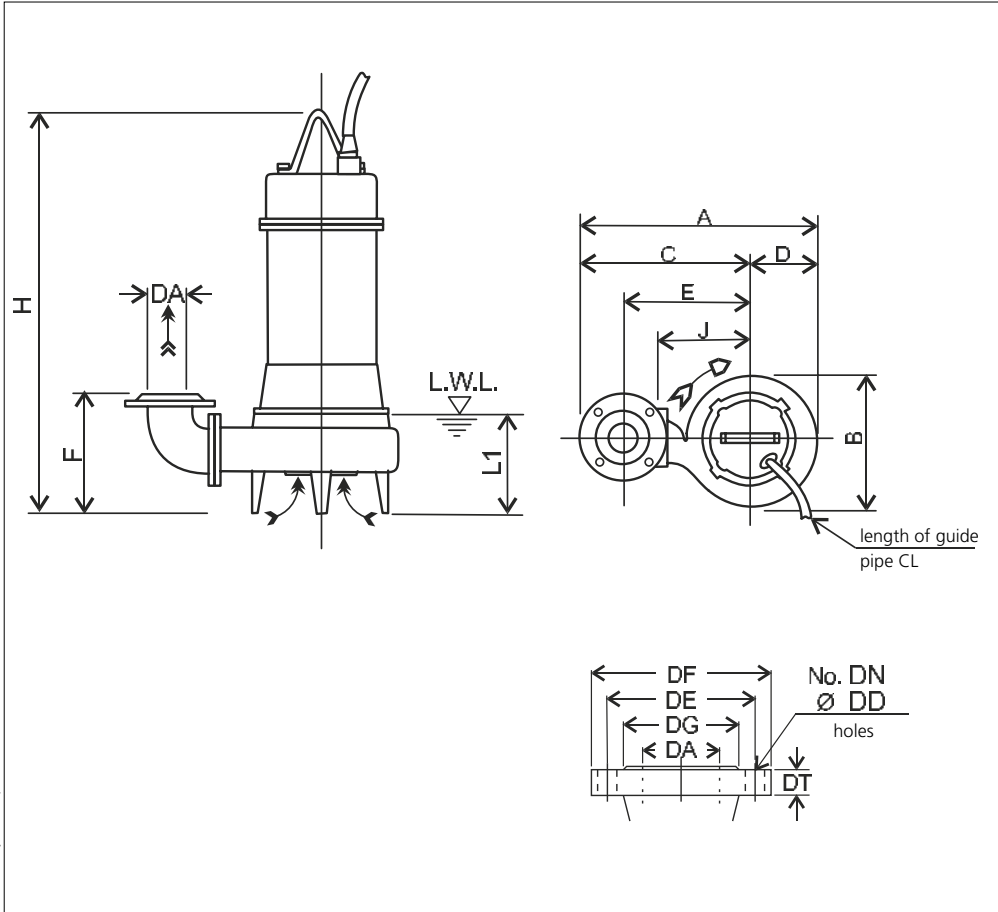
DA	Model	[kW]	A	P1	P2	G	F	H1	H2	H3	L1(*)	L6	BN1	BN2	BM	BP	BY1	BW	DM	I	D1	E1	QDC (lowering device kit) Model	Weight [kg]																	
150	150DL55.5	5.5	635	155	195	325	450	290	362	432	245	69	60	370	165	280	330	1000	700	210	16	210	LL125	65																	
	150DL57.5	7.5	665									73																													
	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)

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			

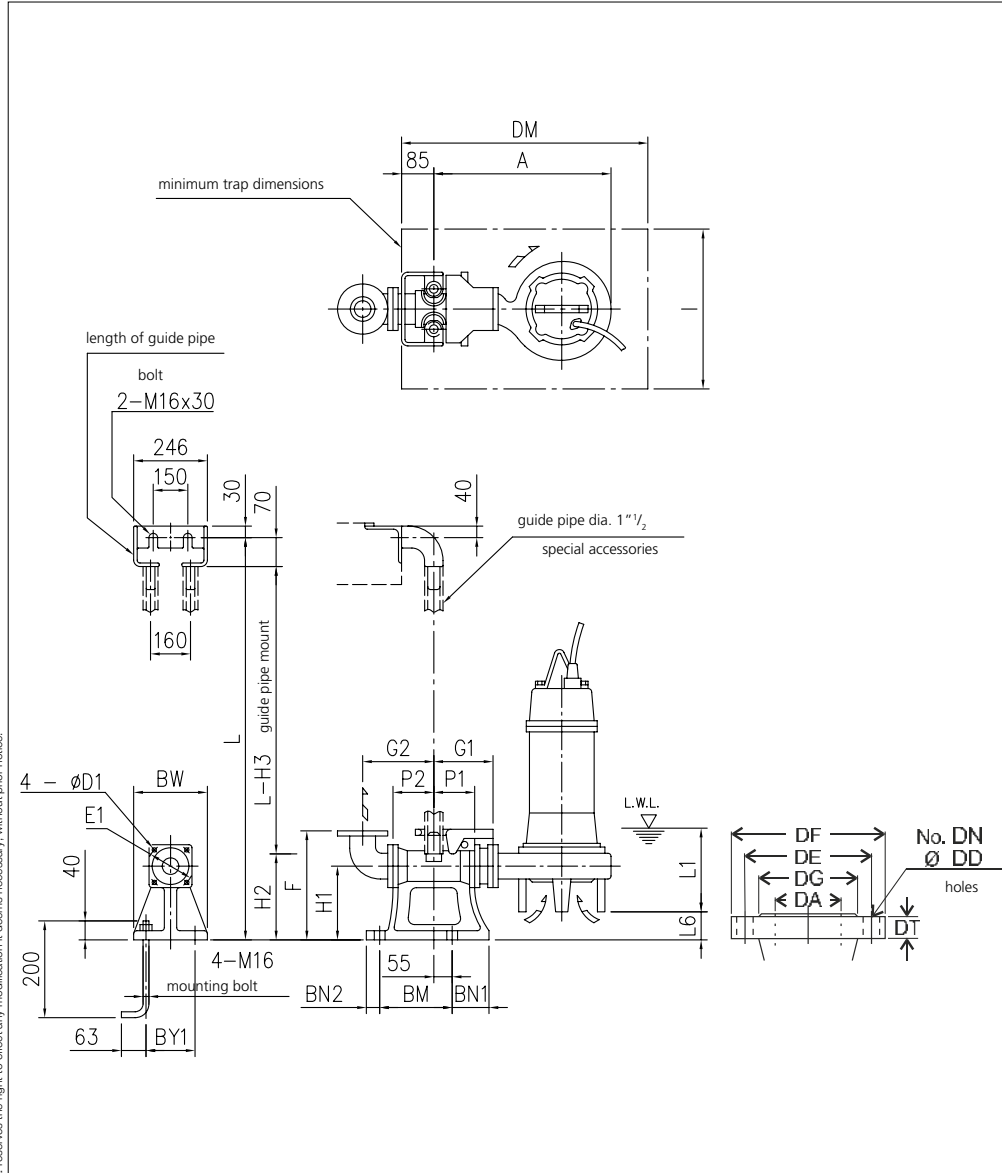
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DL - DL W/C

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																					

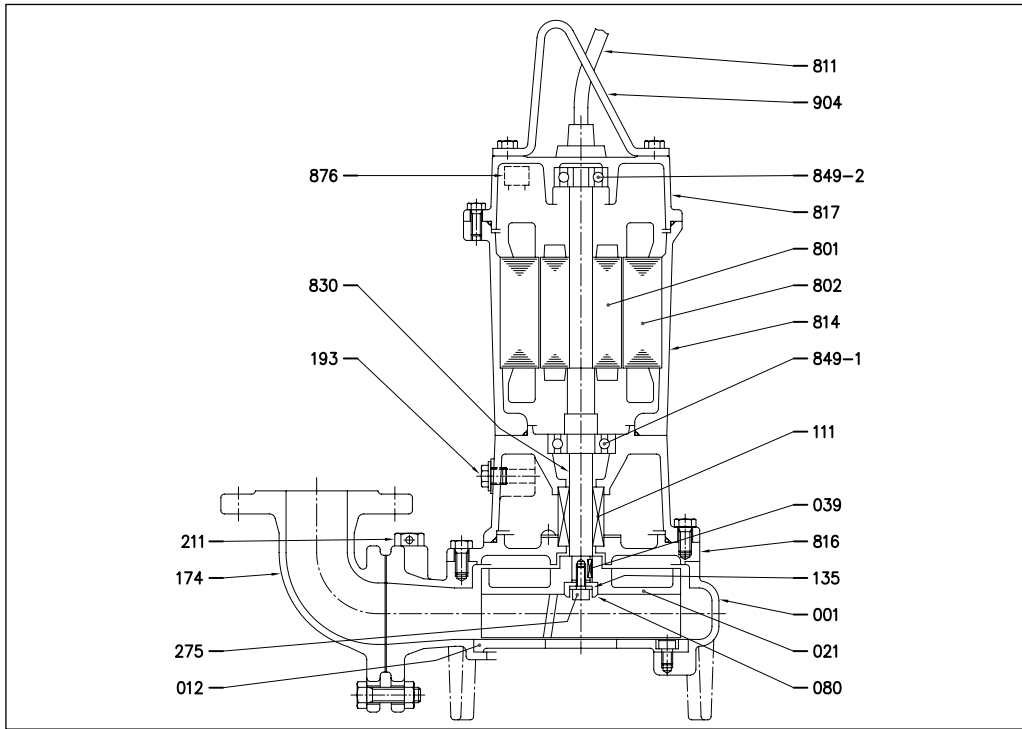
(*) - L.W.L (minimum fluid level)

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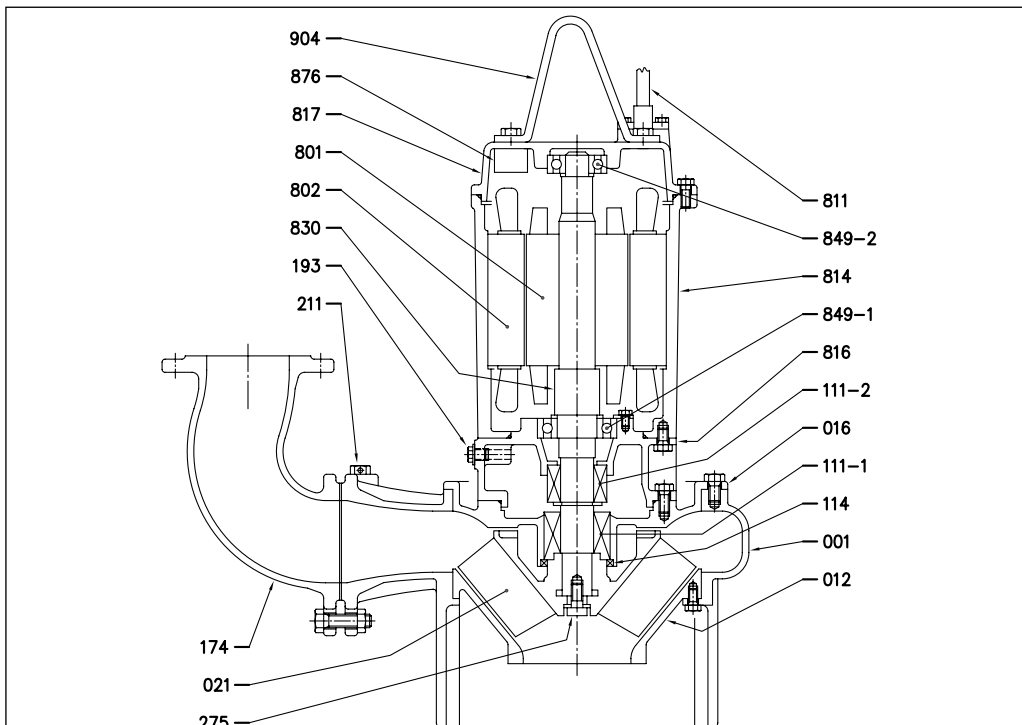
DL - DL W/C

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)

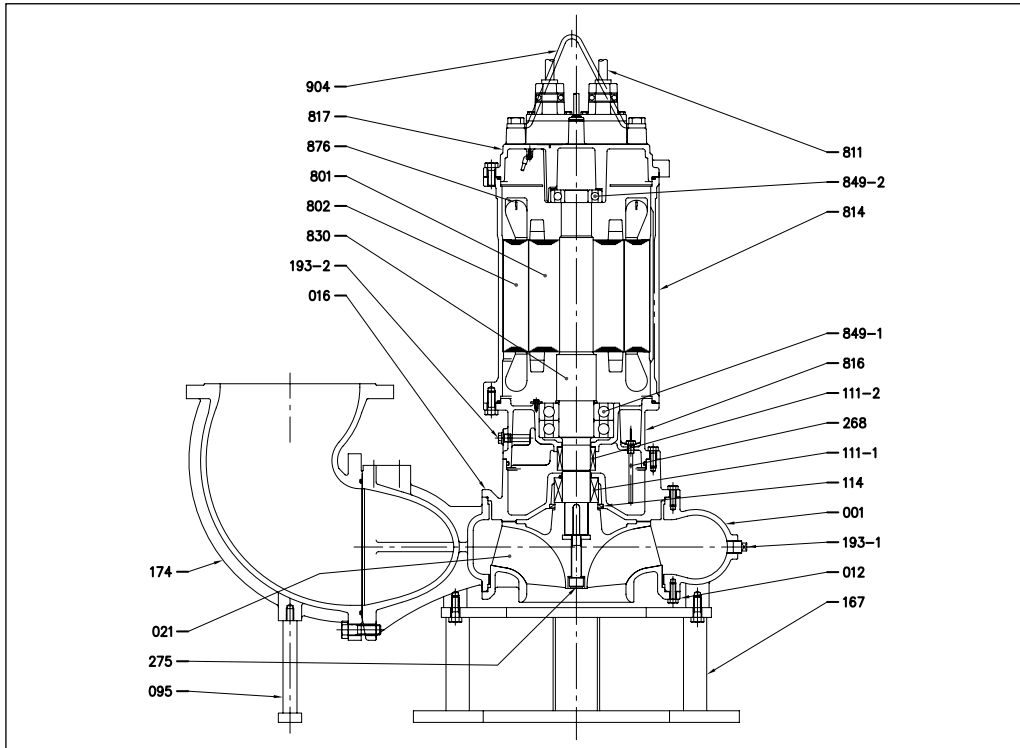


TABLE OF MATERIALS DL - DL W/C (with cutter)

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 ₂]		[kW]	1.5			2.2			3.7			
Resistance at 20°C		[Ω]	8.466			5.937			3.447			
GD ²		[kg/m ²]	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 ⁻¹]	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 ⁻¹]	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 ₂]		[kW]	5.5			7.5			11			
Resistance at 20°C		[Ω]	2.339			1.513			-	0.869		
GD ²		[kg/m ²]	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 ⁻¹]	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 ⁻¹]	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 ₂]		[kW]	15			18.5			22			
Resistance at 20°C		[Ω]	-	0.677		-	0.439		-	0.376		
GD ²		[kg/m ²]	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 ⁻¹]	-	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 ⁻¹]	-	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 ₂]		[kW]	30			37			45			
Resistance at 20°C		[Ω]	0.236			0.152			0.117			
GD ²		[kg/m ²]	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 ⁻¹]	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 ⁻¹]	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)

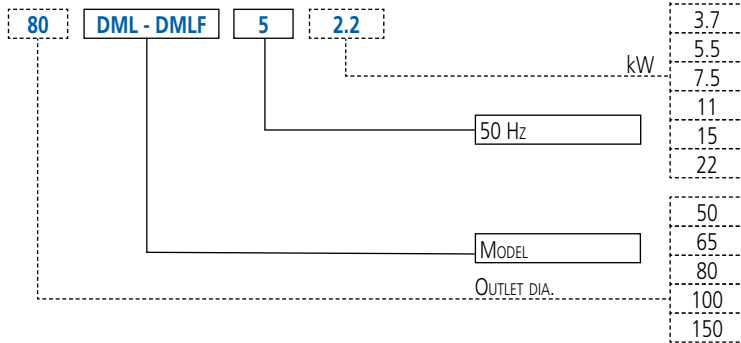
MATERIALS

- 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





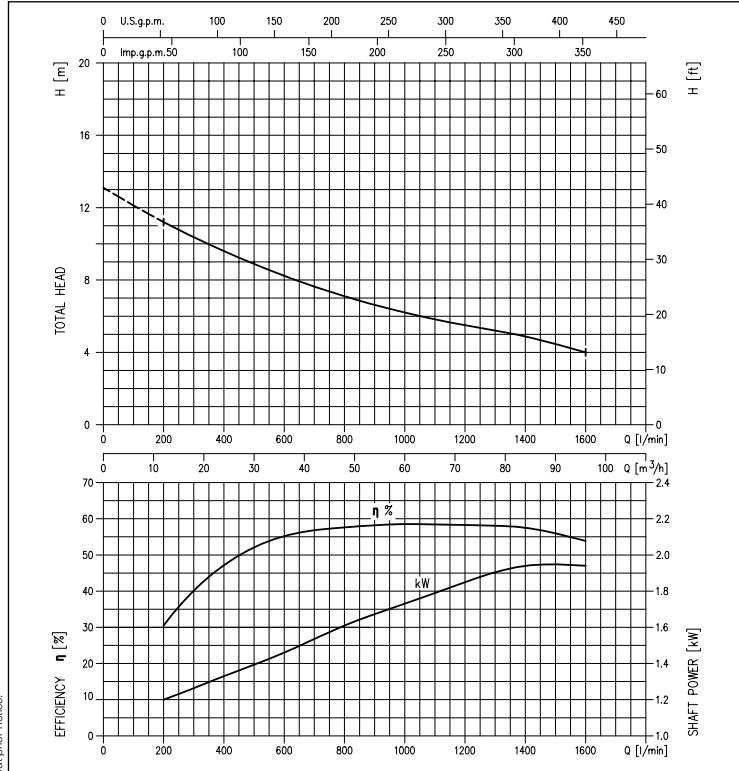
DML - DMLF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

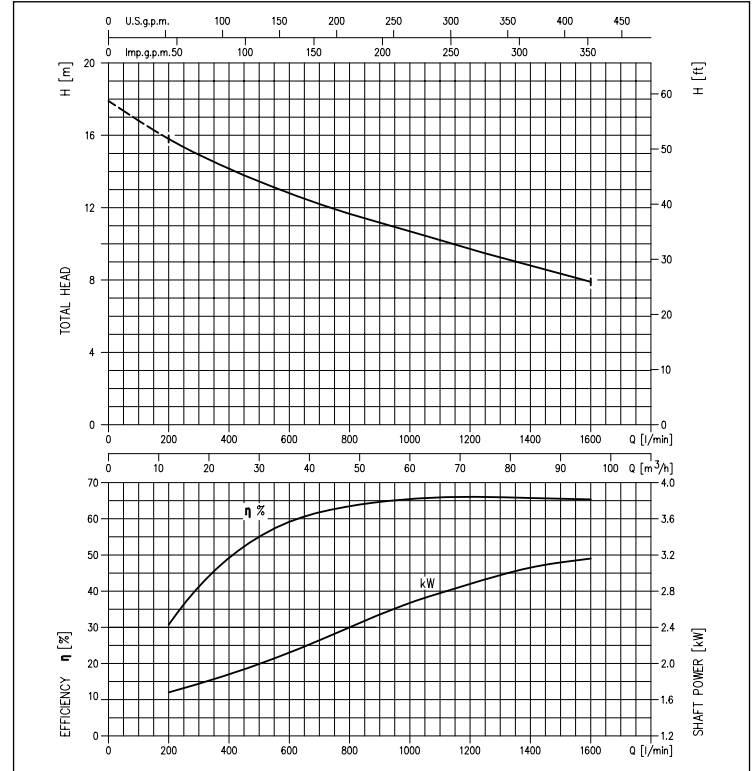
PERFORMANCE CURVES series 80DML52.2

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



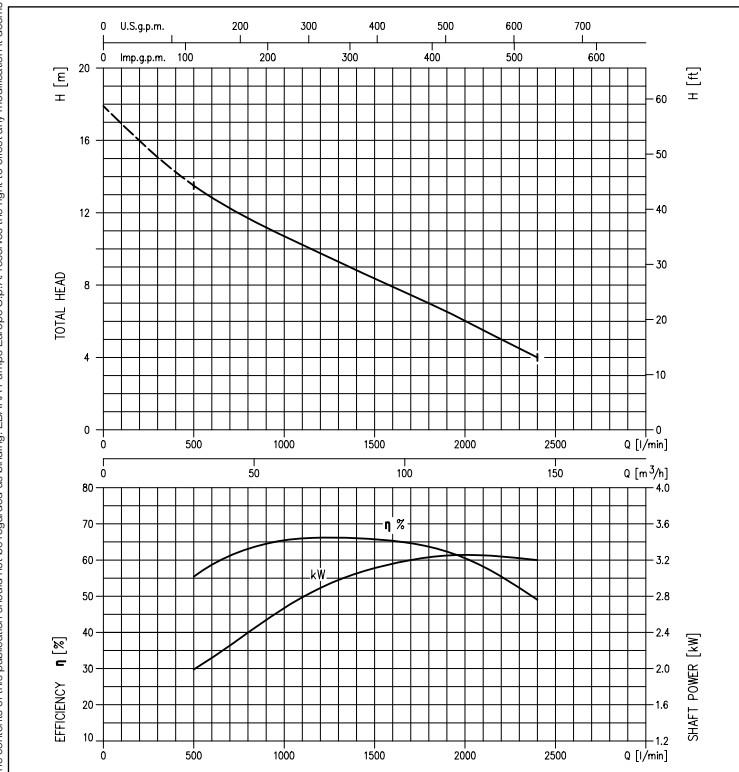
PERFORMANCE CURVES series 80DML53.7

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



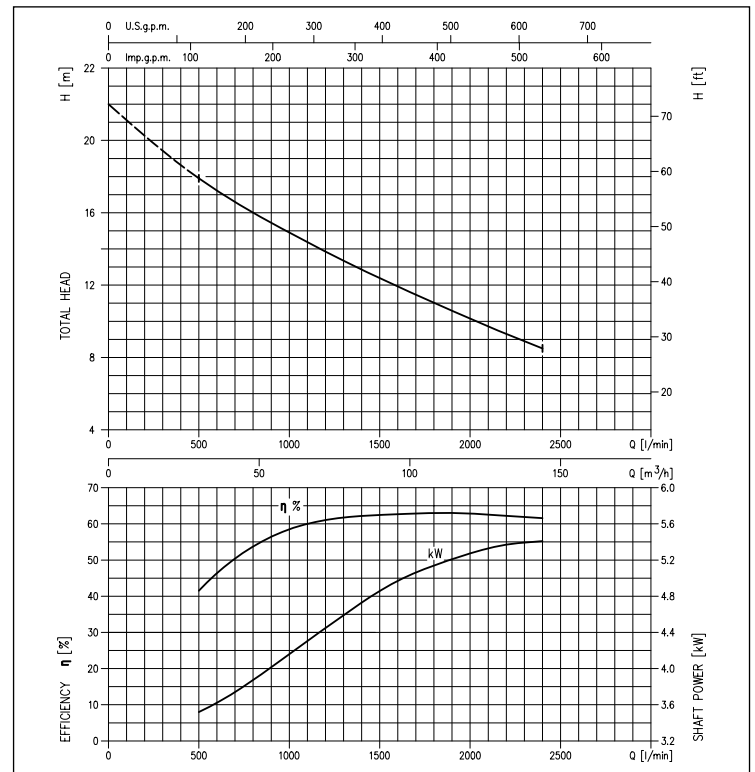
PERFORMANCE CURVES 100DML53.7

(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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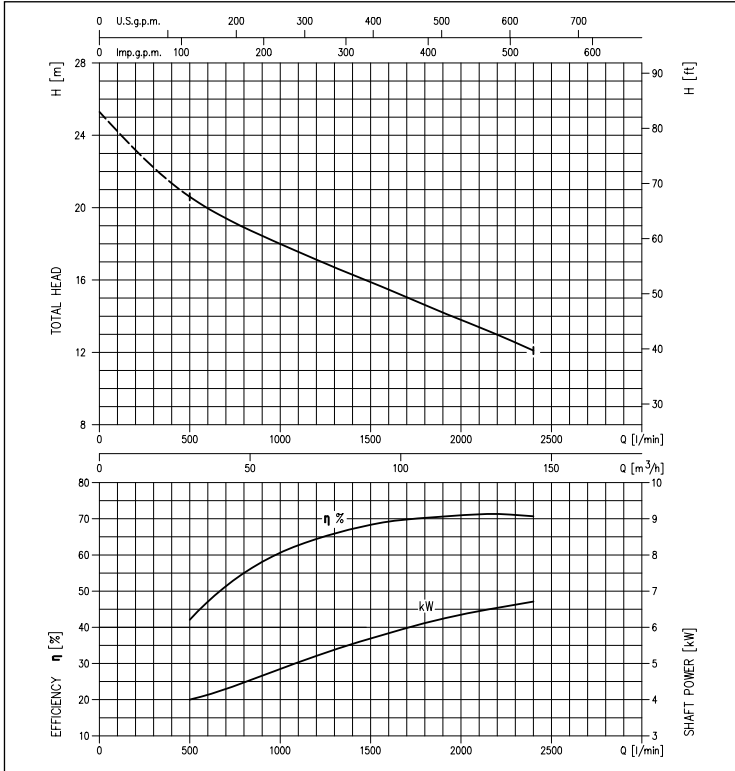


DML - DMLF

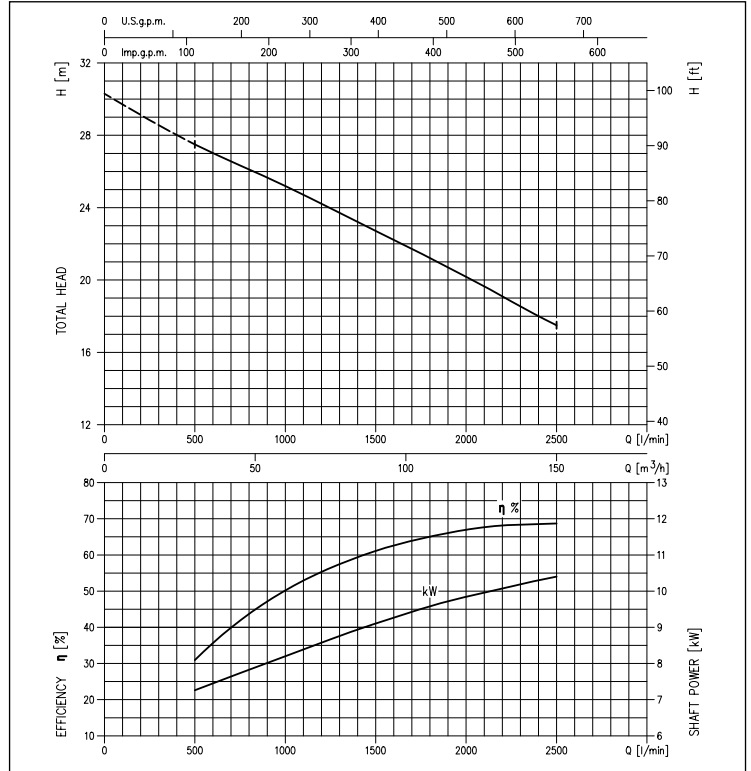
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

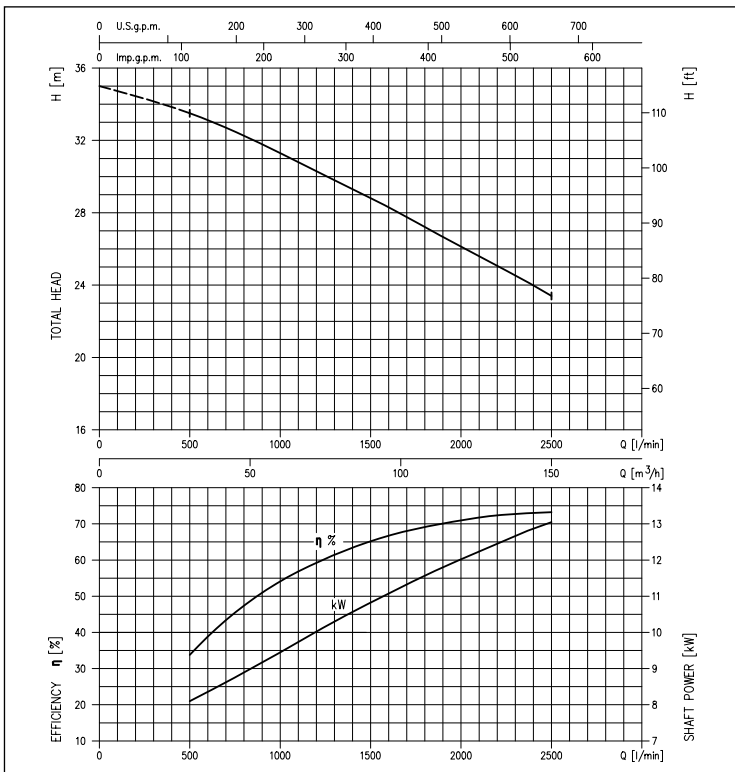
PERFORMANCE CURVES series 100DML57.5
(per ISO 9906 Annex A) IMPELLER DIA.: 248 mm



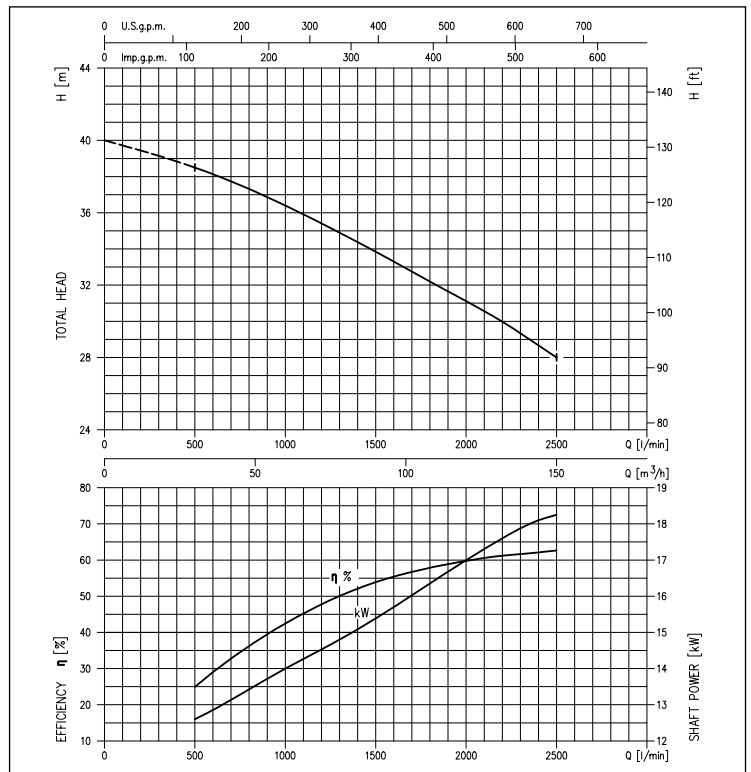
PERFORMANCE CURVES series 100DML511
(per ISO 9906 Annex A) IMPELLER DIA.: 286 mm



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 ₂		Q=Flow rate								
	[HP]	[kW]	l/min m ³ /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

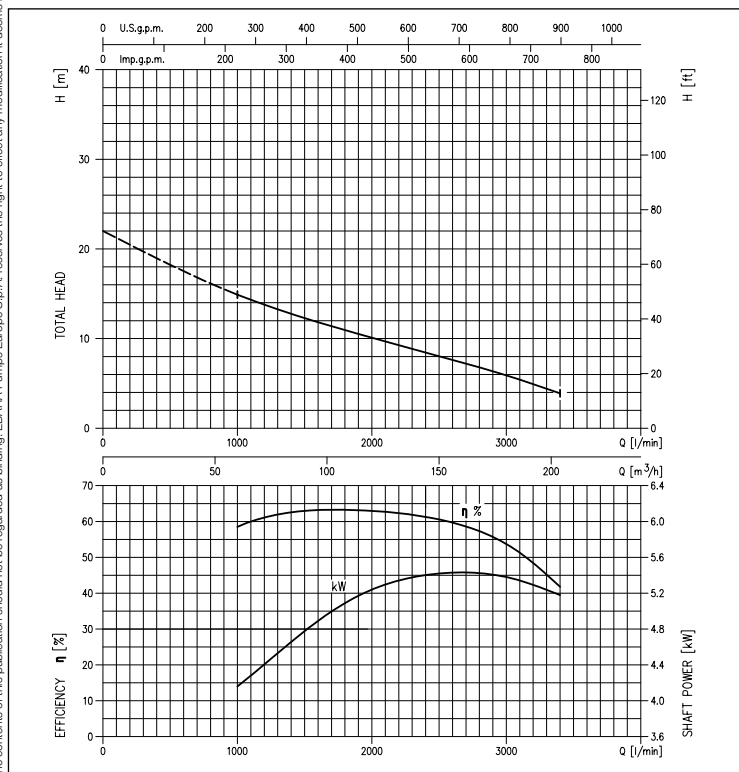
Model	P ₂		Q=Flow rate								
	[HP]	[kW]	l/min m ³ /h	500 30	1000 60	1300 78	1600 96	1900 114	2200 132	2400 144	2500 150
100DML53.7	5	3.7	13.5		10.7	9.3	7.9	6.5	5.0	4.0	-
100DML55.5	7.5	5.5	17.9		14.9	13.4	11.9	10.6	9.3	8.5	-
100DML57.5	10	7.5	20.6		18.0	16.7	15.5	14.2	13.0	12.1	-
100DML511	15	11	27.5		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 ₂		Q=Flow rate									
	[HP]	[kW]	l/min m ³ /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

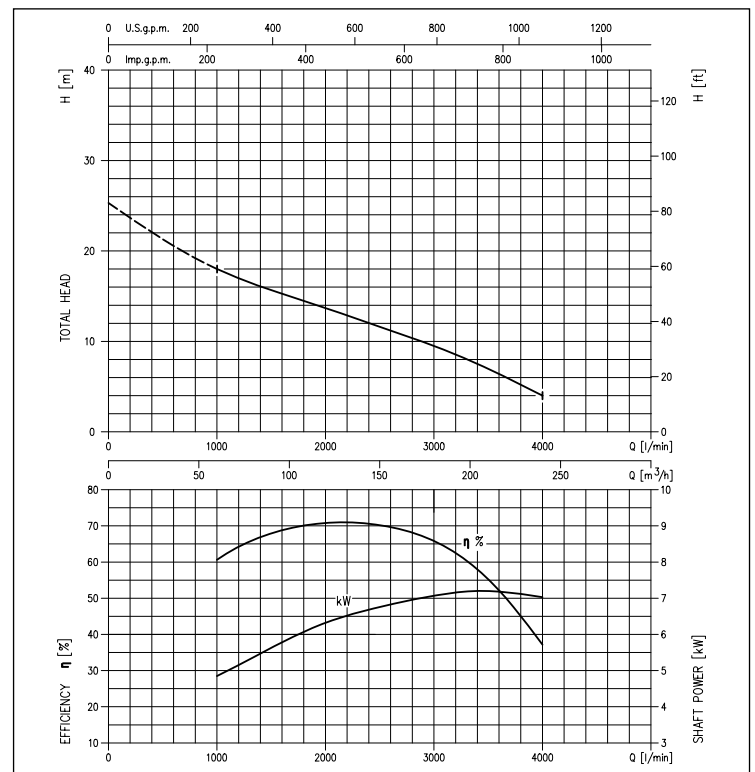
PERFORMANCE CURVES series 150DML 55.5

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



PERFORMANCE CURVES series 150DML 57.5

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





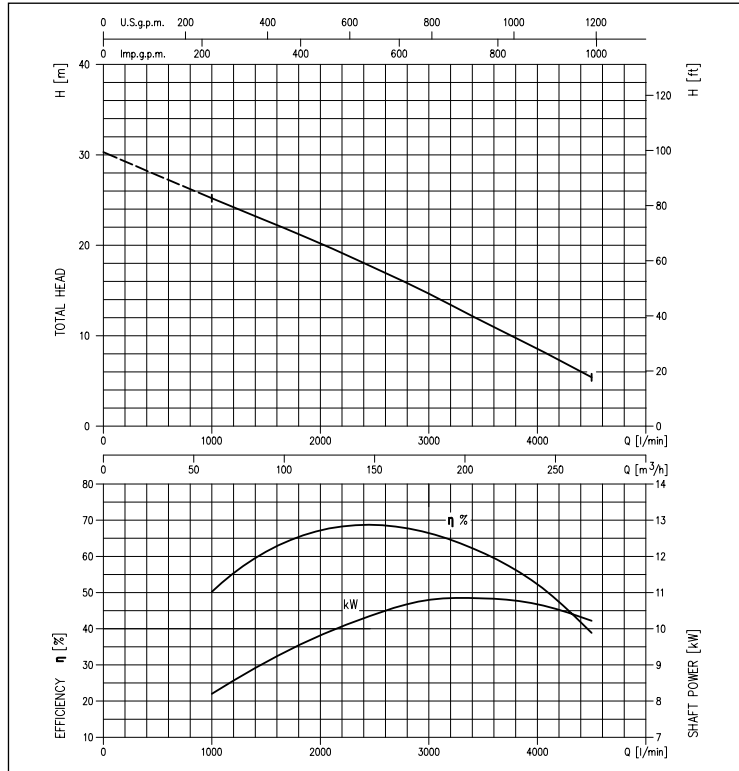
DML - DMLF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

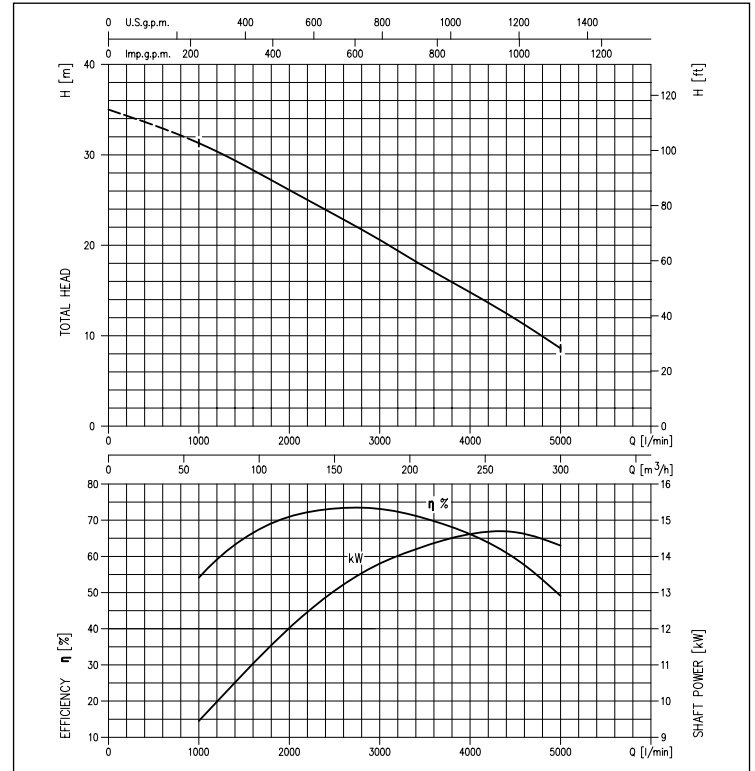
PERFORMANCE CURVES series 150DML 511

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



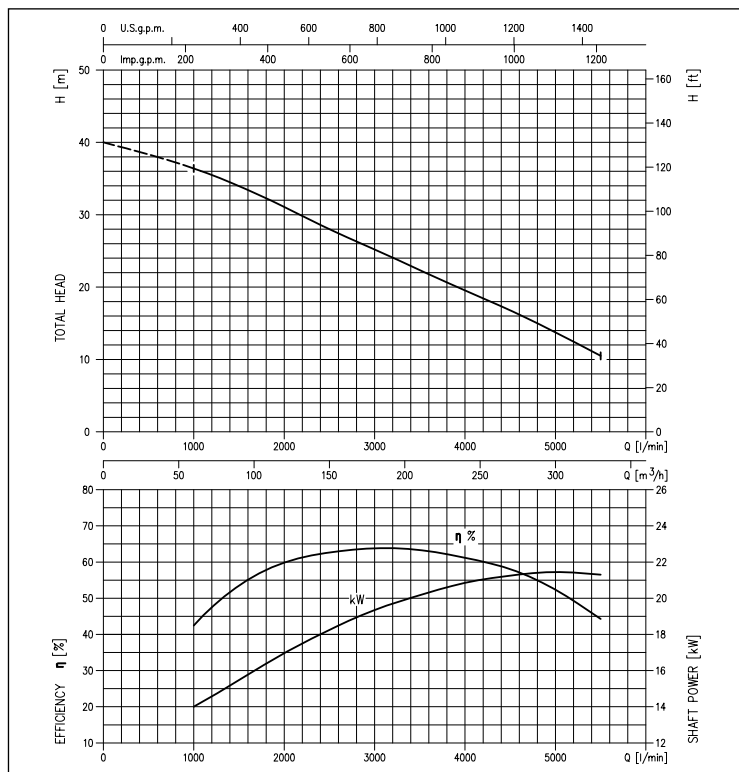
PERFORMANCE CURVES series 150DML 515

(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)

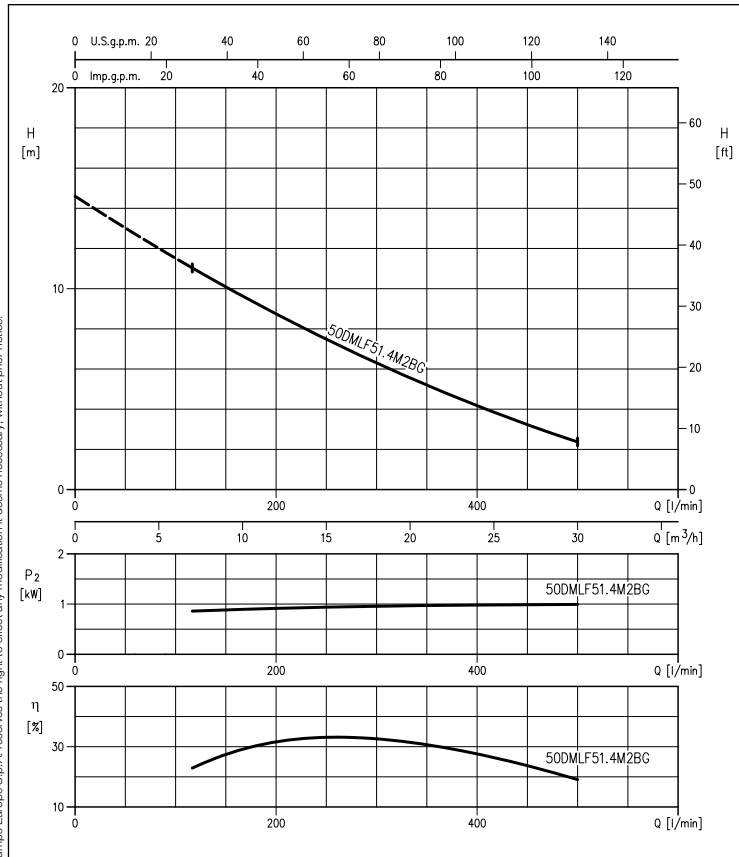
in cast iron

PERFORMANCE TABLE 50-65DMLF

Model	P ₂		Q=Flow rate									
	[HP]	[kW]	117 m ³ /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

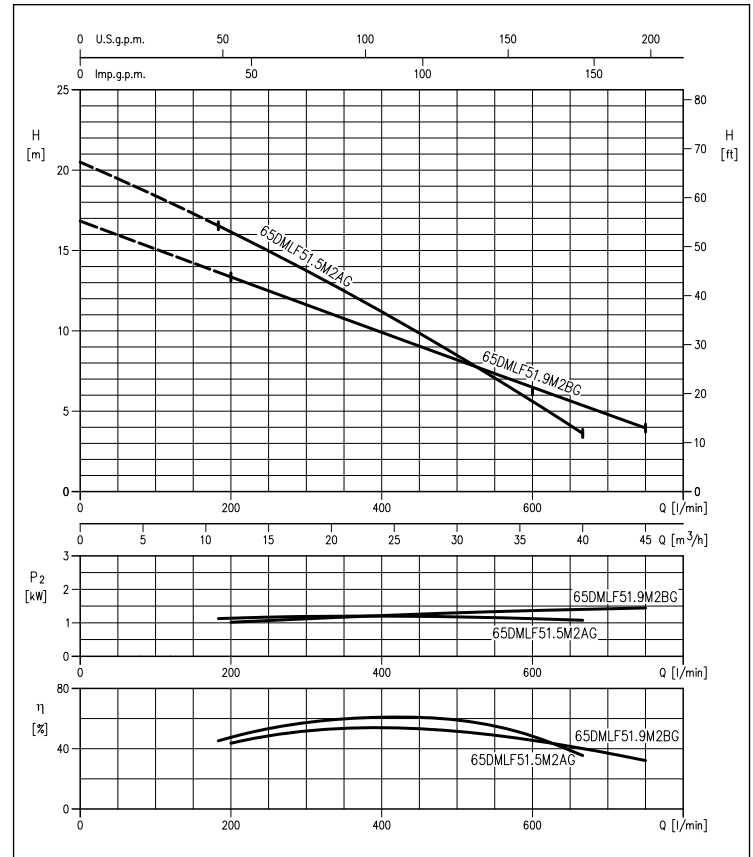
PERFORMANCE CURVES series 50DMLF51.4M2BG (1.4 kW)

(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 DML

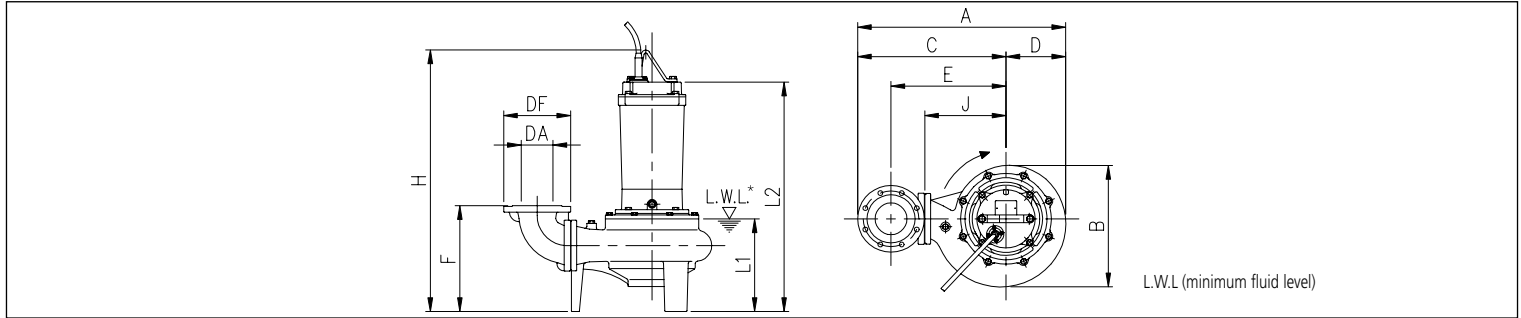


TABLE OF DIMENSIONS DML

Model	DA	kW	Dimensions [mm]										Weight [kg]
			A	B	C	D	E	F	H	J	L1	L2	
80DML52.5	80	2.2	542	320	385	157	285	308	668	210	279	547	80.0
80DML53.7	80	3.7	542	320	385	157	285	308	727	210	279	627	87.0
100DML53.7	100	3.7	582	320	425	157	315	313	727	210	279	627	89.0
100DML55.5	100	5.5	658	381	470	188	360	339	824	255	310	724	121.0
100DML57.5	100	7.5	658	381	470	188	360	339	824	255	310	724	125.0
100DML511	100	11	751	455	530	221	420	355	938	315	329	778	160.0
100DML515	100	15	751	455	530	221	420	355	938	315	329	778	166.0
100DML522	100	22	795	497	550	245	440	358	1021	335	342	841	226.0
150DML55.5	150	5.5	715.5	381	527.5	188	385	369	824	255	310	724	127.0
150DML57.5	150	7.5	715.5	381	527.5	188	385	369	824	255	310	724	132.0
150DML511	150	11	808.5	455	587.5	221	445	385	938	315	329	778	166.0
150DML515	150	15	808.5	455	587.5	221	445	385	938	315	329	778	172.0
150DML522	150	22	852.5	497	607.5	245	465	388	1021	335	342	841	232.0

DIMENSIONS QDC (lowering device kit) LM 80 (for models 80 (100) DML 52.2, 53.7)

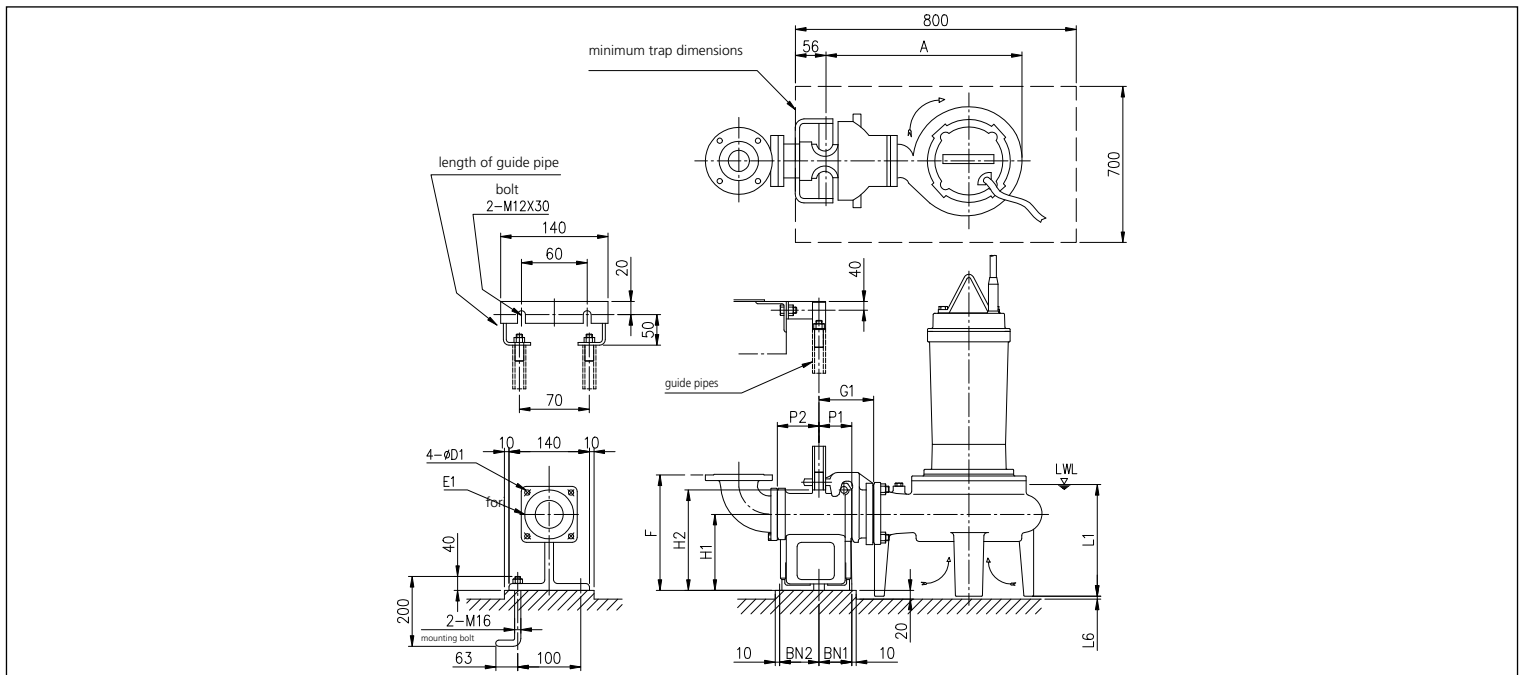


TABLE OF DIMENSIONS QDC (lowering device kit) LM 80

Model	Dimensions [mm]													QDC (lowering device kit)	Weight [kg]	
	A	P1	P2	G1	G2	F	H1	H2	L1	L6	BN1	BN2	D1			E1
80 DML 52.2	492	75	90	125	165	295	175	230	279	7	75	90	15	155	LM80	17.0
80 DML 53.7	492	75	90	125	165	295	175	230	279	7	75	90	15	155	LM80	17.0
100DML53.7	492	75	90	125	195	300	175	230	279	7	75	90	15	155	LM80	17.0

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)

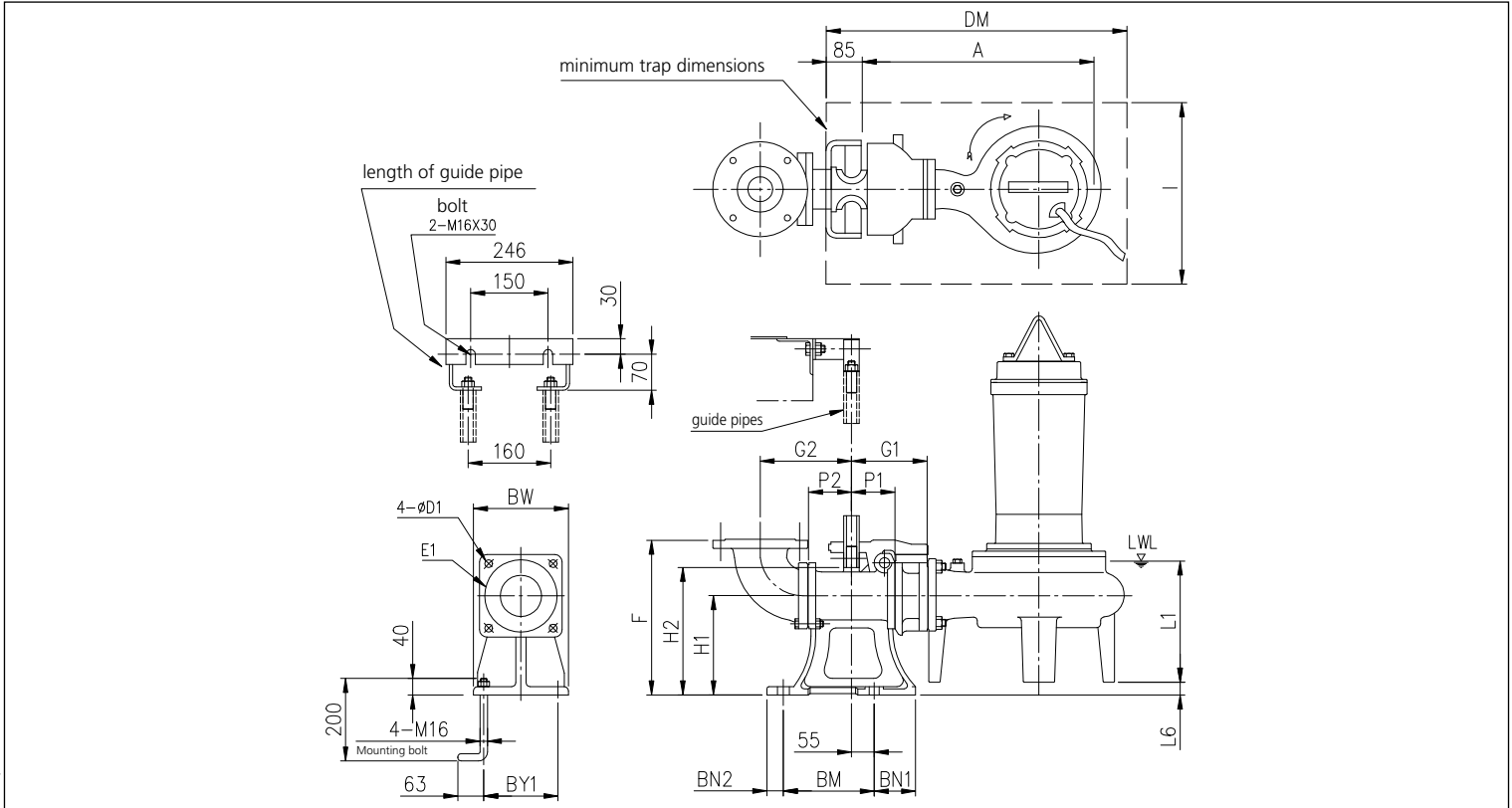


TABLE OF DIMENSIONS QDC (lowering device kit)

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

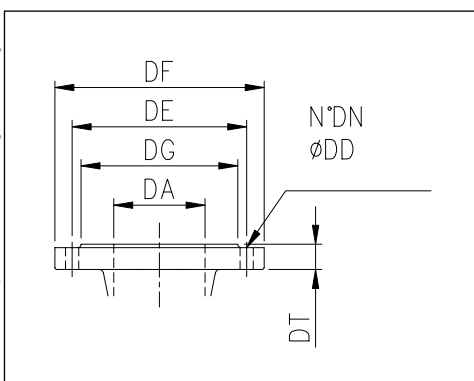


TABLE OF DIMENSIONS FLANGES

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)

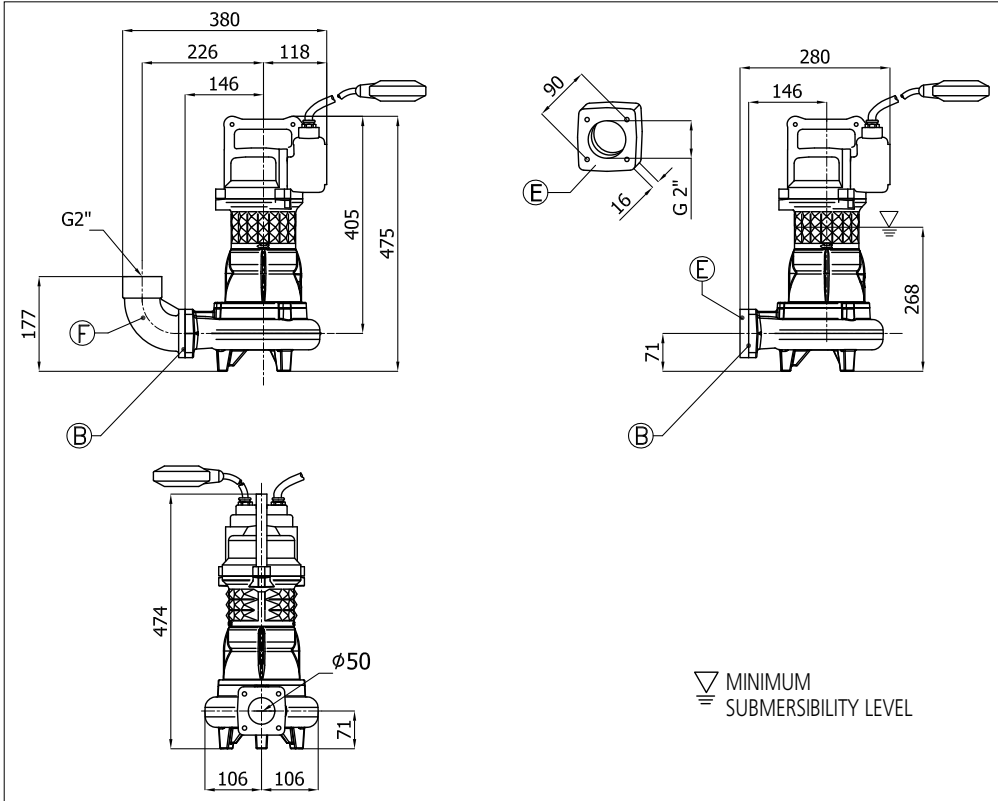
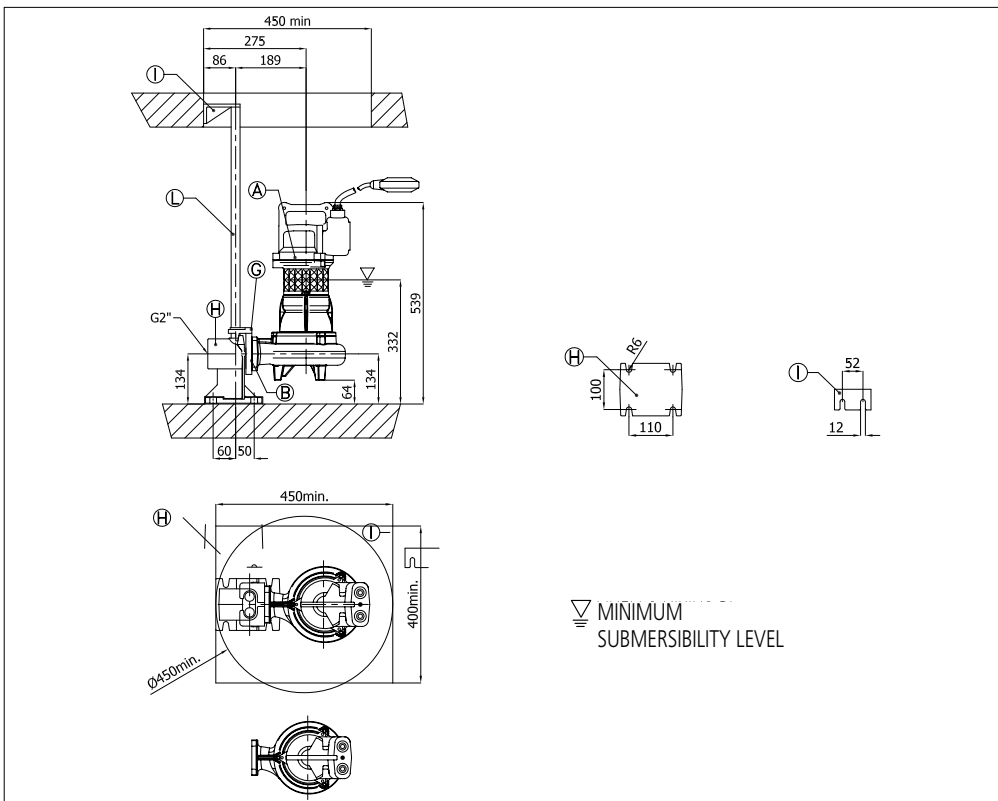


TABLE OF DIMENSIONS 50DMLF/50DMLF with QDC (1.4 kW)

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)

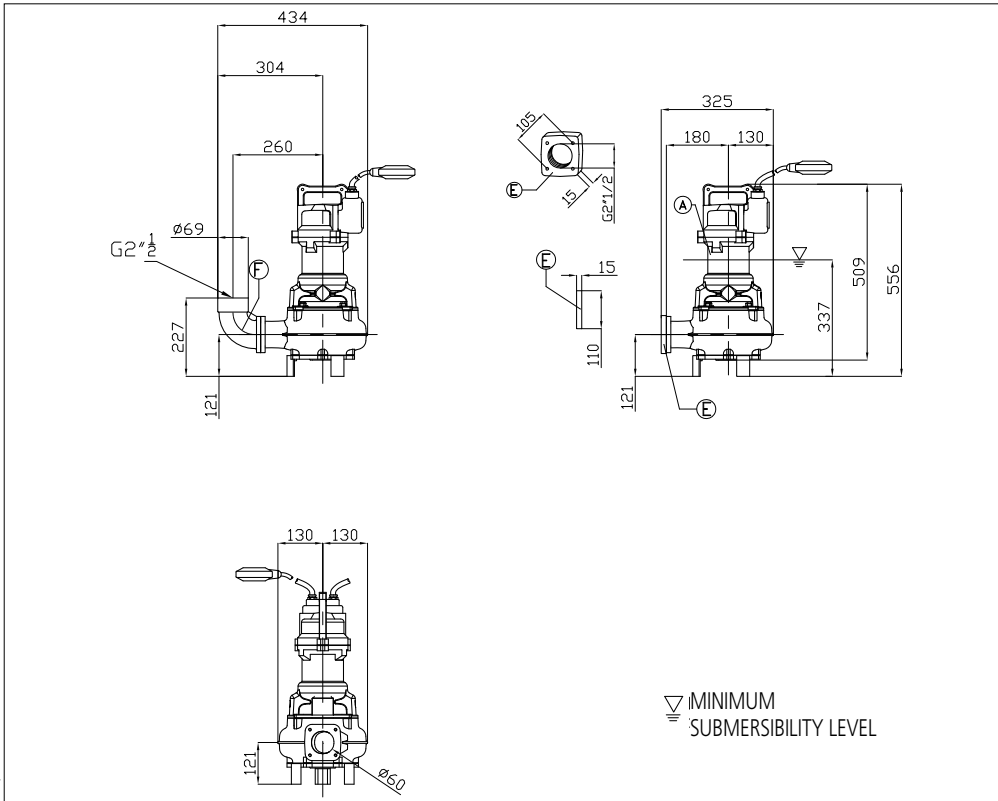
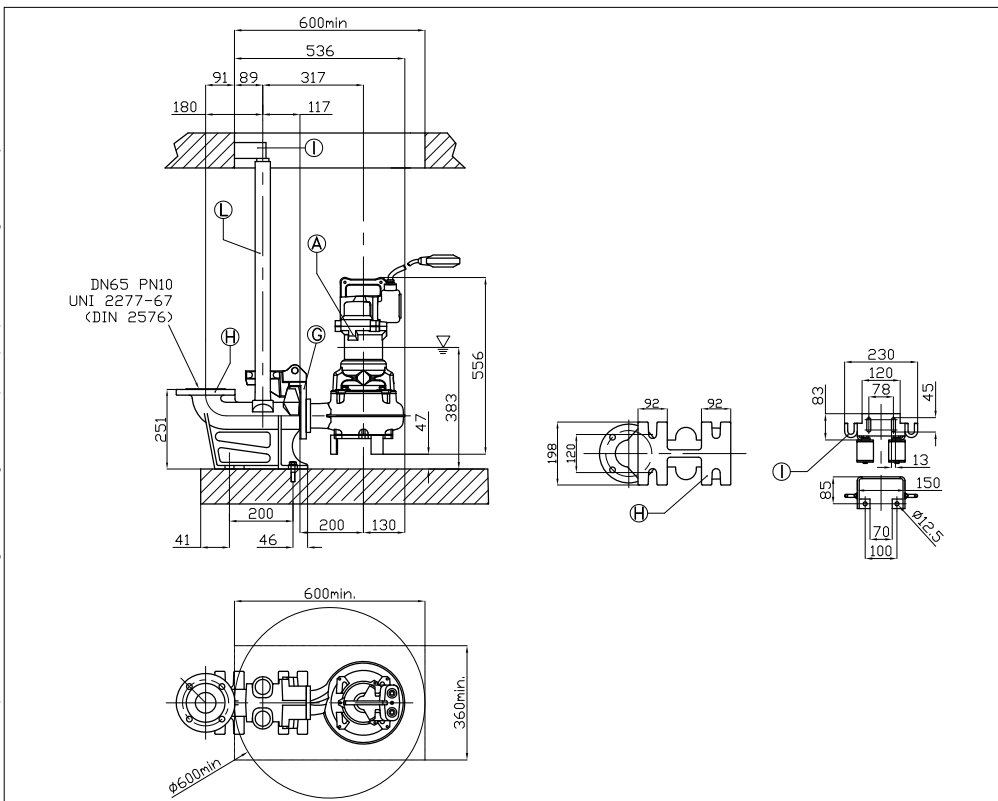


TABLE OF DIMENSIONS 65DMLF/65DMLF with QDC (1.5 - 1.9 kW)

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



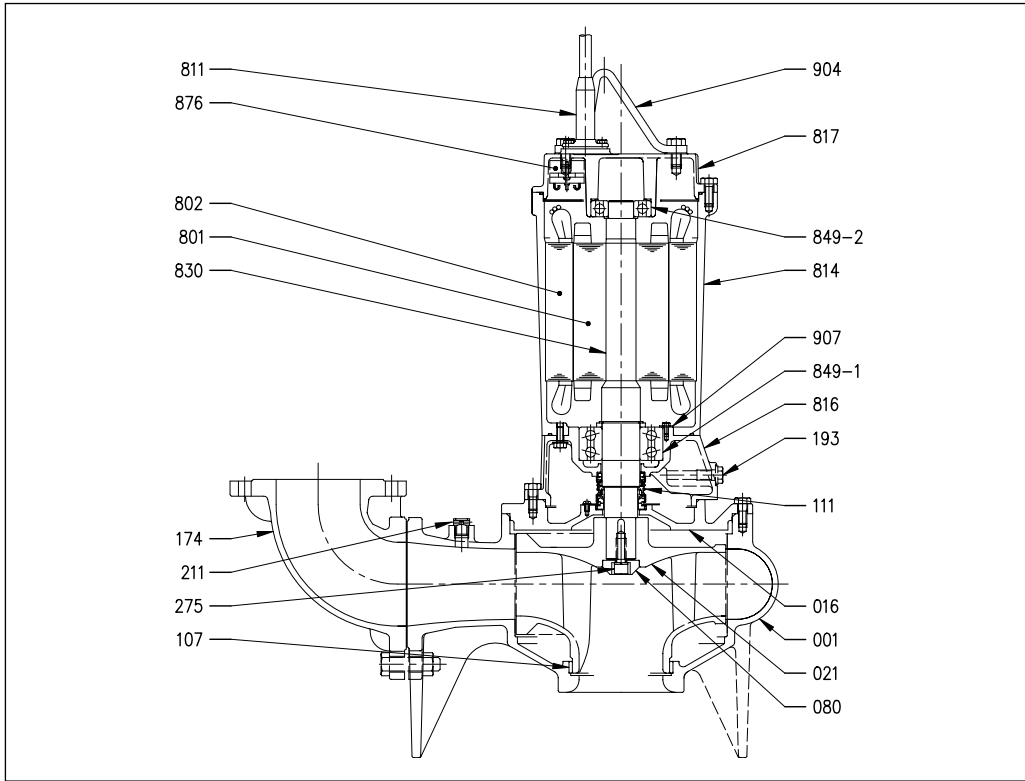
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DML - DMLF

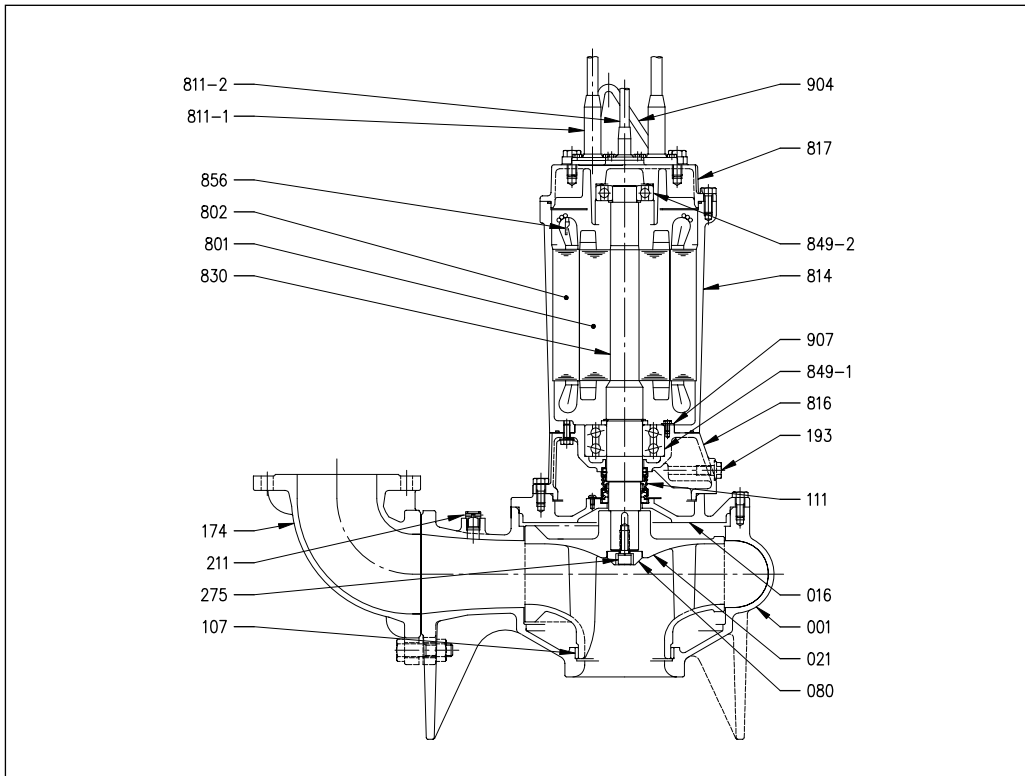
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

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)

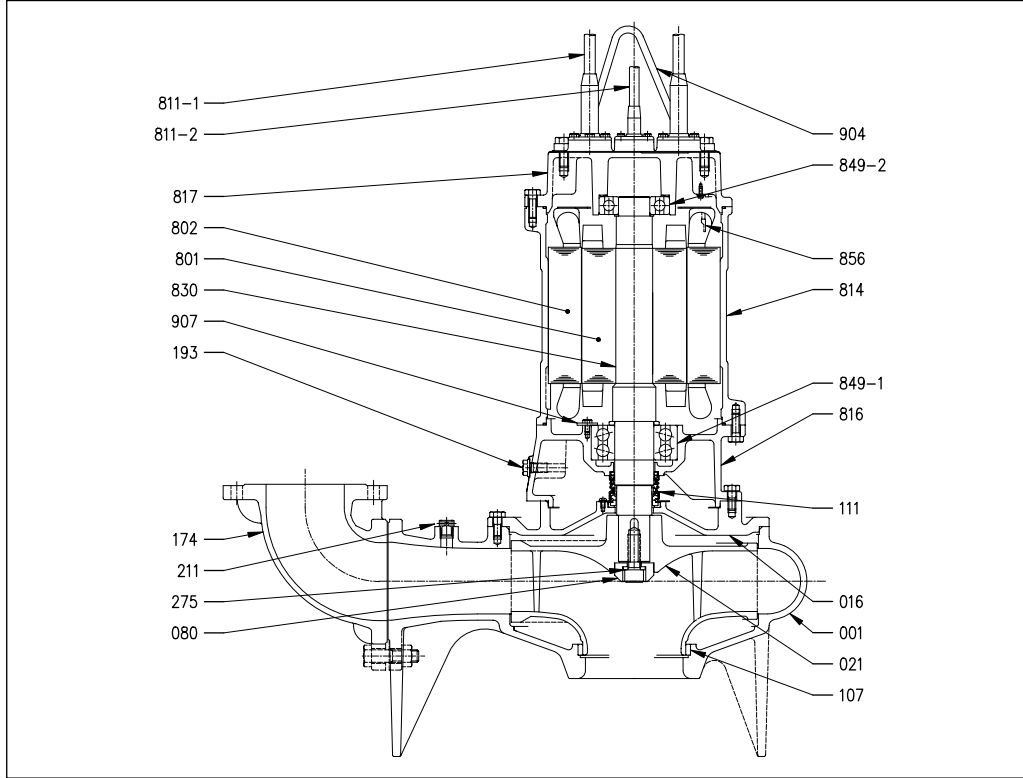


TABLE OF MATERIALS DML

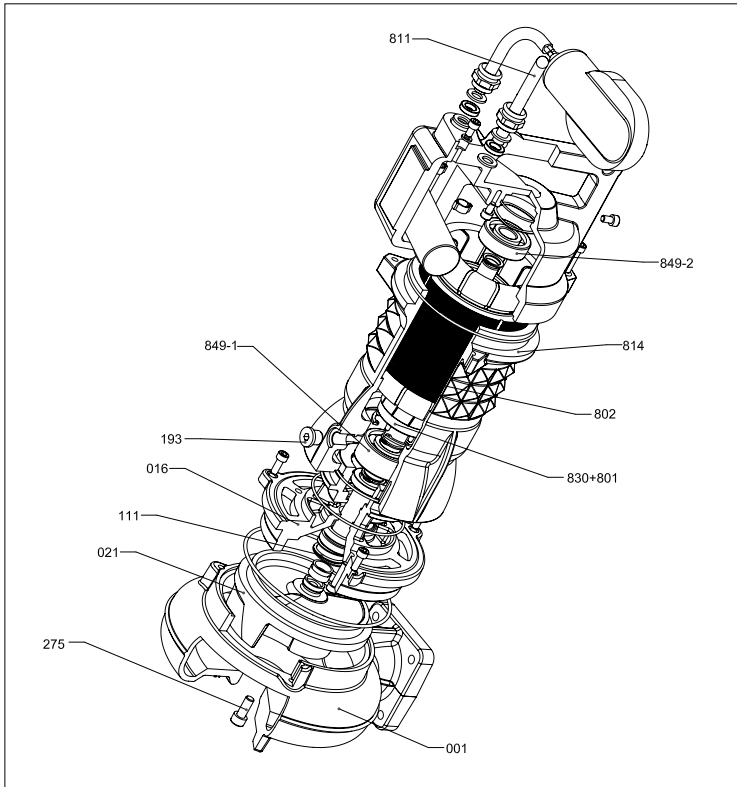
Ref.	Name	Material	Ref.	Name	Material
001	Pump body	Cast iron EN-GHJL-200 - EN 1561	811-1	Power cable	-
016	Mechanical seal cover	Cast iron EN-GHJL-200 - EN 1561	811-2	Signal cable	-
021	Impeller	Cast iron EN-GHJL-200 - EN 1561	814	Motor casing	Cast iron EN-GHJL-200 - EN 1561
080	Bushing	Steel	816	Upper 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

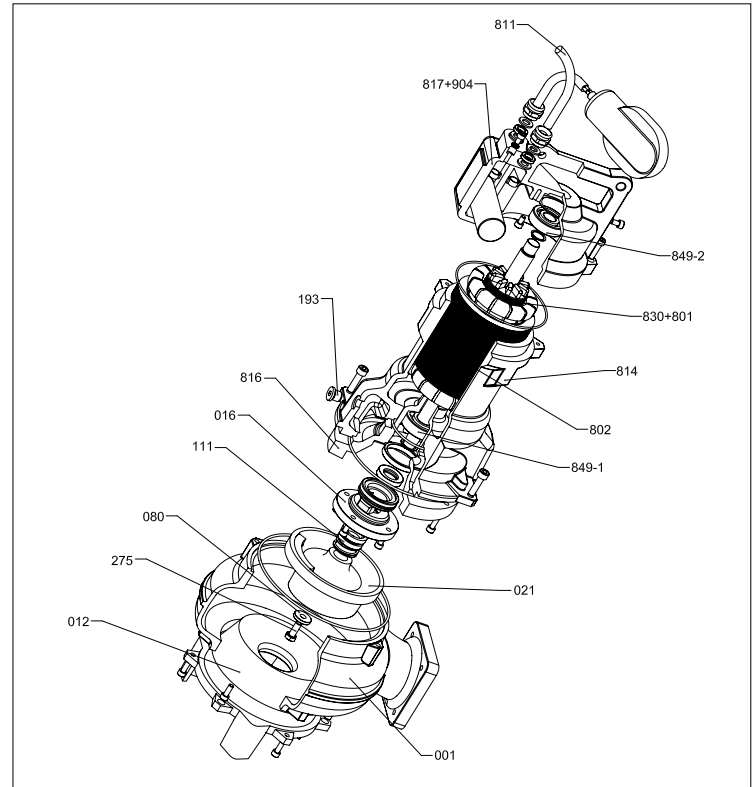
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (SINGLE CHANNEL)

in cast iron

SECTIONAL VIEW 50DMLF (1.4 kW)



SECTIONAL VIEW 65DMLF (1.5 kW)



SECTIONAL VIEW 65DMLF (1.9 kW)

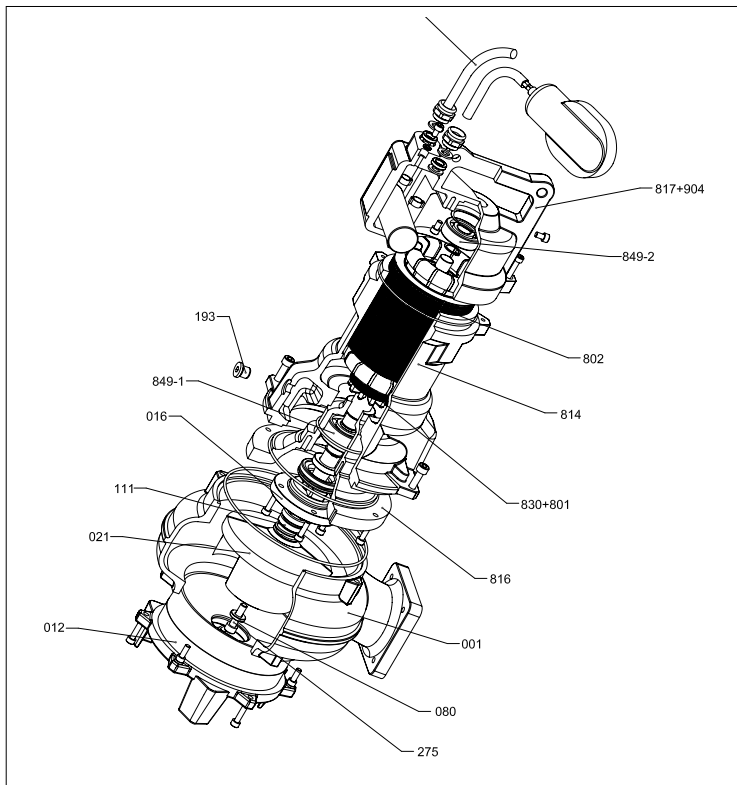


TABLE OF MATERIALS DMLF

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)

[P₂]		[kW]			2.2			3.7		
Resistance at 20°C		[Ω]		7.015			3.623			
GD ²		[kg/m ²]		0.02			0.03			
Voltage		[V]		380	400	415	380	400	415	
Full load	0%	Current	[A]	2.13	2.52	2.81	3.29	3.88	4.45	
		Power	[W]	450	480	580	620	780	840	
		Efficiency	[%]	67.11	68.45	67.13	72.12	71.40	69.56	
	75%	Power factor	[%]	86.20	82.63	79.22	86.08	82.84	79.82	
		rpm	[min ⁻¹]	1428	1437	1442	1439	1443	1447	
		Current	[A]	5.50	5.20	5.20	8.60	8.40	8.40	
	100%	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	
		rpm	[min ⁻¹]	1400	1411	1421	1416	1422	1428	
Torque with rotor locked		[%]		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)

[P₂]		[kW]			5.5			7.5			11		
Resistance at 20°C		[Ω]		1.920			1.326			0.862			
GD ²		[kg/m ²]		0.059			0.076			0.120			
Voltage		[V]		380	400	415	380	400	415	380	400	415	
Full load	0%	Current	[A]	5.56	6.67	7.64	6.93	8.41	9.70	8.49	10.15	11.85	
		Power	[W]	900	1200	1330	1200	1300	1600	1100	1450	1800	
		Efficiency	[%]	73.72	72.26	71.38	75.24	76.86	71.60	81.12	75.49	74.70	
	75%	Power factor	[%]	82.50	78.43	74.23	83.20	75.16	75.46	84.63	81.87	78.15	
		rpm	[min ⁻¹]	1454	1456	1460	1461	1460	1466	1462	1461	1465	
		Current	[A]	12.70	12.60	12.70	16.90	16.90	17.10	23.50	23.80	23.80	
	100%	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	
		rpm	[min ⁻¹]	1437	1440	1445	1445	1447	1455	1447	1446	1451	
Torque with rotor locked		[%]		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%			
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 ₂]		[kW]	15			22			
Resistance at 20°C		[Ω]	0.563			0.308			
GD ²		[kg/m ²]	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
	100%	rpm	[min ⁻¹]	1465	1464	1467	1473	1475	1474
		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 ⁻¹]	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 ₂]		[kW]	1.4		1.5		1.9		
Resistance at 20°C		[Ω]	-		-		-		
GD ²		[kg/m ²]	0.0011		0.0039		0.0078		
Voltage		[V]	230		230		230		
Full load	0%	Current	[A]	-		-		-	
		Power	[W]	-		-		-	
	75%	Current	[A]	-		-		-	
		Efficiency	[%]	72		72		73	
		Power factor	[%]	0.97		0.97		0.97	
	100%	rpm	[min ⁻¹]	-		-		-	
		Current	[A]	-		-		-	
		Efficiency	[%]	73		73		73	
		Power factor	[%]	0.99		0.99		0.99	
		rpm	[min ⁻¹]	-		-		-	
	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		

DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)

in cast iron



Submersible electric pumps for foul waste water, cast iron.

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 vortex impeller
- Top and bottom seal ring (DMLV)
- Anti-vortex system in oil chamber (DMLV)

TECHNICAL DATA

- Maximum fluid temperature: 40°C
- Maximum solid dimensions: 80 - 100 mm (DMLV)
- Maximum solid dimensions: 30 - 80 mm (DMLVF)
- Maximum length of fibres: 400 mm (80DMLV)
500 mm (100DMLV)
- 4 pole motor (DMLV)
- 2/4/6 pole motor (DMLVF)
- Insulation class F (DMLV)
- Insulation class H (DMLVF)
- Protection rating IP68
- Three phase voltage 380-415V -10 +6%, 50Hz (DMLV 2.2 kW) - DOL
- Three phase voltage 380-415V ±10%, 50Hz (DMLV 3.7 - 22 kW) - Y/Δ
- Single phase voltage 230V ±10%, 50Hz (DMLVF)
- Three phase voltage 400/690V ±10%, 50Hz (DMLVF)
- Flanges DN80, DN100 (DMLV)
- Flanges 1" ¼ (40DMLVF), DN50, DN65, DN80, DN100 (DMLVF)
- Power up to 22 kW (DMLV)
- Power up to 18.2 kW (DMLVF)

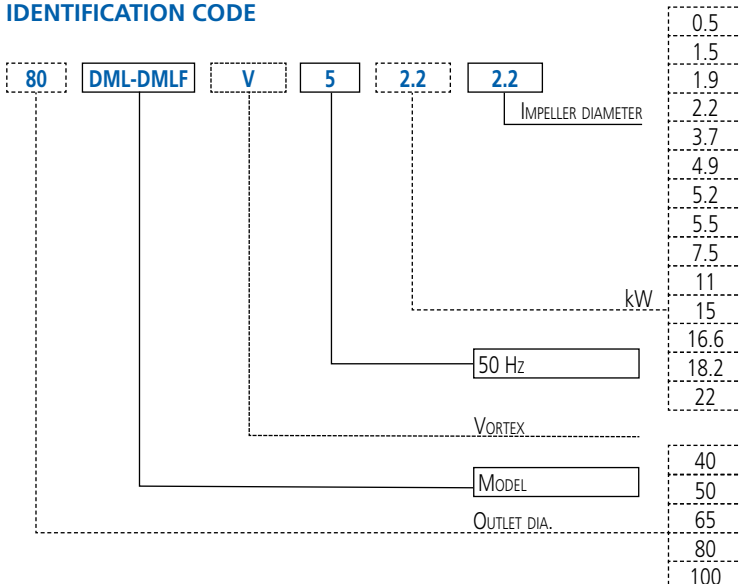
MATERIALS

- Pump body, vortex impeller, elbow (bend) in cast iron
- Shaft in AISI 403 (DMLV) and AISI 420B (DMLVF)
- Mechanical seal:
 - SiC/SiC/NBR (pump side) (DMLV)
 - Carbon/Ceramic/NBR (motor side) (DMLVF)
 - Carbon/Ceramic/NBR (motor side) (40DMLVF)
 - SiC/SiC/NBR (pump side) (DMLVF excluding 40DMLVF)
 - Carbon/Ceramic/NBR (motor side) (DMLVF 4.9 kW and above)

ACCESSORIES (on request)

For accessories, see page 151 onwards

IDENTIFICATION CODE



0.5
1.5
1.9
2.2
3.7
4.9
5.2
5.5
7.5
11
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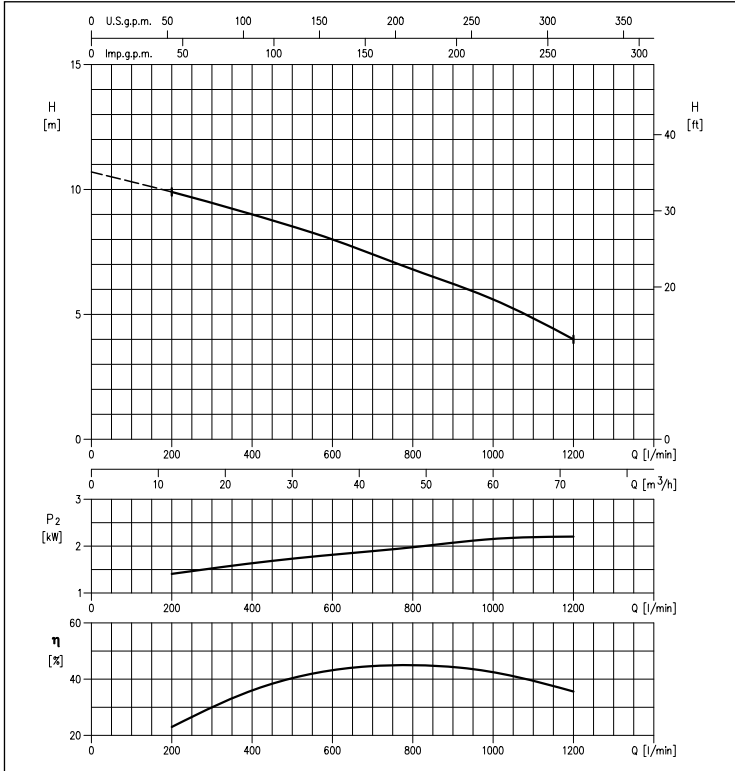
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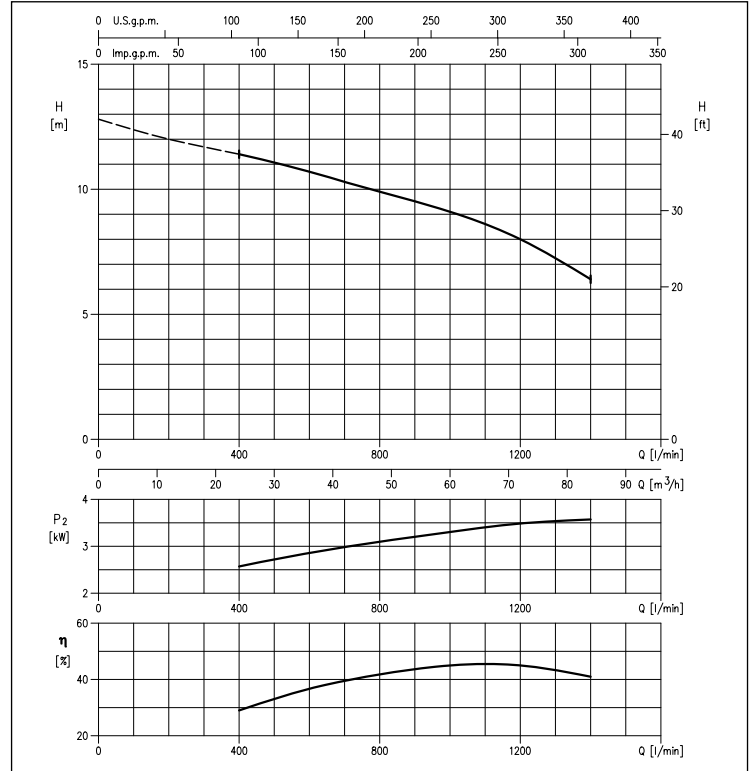
DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX) in cast iron

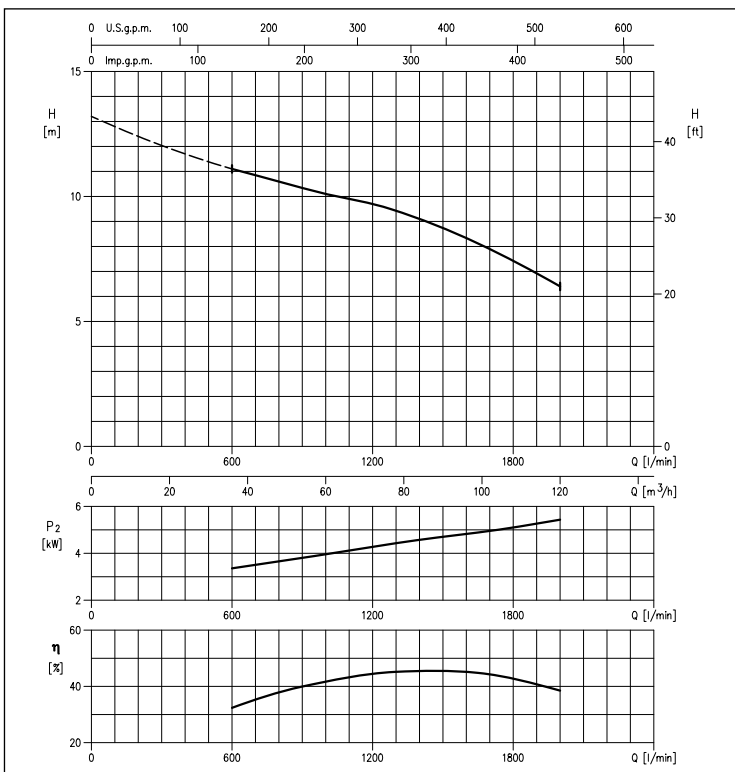
PERFORMANCE CURVES series 80DMLV 52.2
(per ISO 9906 Annex A) IMPELLER DIA.: 185 mm



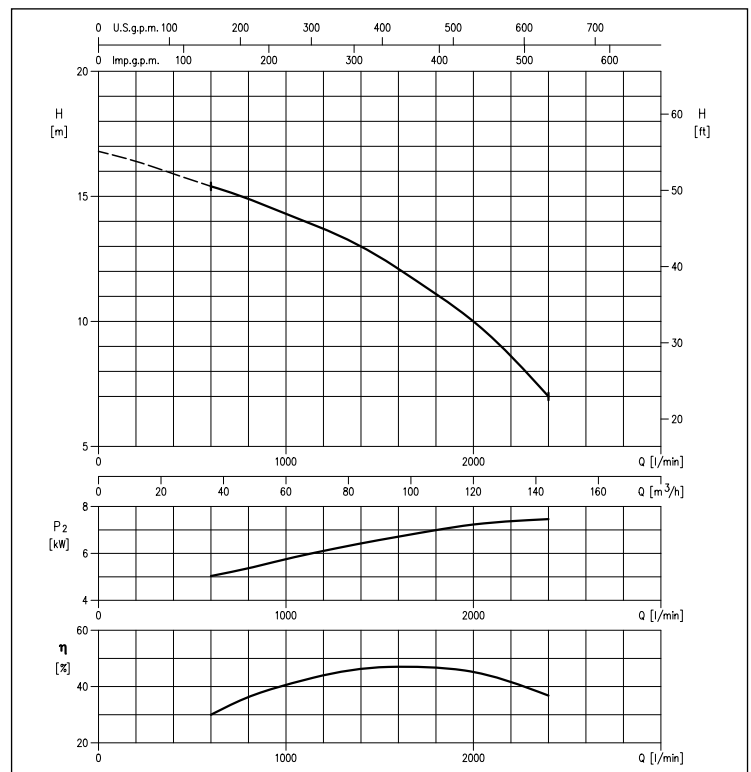
PERFORMANCE CURVES series 80DMLV 53.7
(per ISO 9906 Annex A) IMPELLER DIA.: 204 mm



PERFORMANCE CURVES series 100DMLV 55.5
(per ISO 9906 Annex A) IMPELLER DIA.: 211 mm



PERFORMANCE CURVES series 100DMLV 57.5
(per ISO 9906 Annex A) IMPELLER DIA.: 231 mm



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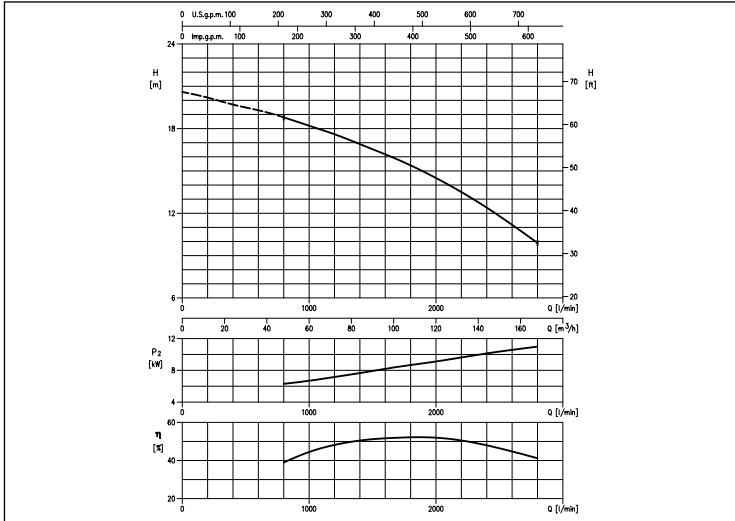


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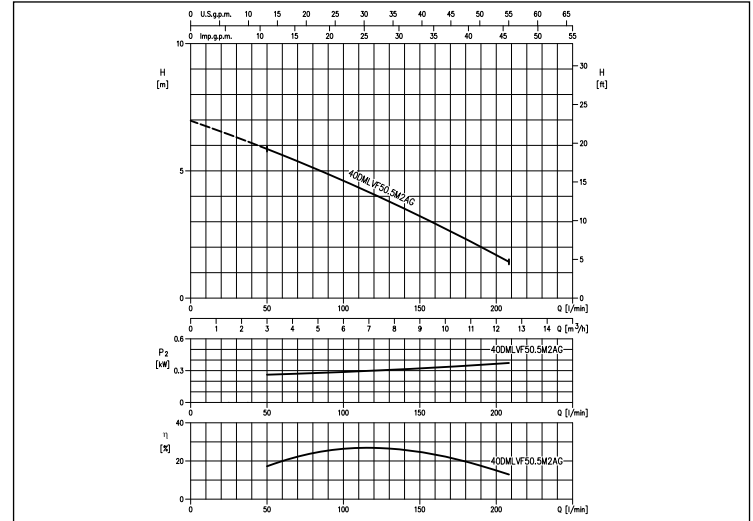
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

PERFORMANCE CURVES

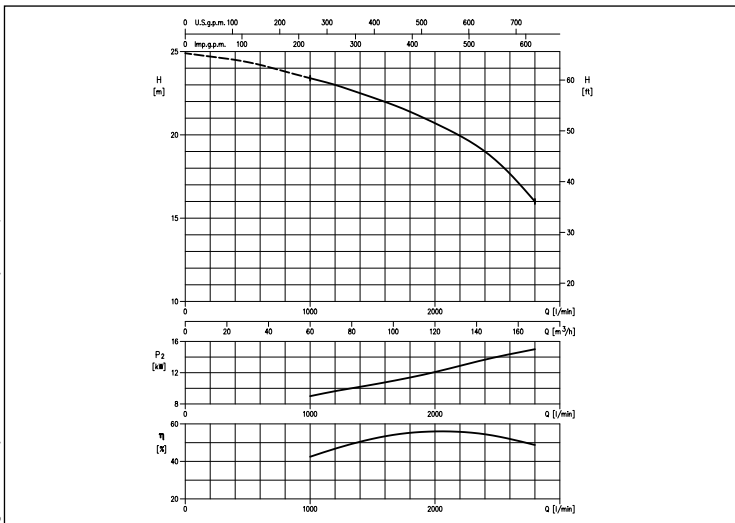
100DMLV511 (per ISO 9906 Annex A)



40DMLVF50.5M2AG (0.5 kW) (per ISO 9906 Annex A)



100DMLV515 (per ISO 9906 Annex A)

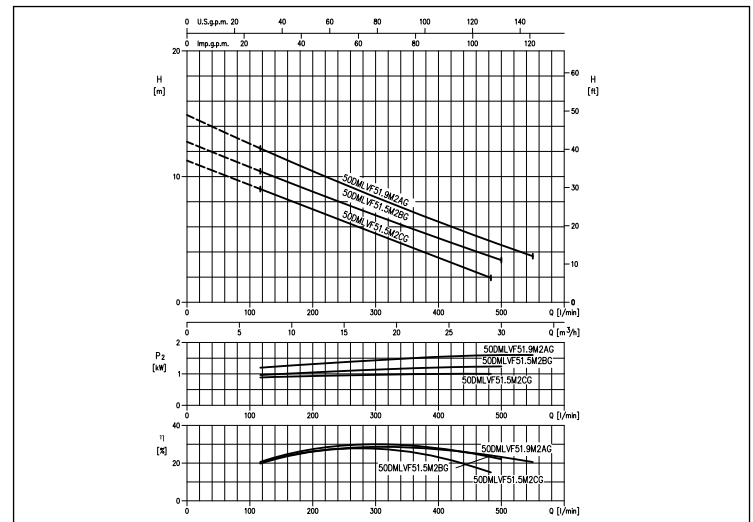


50DMLVF51.5M2CG (1.5 kW)

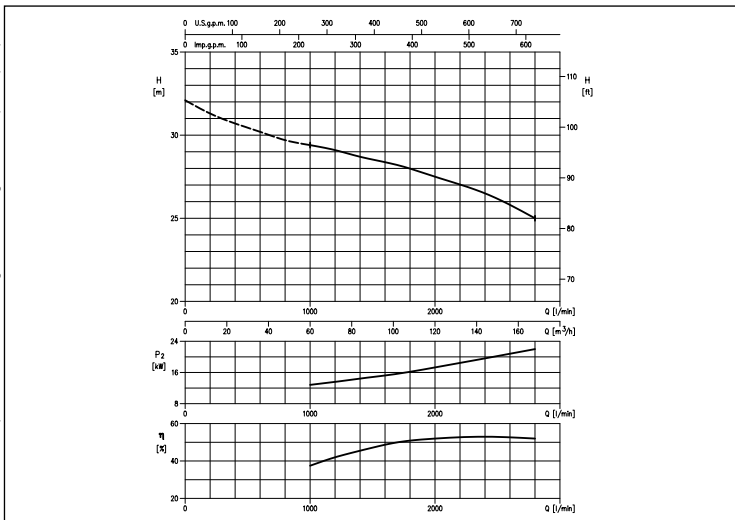
50DMLVF51.5M2BG (1.5 kW)

50DMLVF51.9M2AG (1.9 kW)

(per ISO 9906 Annex A)



100DMLV522 (per ISO 9906 Annex A)



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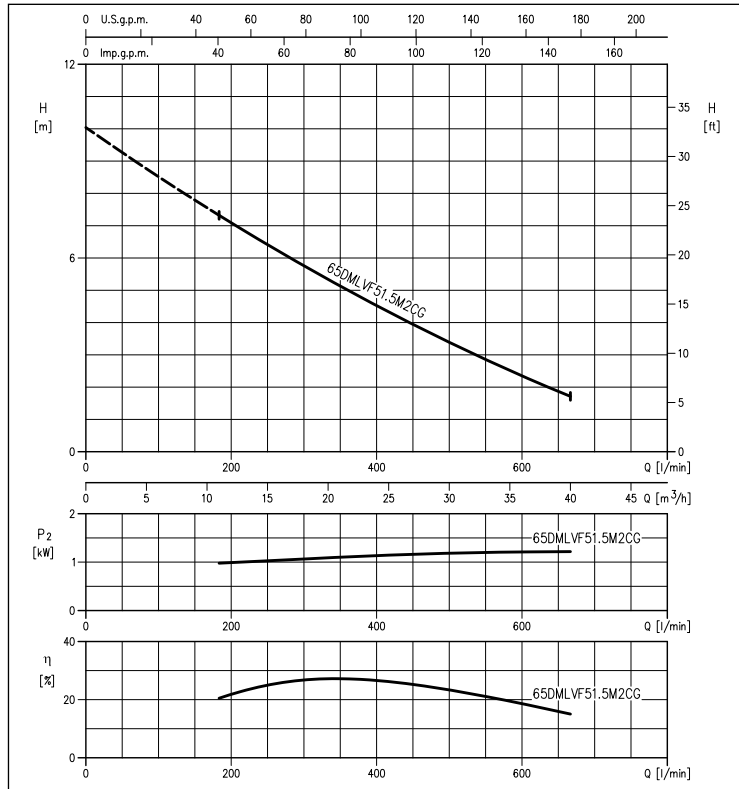


DMLV - DMLVF

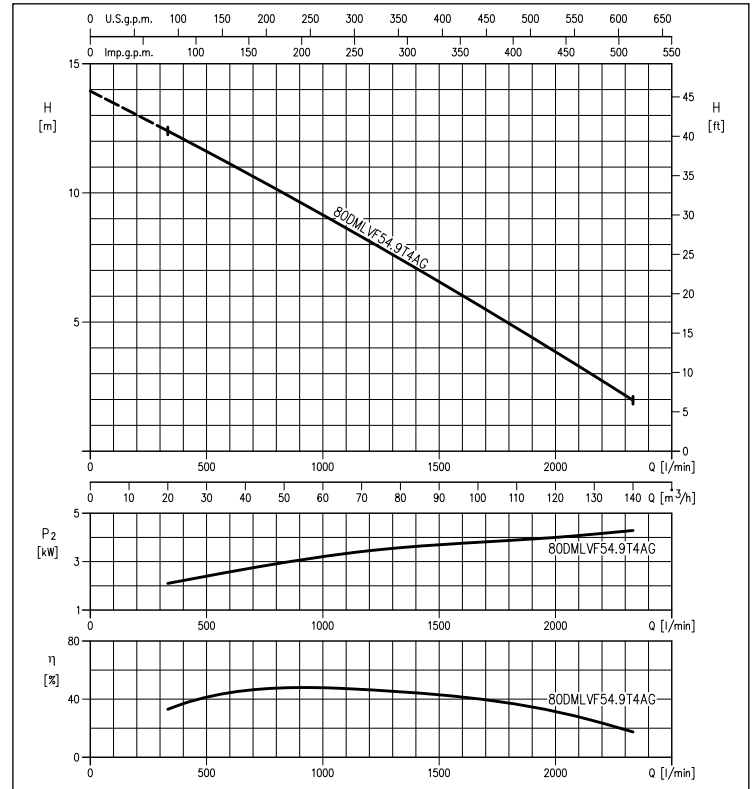
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX) in cast iron

PERFORMANCE CURVES

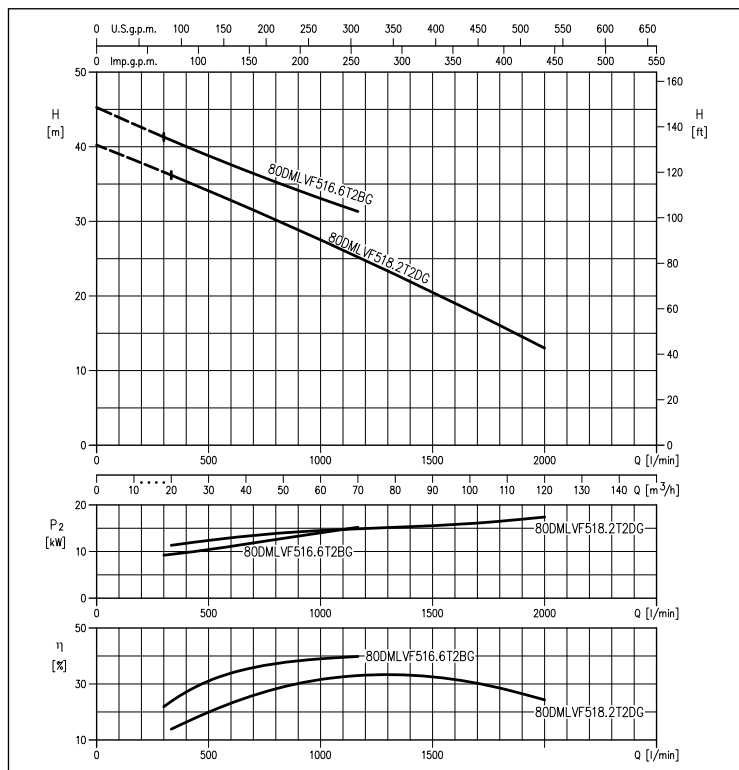
65DMLVF51.5M2CG (1.5 kW) (per ISO 9906 Annex A)



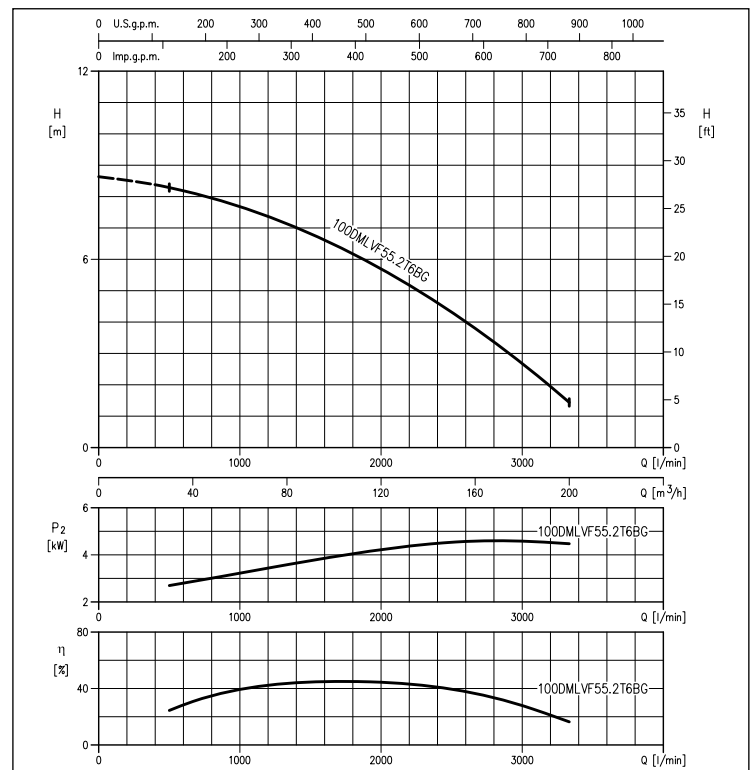
80DMLVF54.9T4AG (4.9 kW) (per ISO 9906 Annex A)



80DMLVF516.6T2BG (16.6 kW)
80DMLVF518.2T2DG (18.2 kW) (per ISO 9906 Annex A)



100DMLVF55.2T6BG (5.2 kW) (per ISO 9906 Annex A)



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DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)

in cast iron

PERFORMANCE TABLE 40-50-65 DMLVF

Model	P ₂		Q=Flow rate											
	[HP]	[kW]	l/min 50	117	183	208	250	300	350	400	483	500	550	667
			m ³ /h 3	7	11	12.5	15	18	21	24	29	30	33	40
			H=Head [m]											
40DMLVF50.5M2AG	0.7	0.5	5.9	4.2	2.2	1.4	-	-	-	-	-	-	-	-
50DMLVF51.5M2CG	2	1.5	-	9	7.7	7.2	6.4	5.5	4.5	3.5	1.9	-	-	-
50DMLVF51.5M2BG	2	1.5	-	10.4	9.1	8.6	7.8	6.9	6.0	5.1	3.6	3.4	-	-
50DMLVF51.9M2AG	2.5	1.9	-	12.2	10.8	10.3	9.4	8.4	7.4	6.4	4.8	4.5	3.7	-
65DMLVF51.5M2CG	2	1.5	-	-	7.3	7.0	6.4	5.8	5.1	4.5	3.6	3.4	2.9	1.7

PERFORMANCE TABLE 80DMLV - 80DMLVF

Model	P ₂		Q=Flow rate												
	[HP]	[kW]	l/min 200	300	333	400	600	900	1167	1200	1320	1400	2000	2100	2333
			m ³ /h 12	18	20	24	36	54	70	72	79	84	120	126	140
			H=Head [m]												
80DMLV52.2	3	2.2	9.9	9.5	9.3	9.0	8	6.4	4.1	4	-	-	-	-	-
80DMLV53.7	5	3.7	-	-	-	11.5	10.7	9.4	9.1	7.9	7.2	6.4	-	-	-
80DMLVF54.9T4AG	6.6	4.9	-	-	12.4	12.1	11.1	9.6	8.3	8.1	7.5	7.1	3.8	3	2
80DMLVF516.6T2BG	22.3	16.6	-	41.3	40.9	40.0	37.6	34.2	31.3	-	-	-	-	-	-
80DMLVF518.2T2DG	24.4	18.2	-	-	36.2	35.4	32.8	28.2	25.2	24.8	23.1	21.9	13.0	-	-

PERFORMANCE TABLE 100DMLV - 100DMLVF

Model	P ₂		Q=Flow rate										
	[HP]	[kW]	l/min 500	600	800	1000	1200	1700	2000	2400	2800	3333	
			m ³ /h 30	36	48	60	72	102	120	144	168	200	
			H=Head [m]										
100DMLVF55.2T6BG	7	5.2	8.3	8.2	8	7.7	7.4	6.4	5.7	4.6	3.4	1.4	
100DMLV5.5	7.5	5.5	-	11.1	10.6	10.1	9.7	7.9	6.4	-	-	-	
100DMLV57.5	10	7.5	-	15.4	14.9	14.3	13.7	11.6	10	7	-	-	
100DMLV511	15	11	-	-	18.8	18.2	17.6	15.8	14.5	12.4	9.9	-	
100DMLV515	20	15	-	-	-	23.4	23	21.7	20.7	19	16	-	
100DMLV522	30	22	-	-	-	29.4	29.1	28.2	27.5	26.5	25	-	

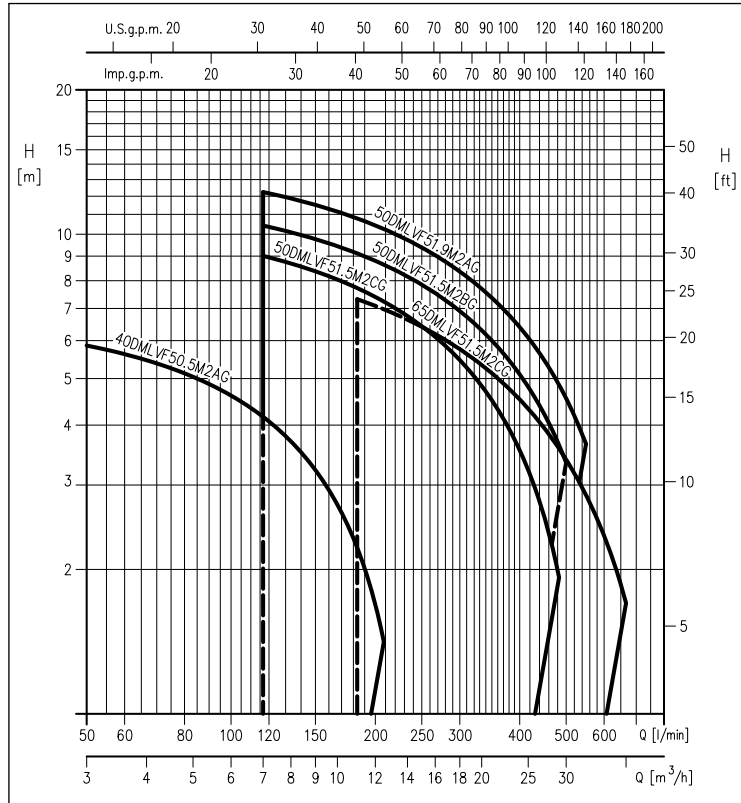
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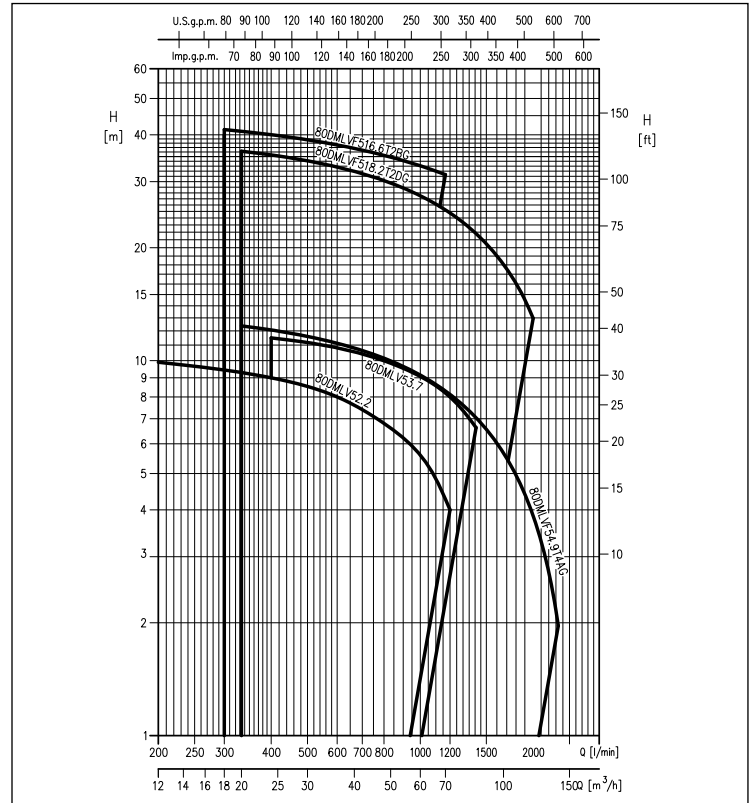
DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

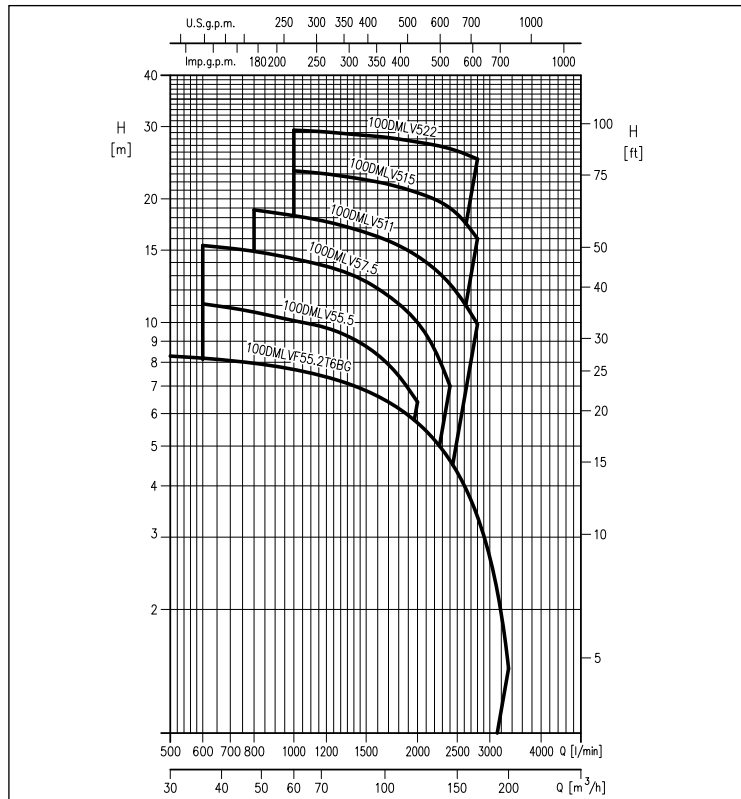
PERFORMANCE CURVES for series 40-50-65 DMLVF (per ISO 9906 Annex A)



PERFORMANCE CURVES for series 80DMLV - 80DMLVF (per ISO 9906 Annex A)



PERFORMANCE CURVES for series 100DMLV - 100DMLVF (per ISO 9906 Annex A)



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DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

DIMENSIONS FLANGES PN 10 (PER EN 1092-2)

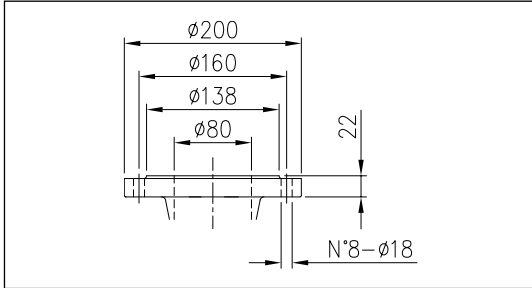
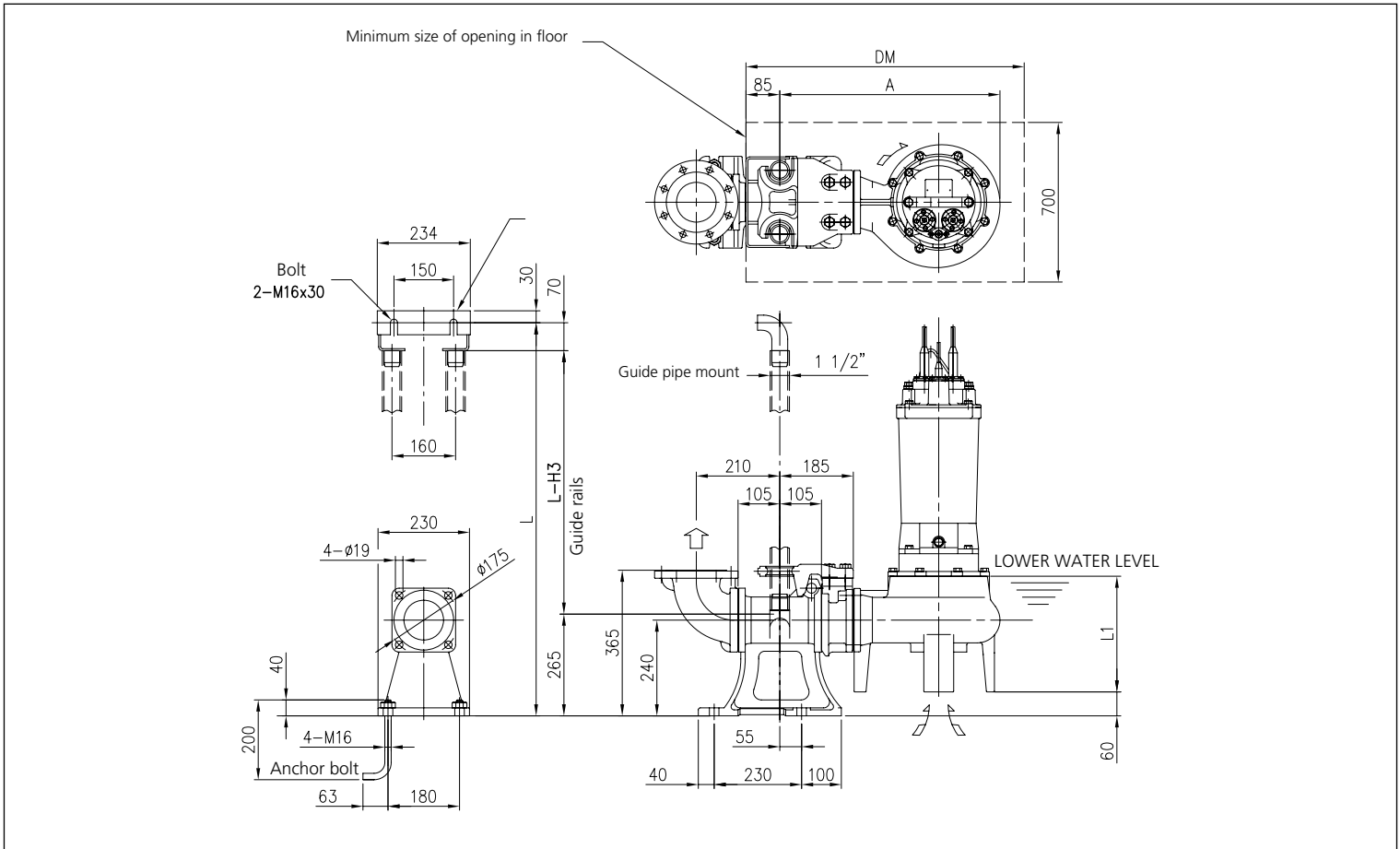


TABLE OF DIMENSIONS QDC (lowering device kit) LM 80 (DMLV)

Model	A	P1	P2	G1	G2	F	H1	H2	H3	L1	L6	BN1	BN2	D1	E1	Coupling foot	Weight [kg]
80 DMLV52.2	468	75	90	125	165	285	175	230	280	200	31	75	90	15	155	LM80	17
80 DMLV53.7	468	75	90	125	165	285	175	230	280	200	31	75	90	15	155		17

TABLE OF DIMENSIONS QDC (lowering device kit) LL 100 (DMLV)



DIMENSIONS FLANGES PN 10 (PER EN 1092-2)

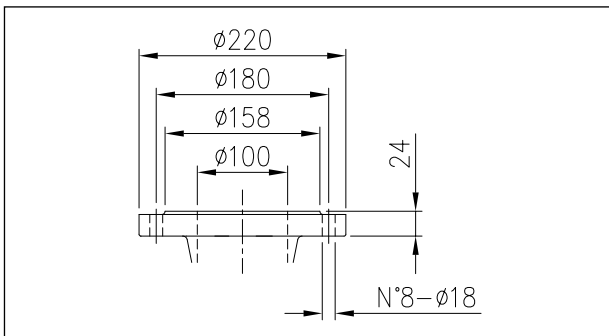


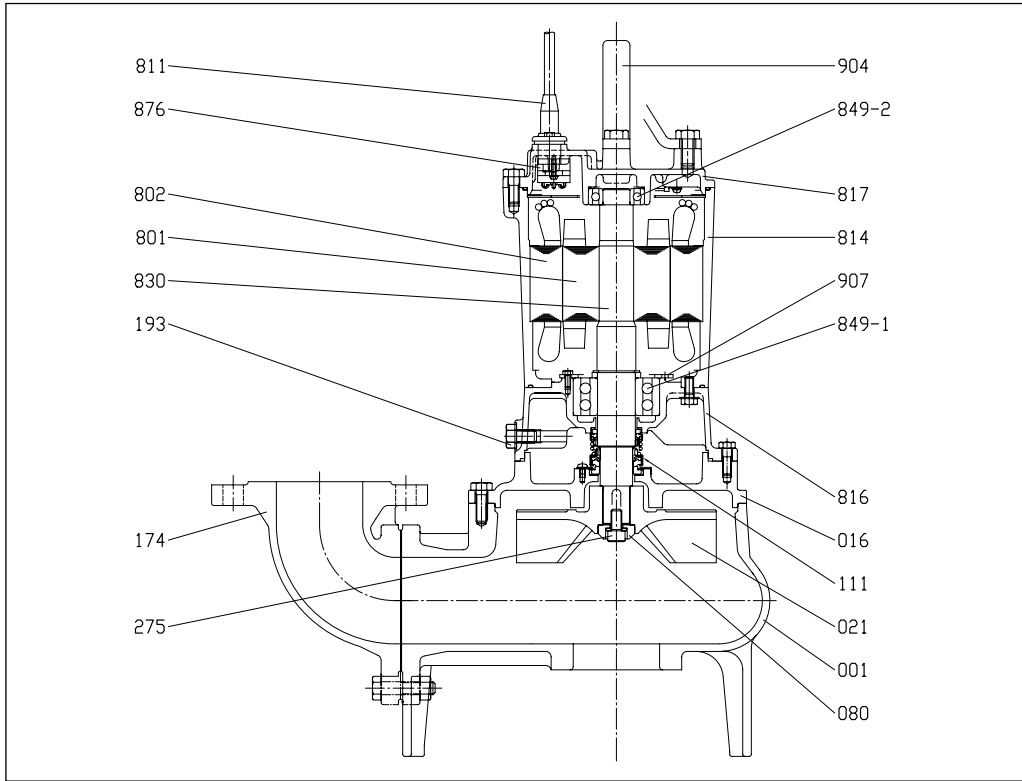
TABLE OF DIMENSIONS QDC (lowering device kit) LM 100 (DMLV)

Model	A	H3	L1	Coupling foot	Weight [kg]
100 DMLV55.5	554	335	250	LL100	46
100 DMLV57.5	611	335	250		46
100 DMLV511	611	335	250		46
100 DMLV515	698	335	300		46
100 DMLV522	698	335	300		46

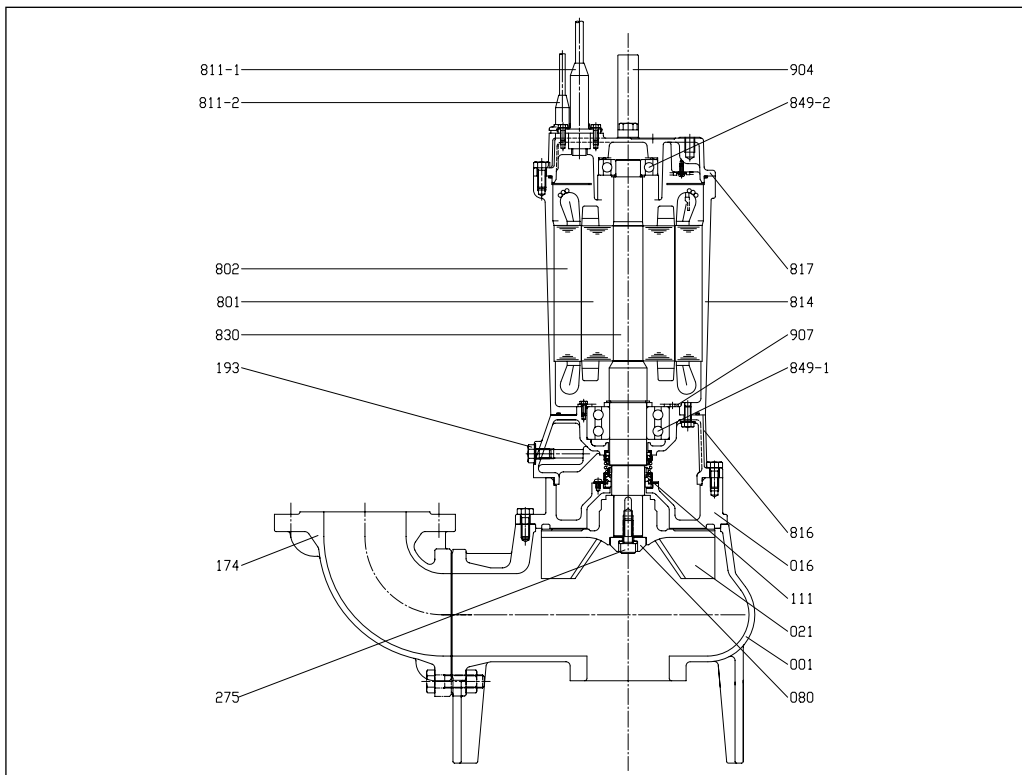
DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

SECTIONAL VIEW 80 DMLV 52.2



SECTIONAL VIEW DMLV (3.7÷7.5kW)



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DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

SECTIONAL VIEW DMLV (11÷22kW)

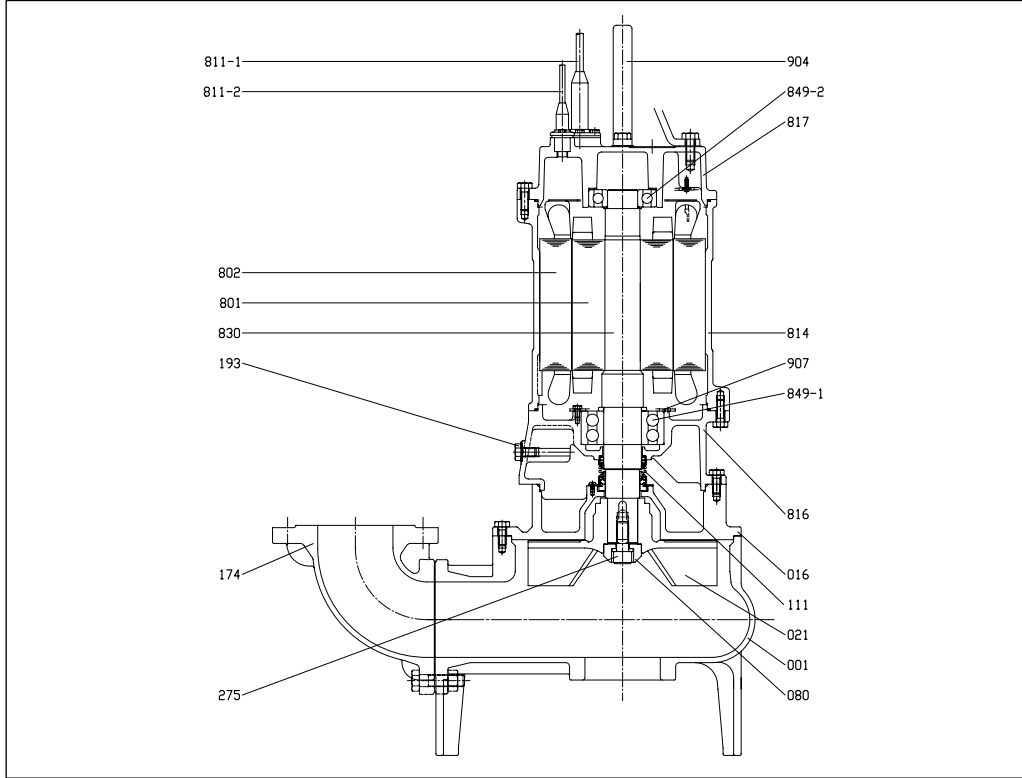


TABLE OF MATERIALS DMLV

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
111	Mechanical seal	-	817	Lower bearing	Cast iron EN-GHJL-200 - EN 1561
174	Delivery bend/union	Cast iron EN-GHJL-200 - EN 1561	830	Shaft	EN 1.4006 (AISI403)
193	Oil cap	Stainless steel	849-1	Ball bearing	-
275	Bolt (impeller)	A2-70 stainless steel class ISO 3506/1	849-2	Ball bearing	-
801	Rotor	-	876	Motor cutout	-
802	Stator	-	904	Lifting hook	Steel
811	Cable	-	907	Cover	Steel

DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

DIMENSIONS 40DMLVF/40DMLVF with QDC (0.5 kW)

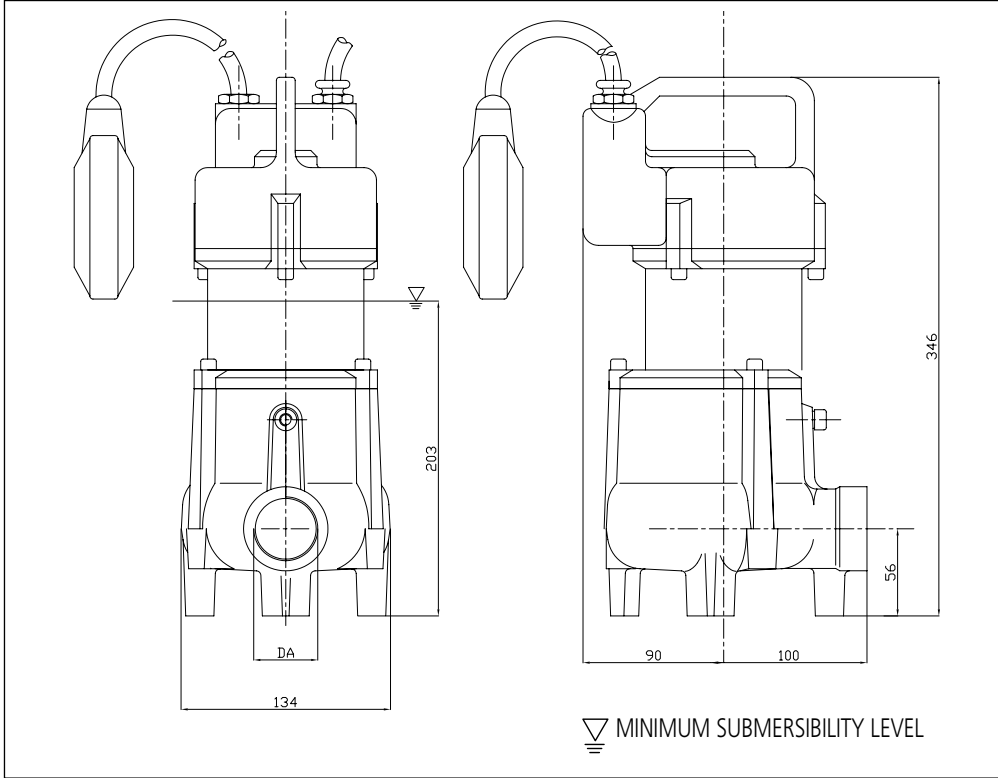


TABLE OF DIMENSIONS 40DMLVF/40DMLVF with QDC (0.5 kW)

DA	Model	[kW]	Weight [kg]
1" 1/4	40DMLVF50.5M2AG	0.5	14

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DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)

in cast iron

DIMENSIONS 50DMLVF/50DMLVF with QDC (1.5 - 1.9 kW)

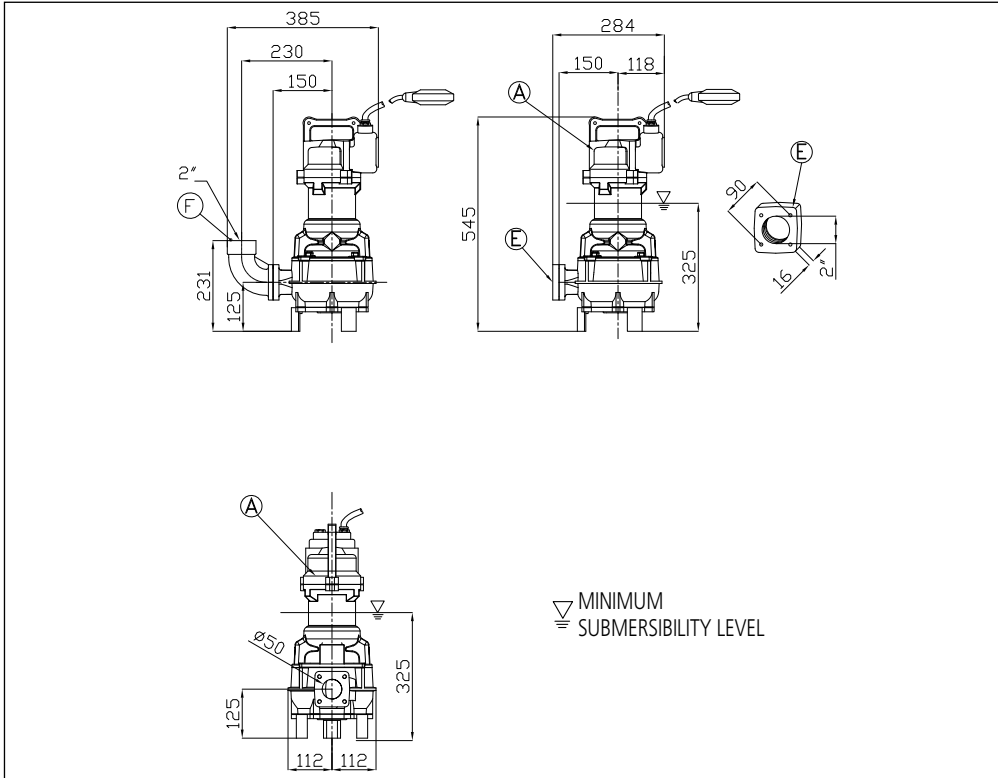
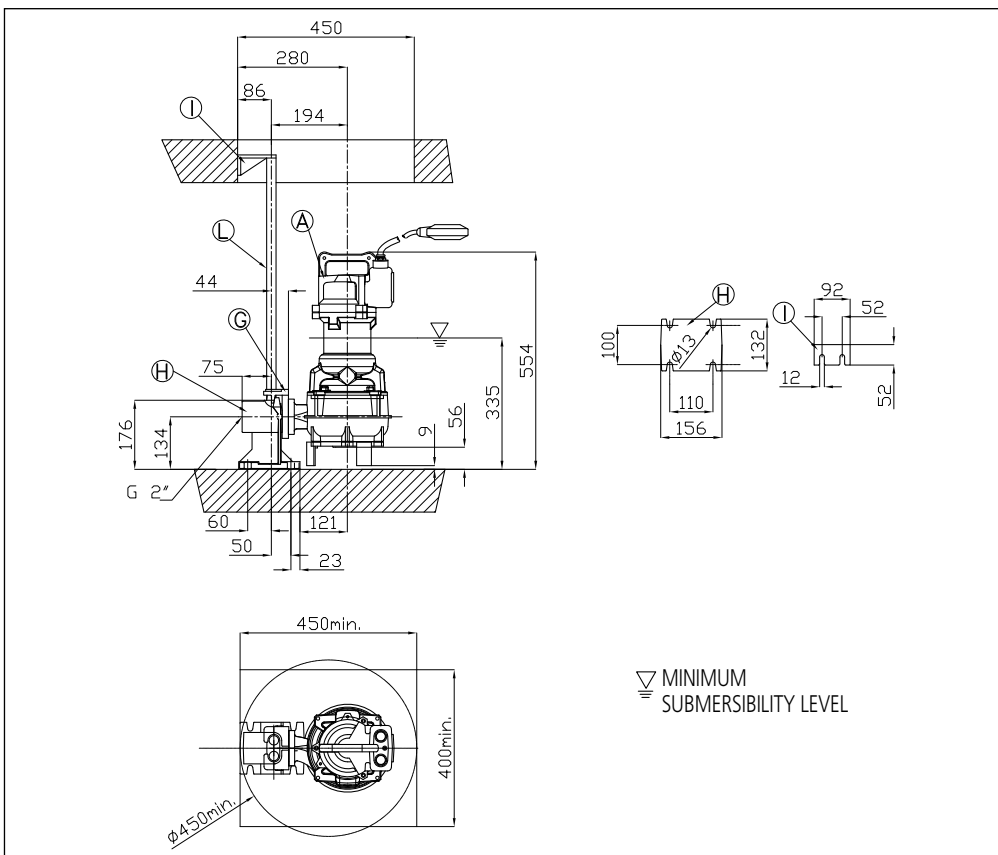


TABLE OF DIMENSIONS 50DMLVF/50DMLVF with QDC (1.5 - 1.9 kW)

DA	Model	[kW]	Weight [kg]
50	50DMLVF51.5M2CG	1.5	43
	50DMLVF51.5M2BG	1.5	43
	50DMLVF51.9M2AG	1.9	43



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DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

DIMENSIONS 65DMLVF/65DMLVF with QDC (1.5 kW)

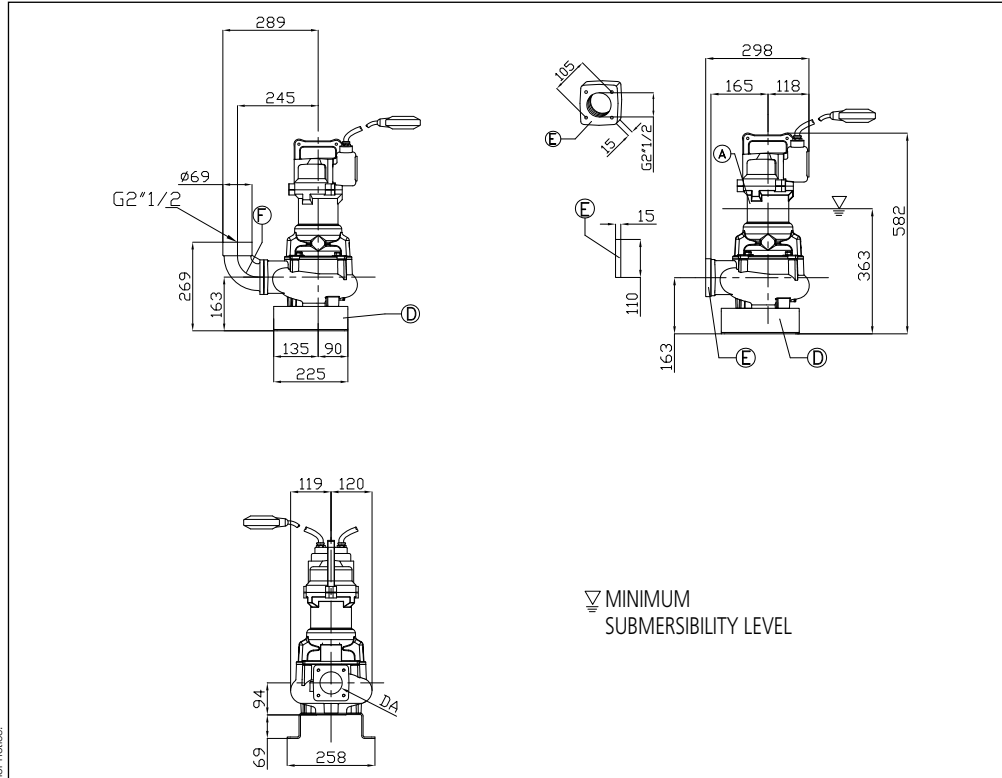
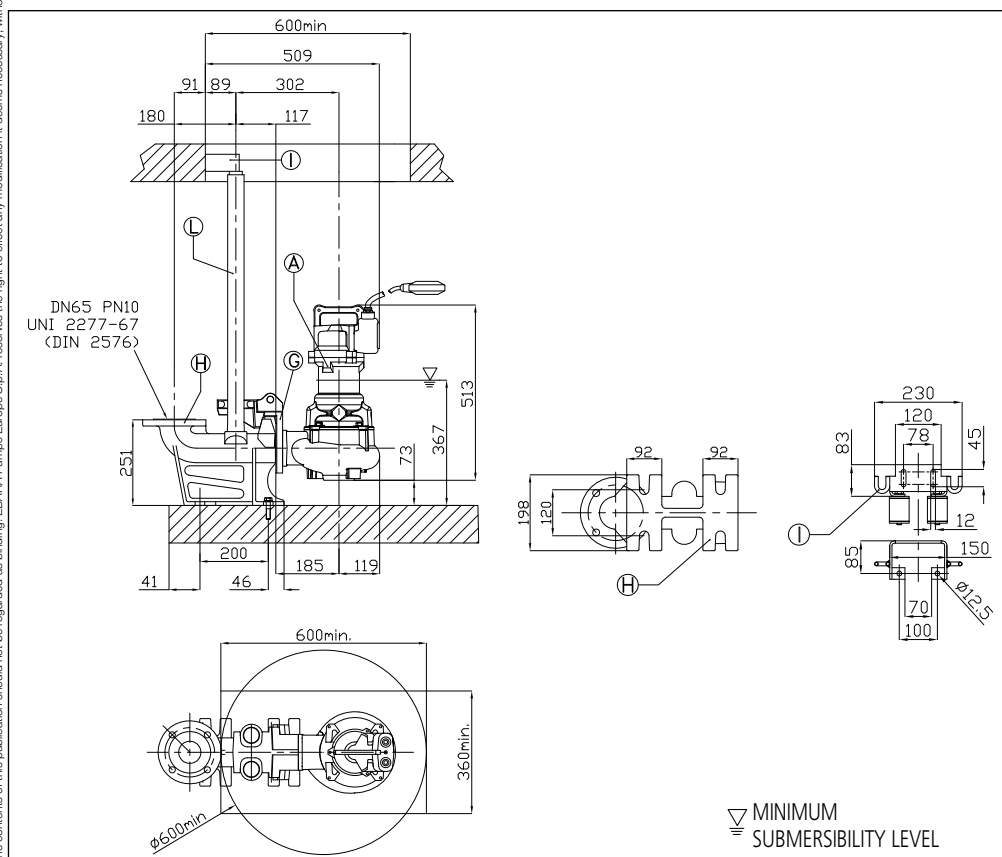


TABLE OF DIMENSIONS
65DMLVF/65DMLVF with QDC (1.5 kW)

DA	Model	[kW]	Weight [kg]
65	65DMLVF51.5M2CG	1.5	44



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DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

DIMENSIONS 80DMLVF/80DMLVF with QDC (4.9 kW)

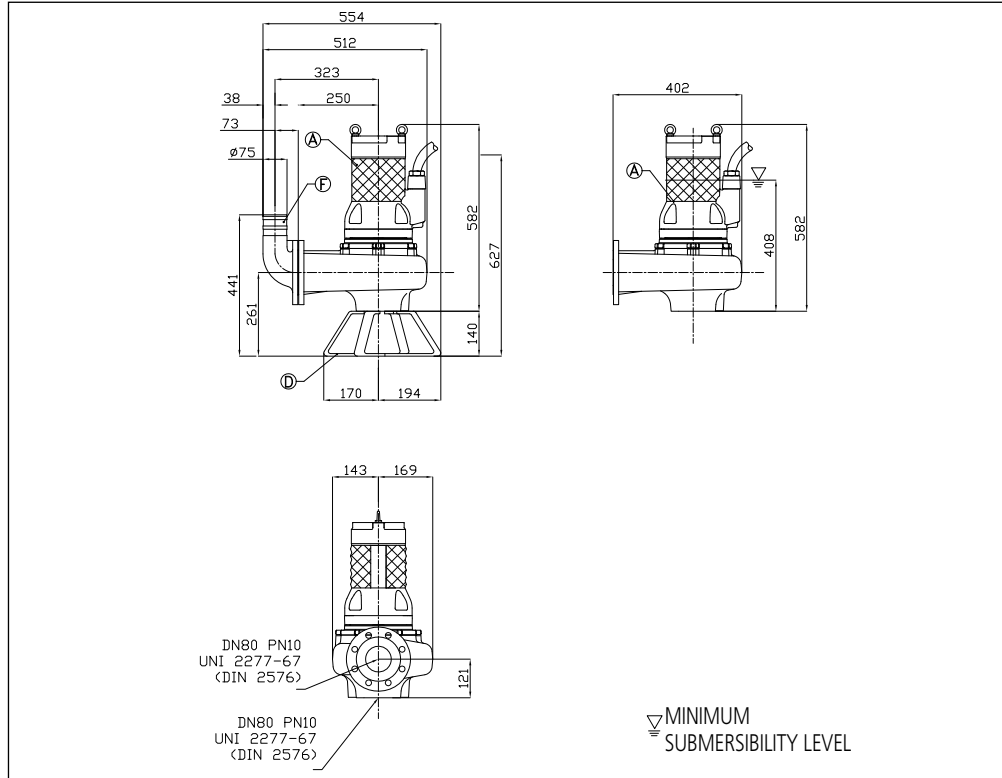
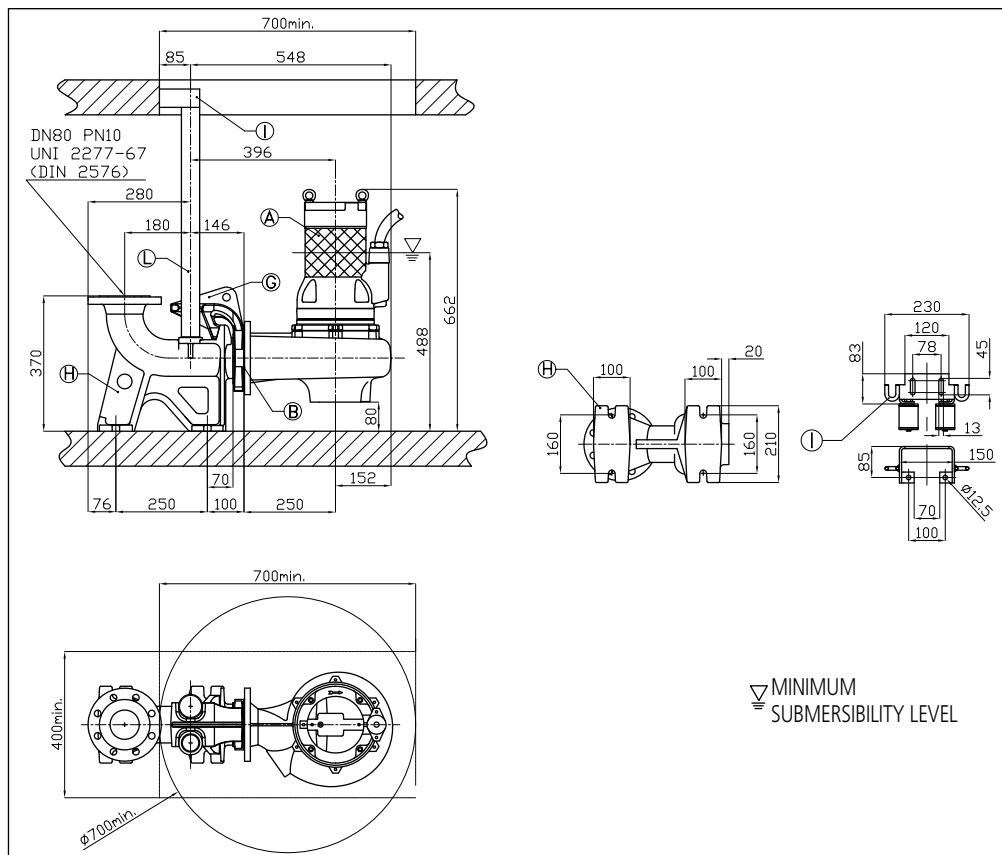


TABLE OF DIMENSIONS
80DMLVF/80DMLVF with QDC (4.9 kW)

DA	Model	[kW]	Weight [kg]
DN 80 PN10 UNI 2277 - 67 (DIN 2576)	80DMLVF54.9T4AG	4.9	79

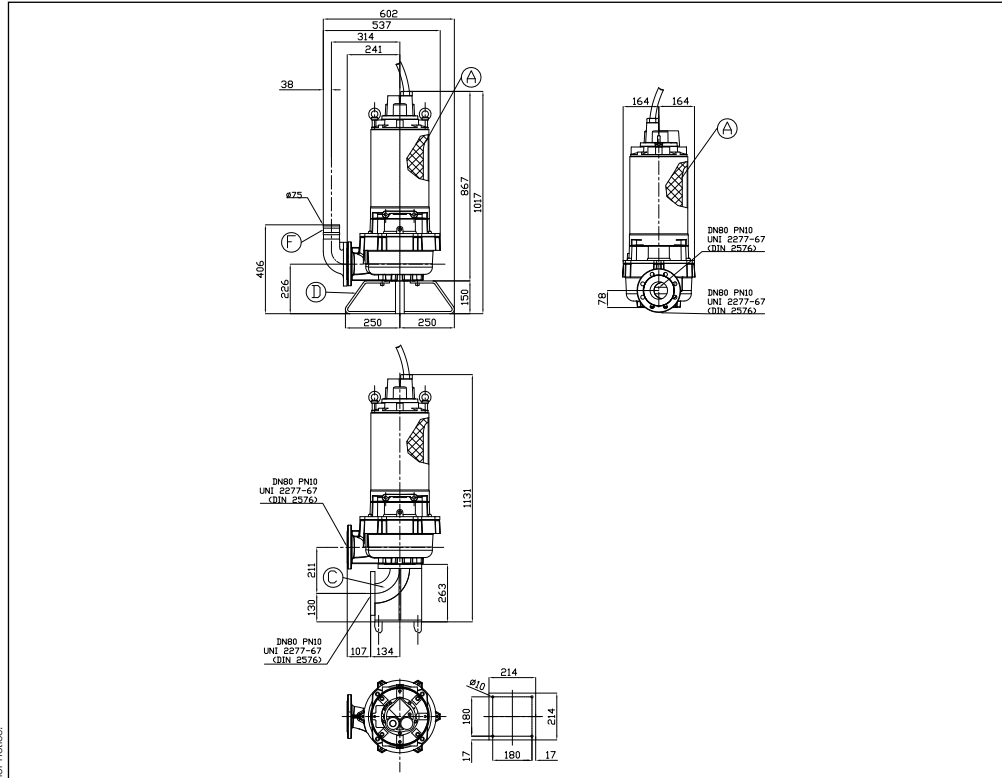


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DMLV - DMLVF

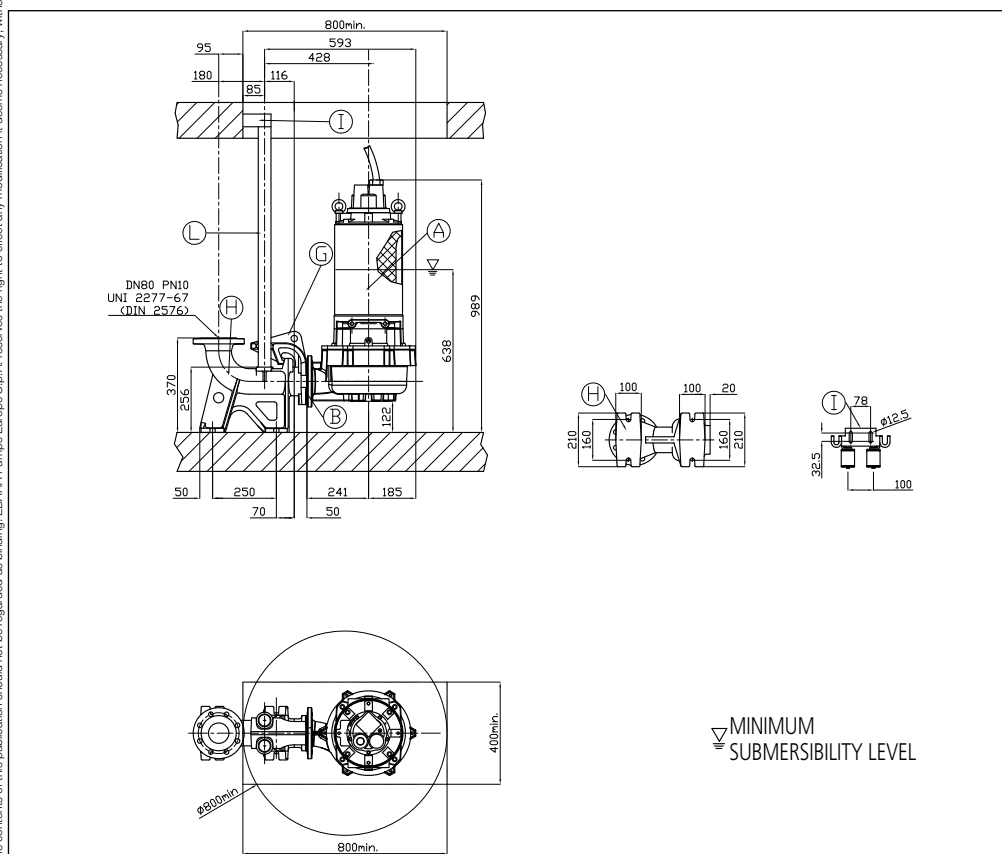
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

DIMENSIONS 80DMLVF/80DMLVF with QDC (16.6 kW)



DIMENSIONS CHART 80DMLVF/80DMLVF with QDC (16.6 kW)

DA	Model	[kW]	Weight [kg]
DN 80 PN10 UNI 2277 - 67 (DIN 2576)	80DMLVF516.6T2BG	16.6	191

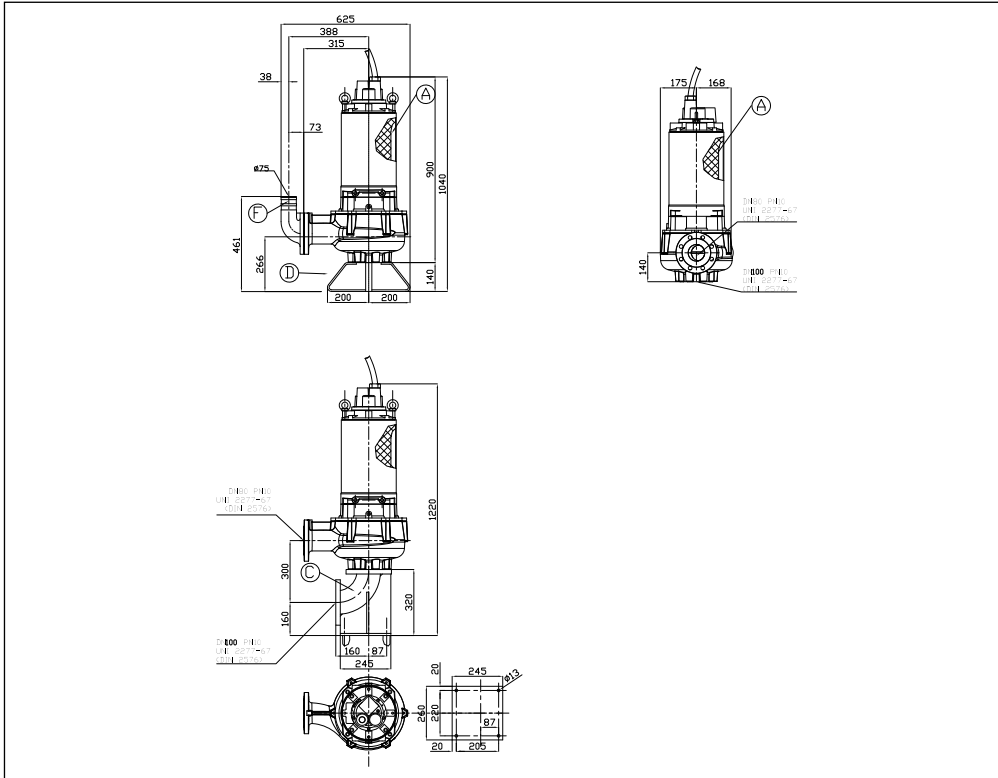


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DMLV - DMLVF

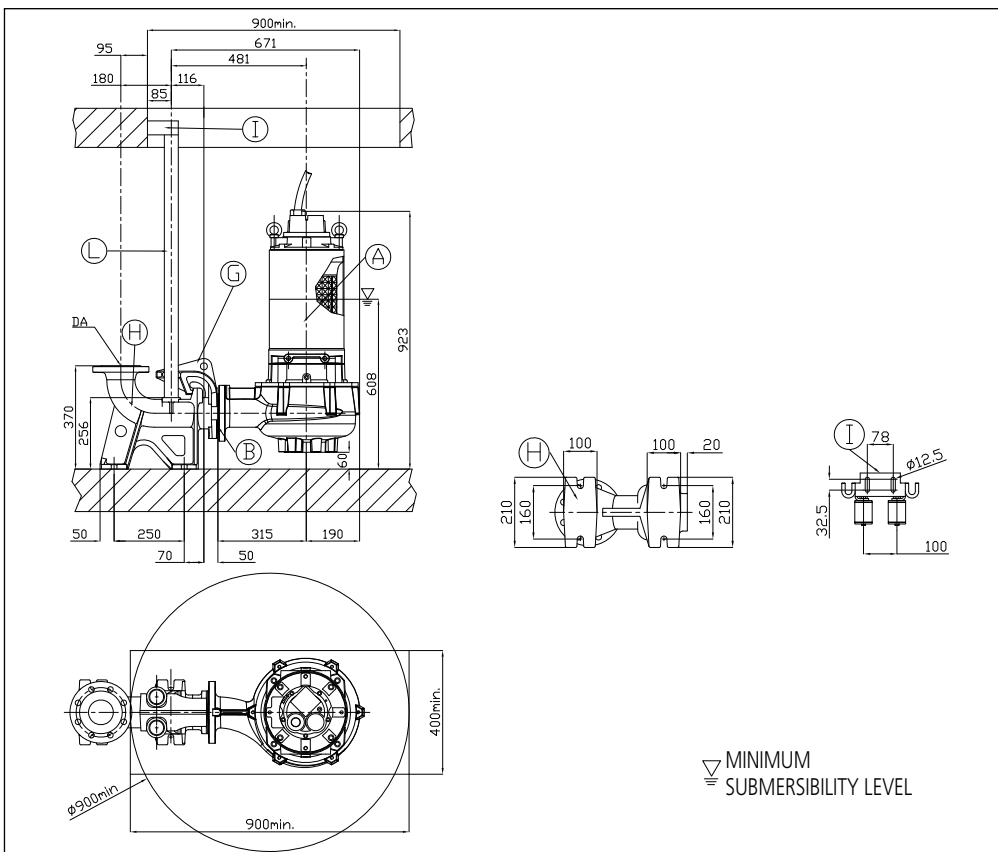
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

DIMENSIONS 80DMLVF/80DMLVF with QDC (18.2 kW)



DIMENSIONS CHART 80DMLVF/80DMLVF with QDC (18.2 kW)

DA	Model	[kW]	Weight [kg]
DN 80 PN10 UNI 2277-67 (DIN 2576)	80DMLVF518.2T2DG	18.2	190

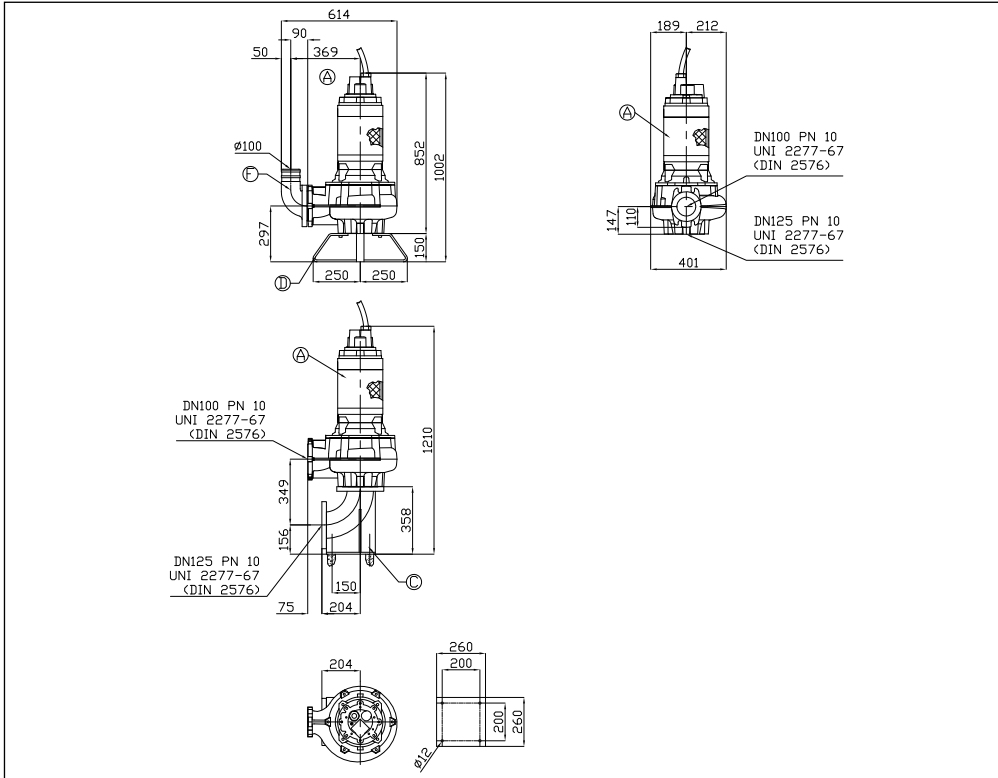


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DMLV - DMLVF

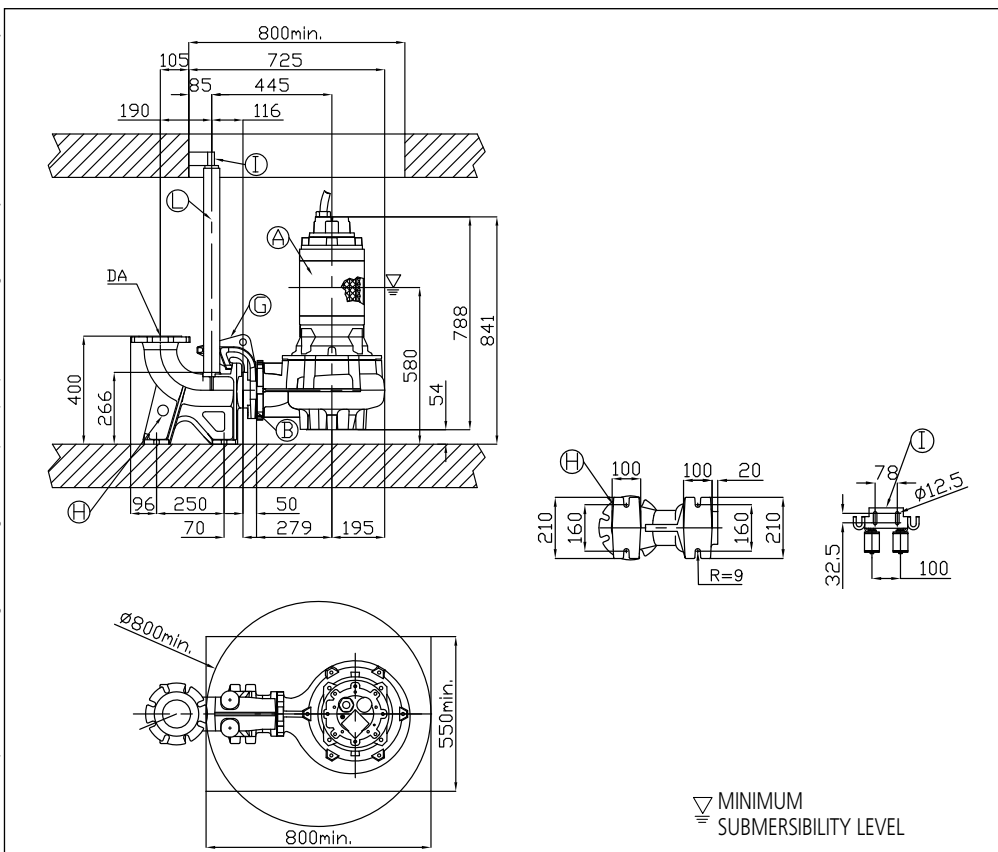
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

DIMENSIONS 100DMLVF/100DMLVF with QDC



DIMENSIONS CHART 100DMLVF/100DMLVF with QDC

DA	Model	[kW]	Weight [kg]
DN 100 PN10 UNI 2277-67 (DIN 2576)	100DMLVF55.2T6BG	5.2	170

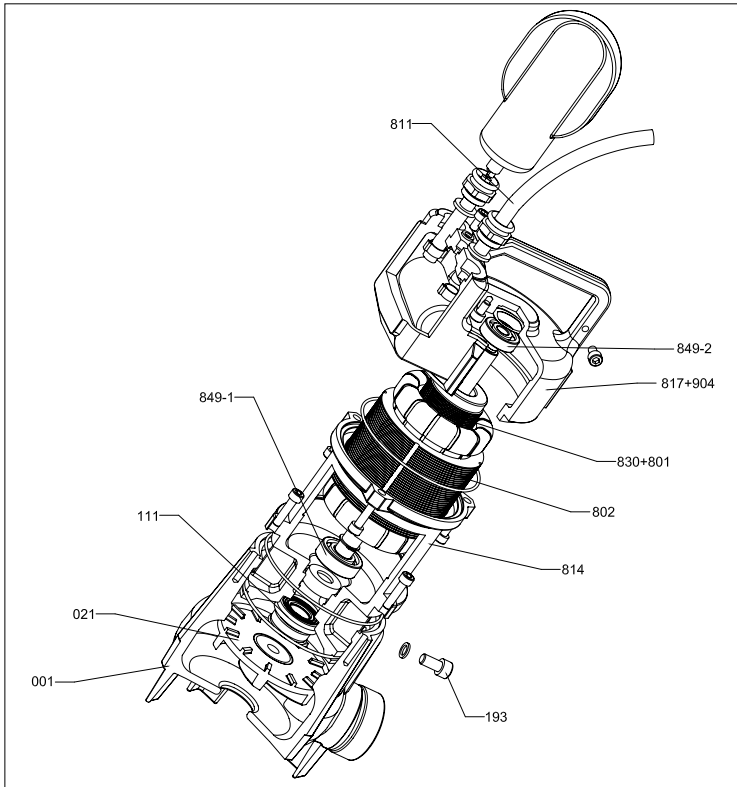


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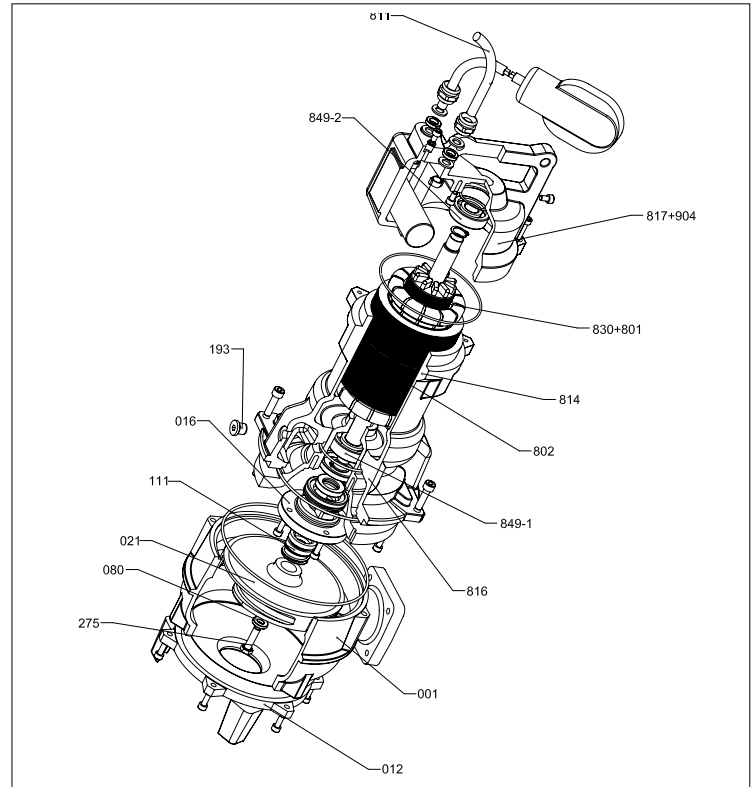
DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

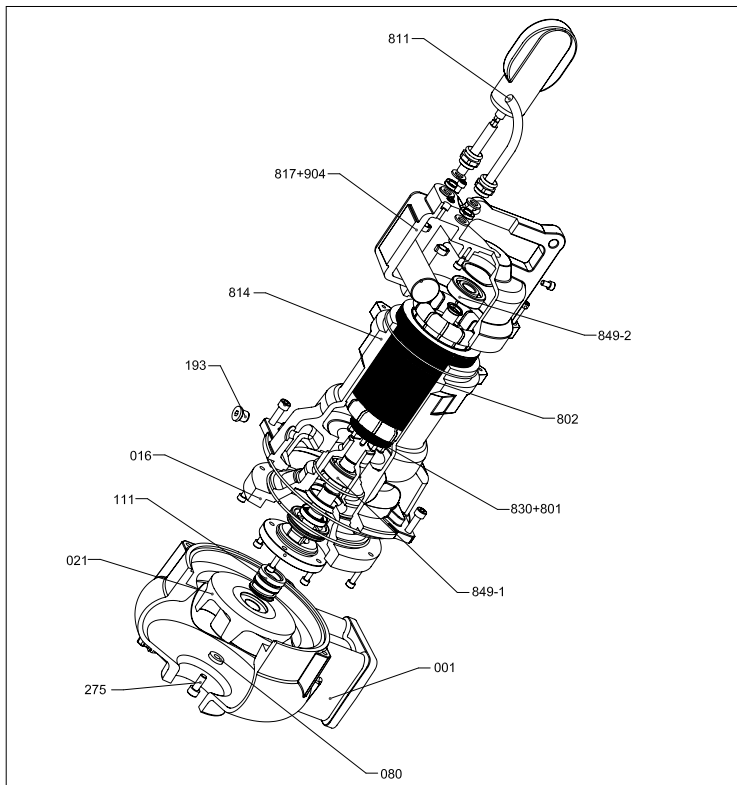
SECTIONAL VIEW 40DMLVF (0.5 kW)



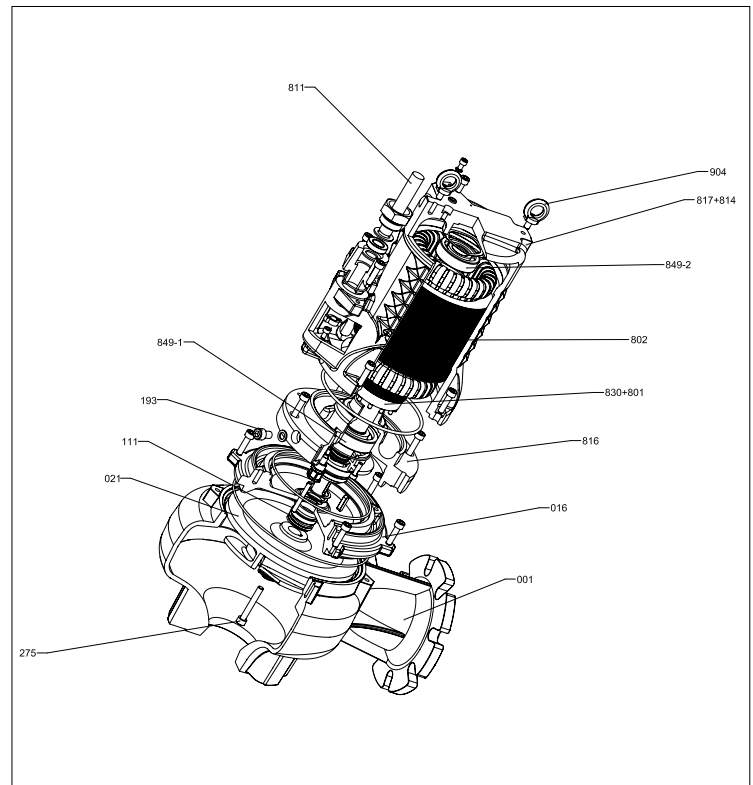
SECTIONAL VIEW 50DMLVF (1.5 - 1.9 kW)



SECTIONAL VIEW 65DMLVF (1.5 kW)



SECTIONAL VIEW 80DMLVF (4.9 kW)

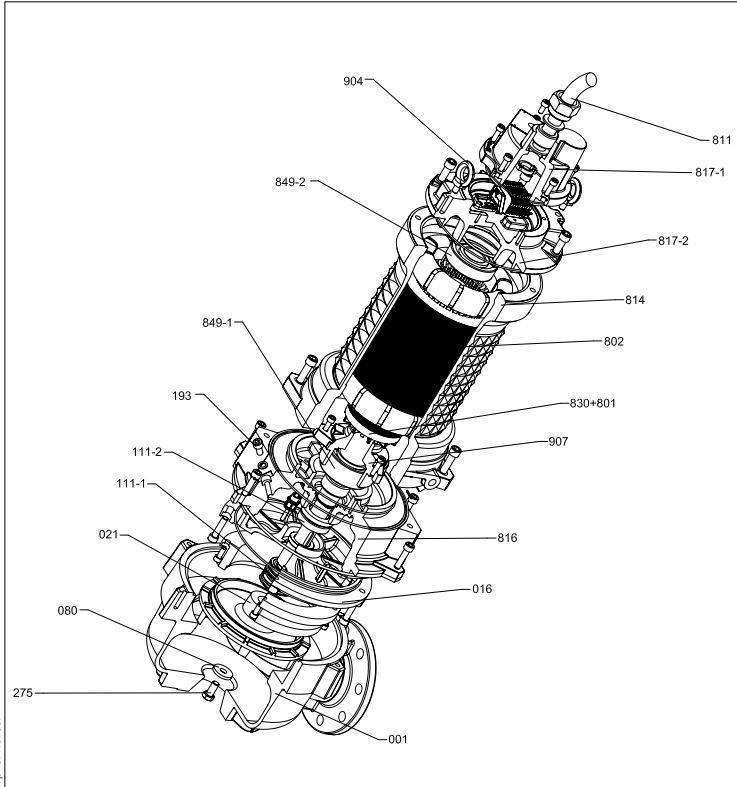


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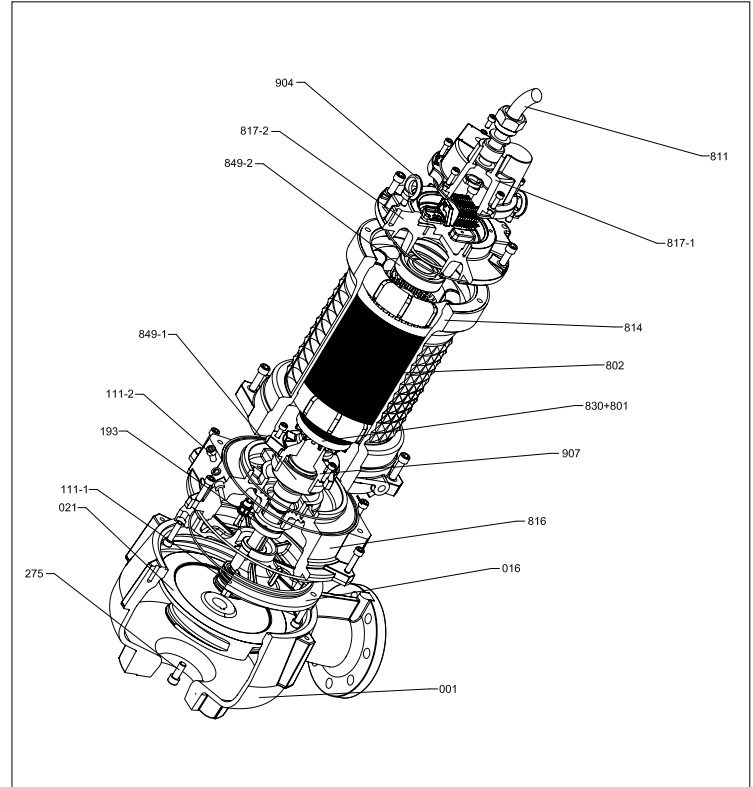
DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

SECTIONAL VIEW 80 DMLVF (16.6 kW)



SECTIONAL VIEW 80DMLVF (18.2 kW)



SECTIONAL VIEW 100DMLVF (5.2 kW)

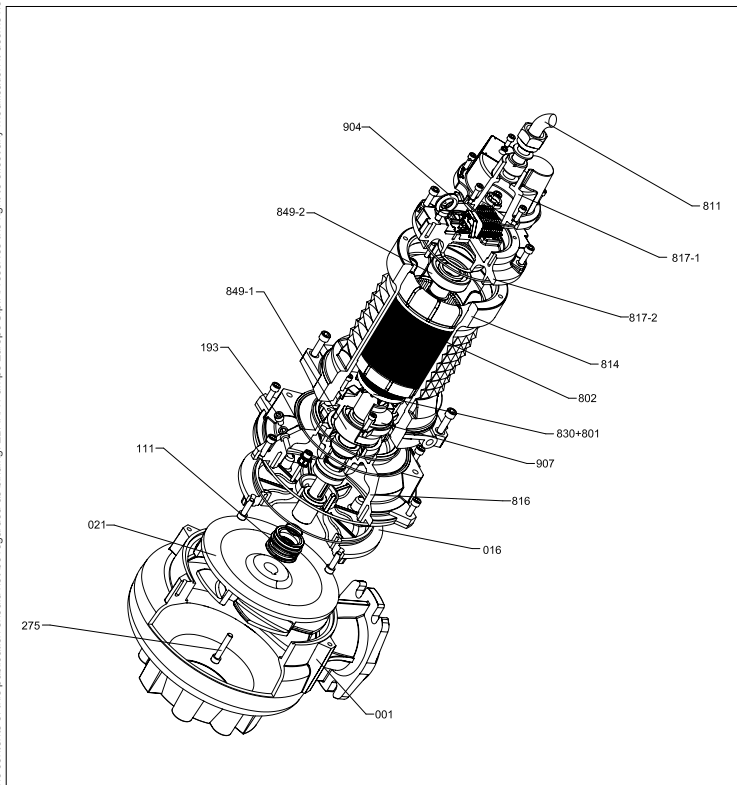


TABLE OF MATERIALS DMLVF

Ref.	Name	Material
001	Pump body	Cast iron EN-GHJL-250
012	Suction side cover	Cast iron EN-GHJL-250
016	Mechanical seal cover	Cast iron EN-GHJL-250
021	Impeller	Cast iron EN-GHJL-250+Ni
080	Bushing	Steel
111	Mechanical seal	-
111-1	Mechanical seal	-
111-2	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-GHJL-250
816	Upper mount	Cast iron EN-GHJL-250
817	Lower bearing	Cast iron EN-GHJL-250
817-1	Lower mount [1]	Cast iron EN-GHJL-250
817-2	Lower mount [1]	Cast iron EN-GHJL-250
830	Shaft	AISI 420B
849-1	Ball bearing	-
849-2	Ball bearing	-
904	Lifting hook [2]	Cast iron EN-GHJL-250
907	Bearing cover	Cast iron EN-GHJL-250

[1] - Except for 40DMLVF 0.5 kW, 50DMLVF (1.5 - 1.9 kW), 65DMLVF (1.5 kW), 80DMLVF (4.9 kW)
[2] - For models 80DMLVF (4.9 kW), 80DMLVF (16.6 kW), 80DMLVF (18.2 kW), 100DMLVF (5.2 kW) the lifting hook is in steel

DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)

in cast iron

ELECTRICAL DATA TABLE DMLVF (0.5 - 18.2 kW)

For the DMLV electrical data, refer to pages 76-77

[P ₂]	[kW]	0.5	1.5	1.5	1.9	1.5	4.9	16.6	18.2	5.2		
Resistance at 20°C	[Ω]	-	-	-	-	-	-	-	-	-		
GD ²	[kg/m ²]	0.0006	0.0052	0.0056	0.0066	0.0005	0.0438	0.0586	0.051	0.1331		
Voltage	[V]	230	230	230	230	230	400/690	400/690	400/690	400/690		
Full load	0%	Current	[A]	-	-	-	-	-	-	-	-	
		Power	[W]	-	-	-	-	-	-	-	-	
	75%	Current	[A]	-	-	-	-	-	-	-	-	
		Efficiency	[%]	67	72	72	73	72	74	92	92	88
		Power factor	[%]	0.96	0.97	0.97	0.97	0.97	0.9	0.82	0.82	0.73
	rpm	[min ⁻¹]	-	-	-	-	-	-	-	-	-	
	100%	Current	[A]	-	-	-	-	-	-	-	-	
		Efficiency	[%]	70	73	73	73	73	0.8	92	93	89
		Power factor	[%]	0.98	0.99	0.99	0.99	0.99	0.9	0.87	0.87	0.81
	rpm	[min ⁻¹]	-	-	-	-	-	-	-	-	-	
Torque with rotor locked	[%]	-	-	-	-	-	-	-	-	-		
Starting current	[A]	3.2	33.3	33.3	62.7	33.3	49.5	175.8	192.3	61.4		
Poles		2					4	2		6		
Phases		1					3					
Starts per hour		15										
Model		M206M-0.5-230/50NY-E	M271M-1.5-230/50NY-E		M271M-1.9-230/50NY-E	M271M-1.5-230/50NY-E	M410T-4.9-400/50YY-E3	M213T-16.6-400/50YY-E3	M213T-18.2-400/50YY-E3	M611T-5.2-400/50YY-E3		
Type of pump		40DMLVF50.5M2AG	50DMLVF51.5M2CG	50DMLVF51.5M2BG	50DMLVF51.9M2AG	65DMLVF51.5M2CG	80DMLVF54.9T4AG	80DMLVF516.6T2BG	80DMLVF518.2T2DG	100DMLVF55.2T6BG		

DRS

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS)

in cast iron



SINGLE-PHASE



THREE-PHASE



Submersible pumps in cast iron with open impeller and suction grinder

APPLICATIONS

- Evacuation of civil and industrial waste water
- Handling water loaded with fibrous matter and paper
- Draining cesspits
- Draining infiltration water

TECHNICAL FEATURES

- Open impeller with grinder

TECHNICAL DATA

- Maximum fluid temperature: 40°C
- Maximum solid dimensions: 6 - 7 mm (DRS 40); 8 - 10 (DRS 65)
- Single/three phase asynchronous motor
- Versions available: 2 pole
- Insulation class: H
- Protection rating IP 68
- Single phase voltage 230V ±10%, 50Hz
three-phase voltage 400/690 ±10%, 50Hz
- Flanges DN 40-65
- Power up to 25.1 kW

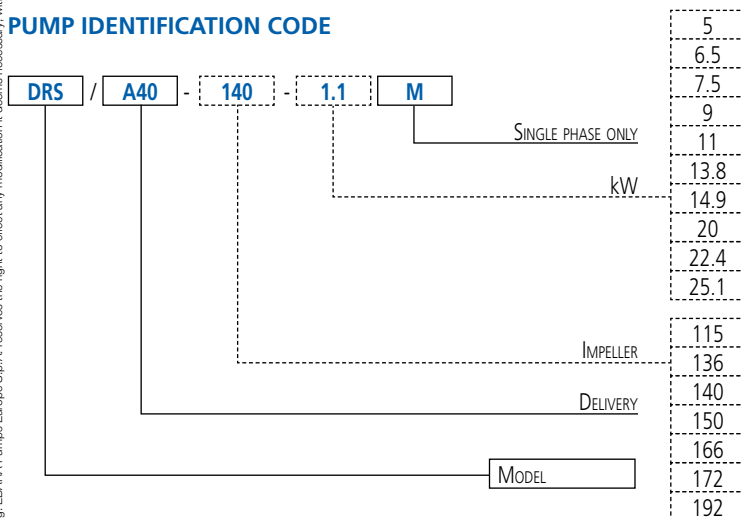
MATERIALS

- Pump body, impeller, motor casing, volute base, upper cover in cast iron
- Grinder in AISI 304 stainless steel
- Shaft made of AISI 420B
- Mechanical seal: SiC/SiC/NBR (pump side)
Carbon/Ceramic/NBR (motor side)

ACCESSORIES (on request)

For accessories, see page 151 onwards

PUMP IDENTIFICATION CODE

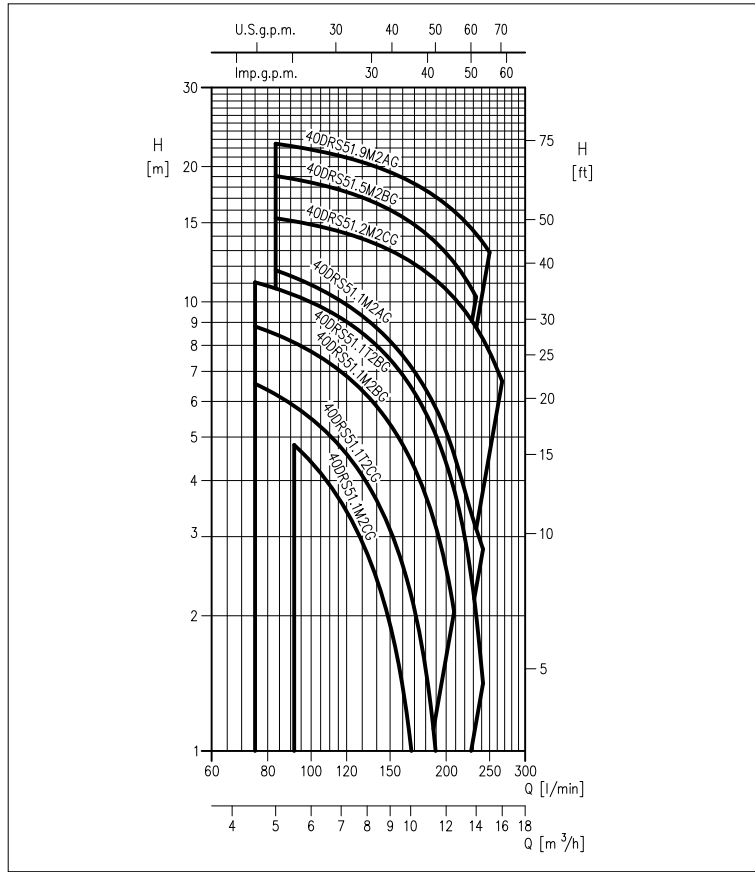


5
6.5
7.5
9
11
13.8
14.9
20
22.4
25.1
115
136
140
150
166
172
192

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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS) in cast iron

PERFORMANCE RANGE 40 DRS (per ISO 9906 Annex A)

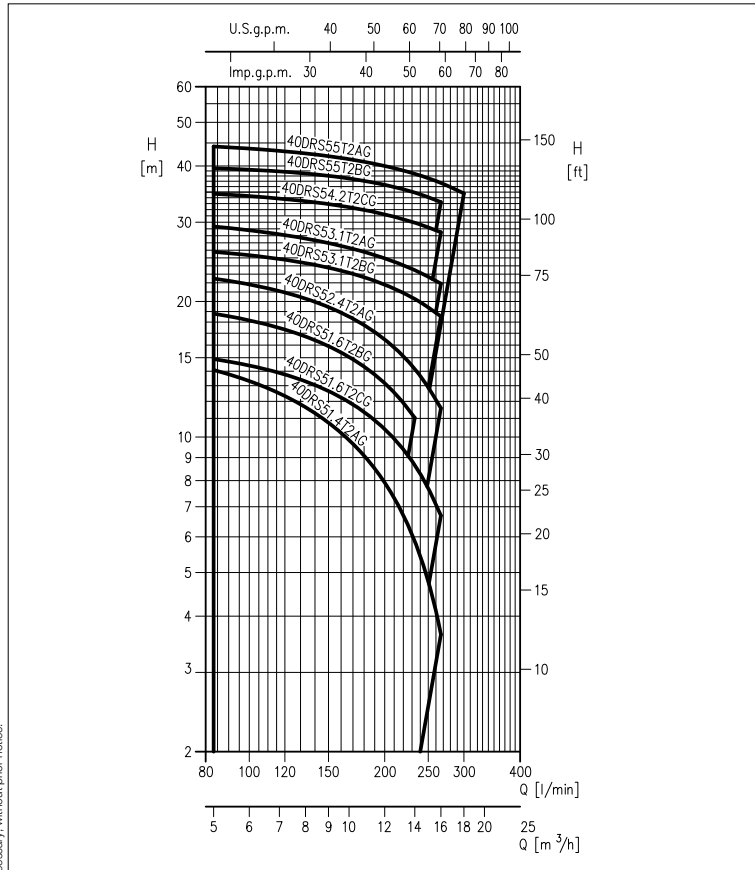


PERFORMANCE TABLE

Model	P ₂		Q=Flow rate										
	[HP]	[kW]	l/min 75 m ³ /h 4.5	83 5.0	92 5.5	150 9.0	175 10.5	200 12.0	208 12.5	233 14.0	242 14.5	250 15.0	267 16.0
			H=Head [m]										
40DRS51.1M2CG	1.5	1.1	-	-	4.8	1.9	0.6	-	-	-	-	-	-
40DRS51.1M2BG	1.5	1.1	8.8	8.5	8.1	5.3	4	2.5	2	-	-	-	-
40DRS51.1M2AG	1.5	1.1	-	11.8	11.3	8.2	6.7	5.1	4.6	3	2.4	-	-
40DRS51.2M2CG	1.6	1.2	-	15.3	15.1	13	11.9	10.6	10.2	8.8	8.3	7.7	6.6
40DRS51.5M2BG	2	1.5	-	19.1	18.7	16	14.5	12.8	12.2	10.3	-	-	-
40DRS51.9M2AG	2.5	1.9	-	22.5	21.2	19.4	18	16.5	15.9	14.2	13.5	12.9	-
40DRS51.1T2CG	1.5	1.1	6.6	6.2	5.9	3.1	1.8	0.4	-	-	-	-	-
40DRS51.1T2BG	1.5	1.1	11	10.7	10.3	7.4	6	4.4	3.8	2	1.4	-	-

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS) in cast iron

PERFORMANCE RANGE 40 DRS (per ISO 9906 Annex A)



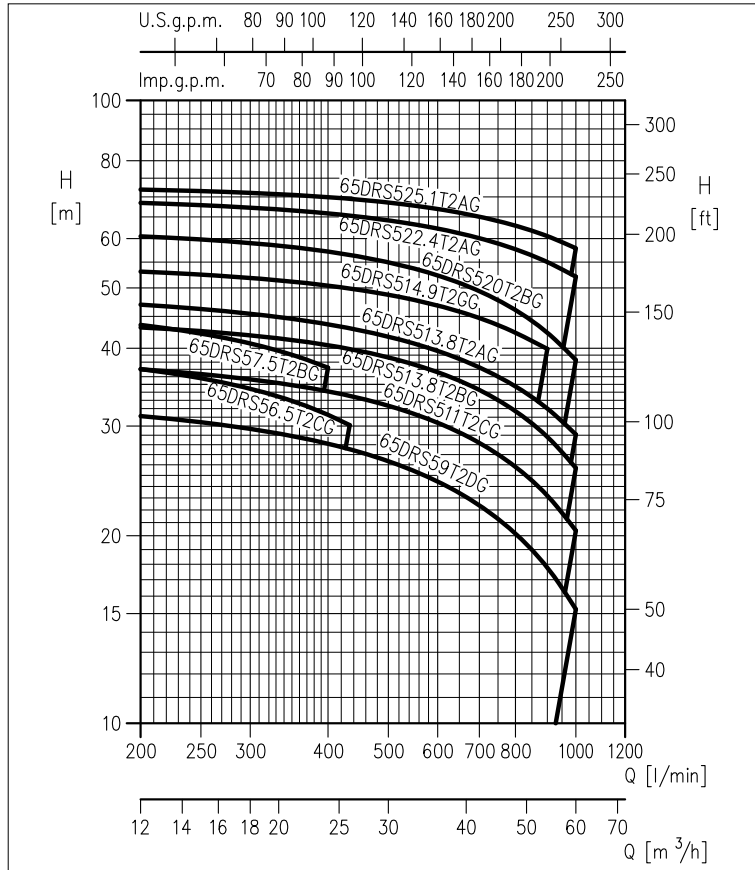
PERFORMANCE TABLE

Model	P ₂		Q=Flow rate					
	[HP]	[kW]	l/min 83 m³/h 5.0	150 9.0	200 12.0	233 14.0	267 16.0	300 18.0
			H=Head [m]					
40DRS51.4T2AG	1.9	1.4	14.1	10.8	7.9	5.9	3.7	-
40DRS51.6T2CG	2.1	1.6	14.9	12.6	10.4	8.7	6.7	-
40DRS51.6T2BG	2.1	1.6	18.8	15.9	13.2	11	-	-
40DRS52.4T2AG	3.2	2.4	22.5	19.4	16.5	14.2	11.6	-
40DRS53.1T2BG	4.2	3.1	25.8	23.8	21.8	20.3	18.5	-
40DRS53.1T2AG	4.2	3.1	29.3	27	24.9	23.5	21.9	-
40DRS54.2T2CG	5.6	4.2	34.7	32.9	31.2	29.9	28.5	-
40DRS55T2BG	6.7	5	39.5	38	36.3	34.9	33.3	-
40DRS55T2AG	6.7	5	44	42	40	38.4	36.7	34.8

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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS) in cast iron

PERFORMANCE RANGE 65 DRS (per ISO 9906 Annex A)



PERFORMANCE TABLE

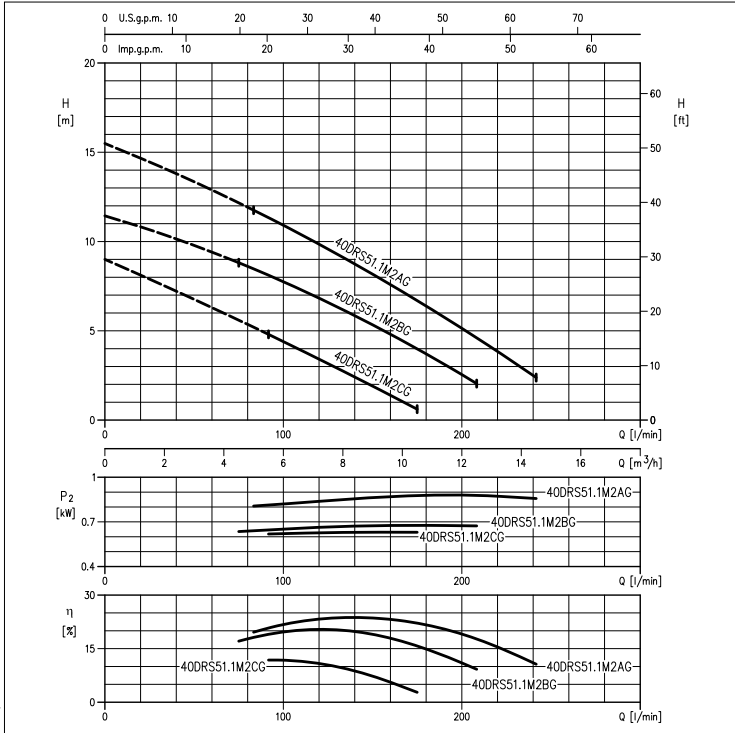
Model	P ₂		Q=Flow rate					
	[HP]	[kW]	l/min 200 m ³ /h 12.0	400 24.0	433 26.0	667 40.0	900 54.0	1000 60.0
			H=Head [m]					
65DRS56.5T2CG	8.7	6.5	37	31.3	30.1	-	-	-
65DRS57.5T2BG	10.1	7.5	43.5	37.2	-	-	-	-
65DRS59T2DG	12.1	9	31.1	28.1	27.5	23.1	17.8	15.2
65DRS511T2CG	14.8	11	37	34.1	33.5	28.9	23.2	20.4
65DRS513.8T2BG	18.5	13.8	43	40.5	39.9	35.1	28.8	25.7
65DRS513.8T2AG	18.5	13.8	47	43.5	43	38.1	32	29.1
65DRS514.9T2GG	20.0	14.9	53	50.5	50	45.5	39.8	-
65DRS520T2BG	26.8	20	60.5	57	56.5	50.5	42.5	38.3
65DRS522.4T2AG	30.0	22.4	68.5	66	65.5	61	55	52
65DRS525.1T2AG	33.7	25.1	72	70	69.5	65.5	60.5	58



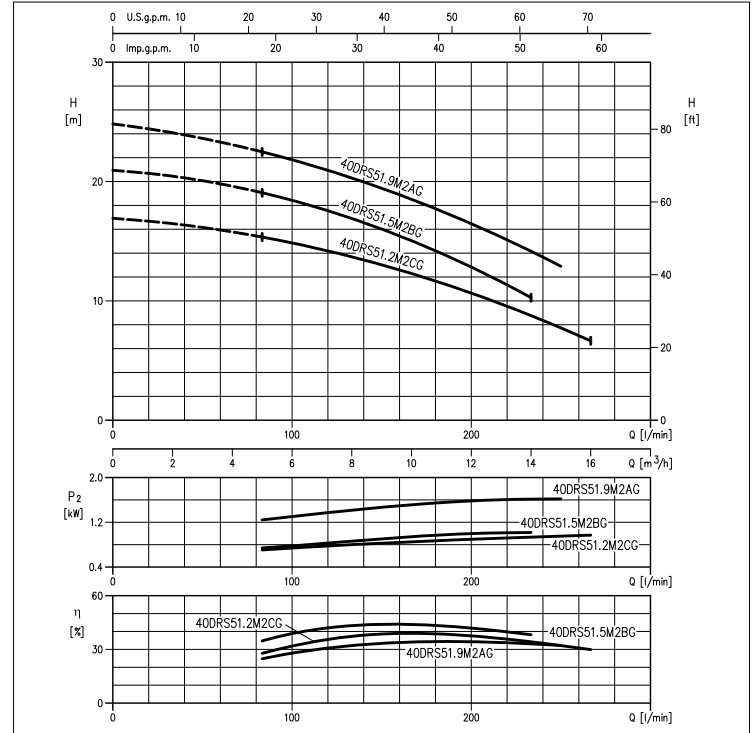
DRS

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS) in cast iron

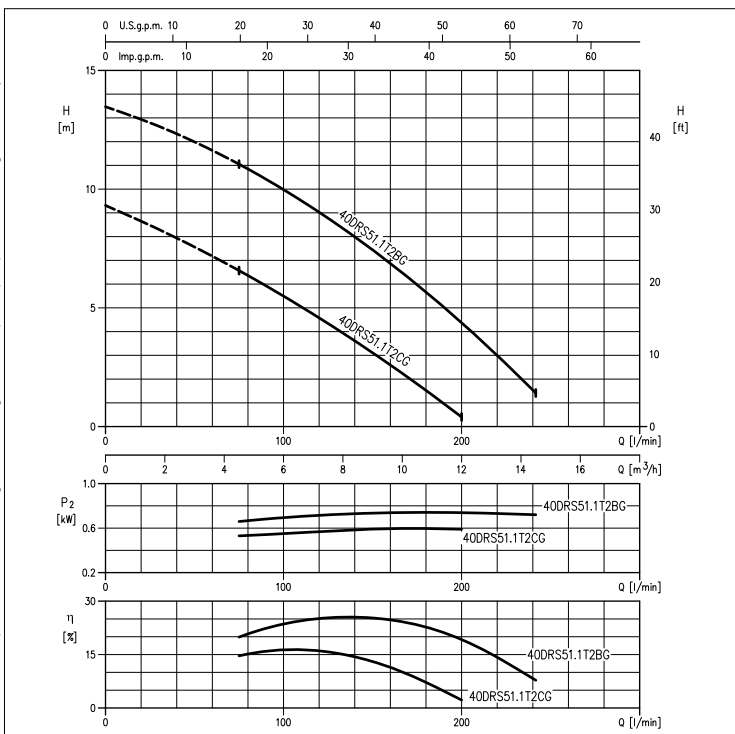
PERFORMANCE CURVES (per ISO 9906 Annex A)
40DRS51.1M2CG (1.1 kW)
40DRS51.1M2BG (1.1 kW)
40DRS51.1M2AG (1.1 kW)



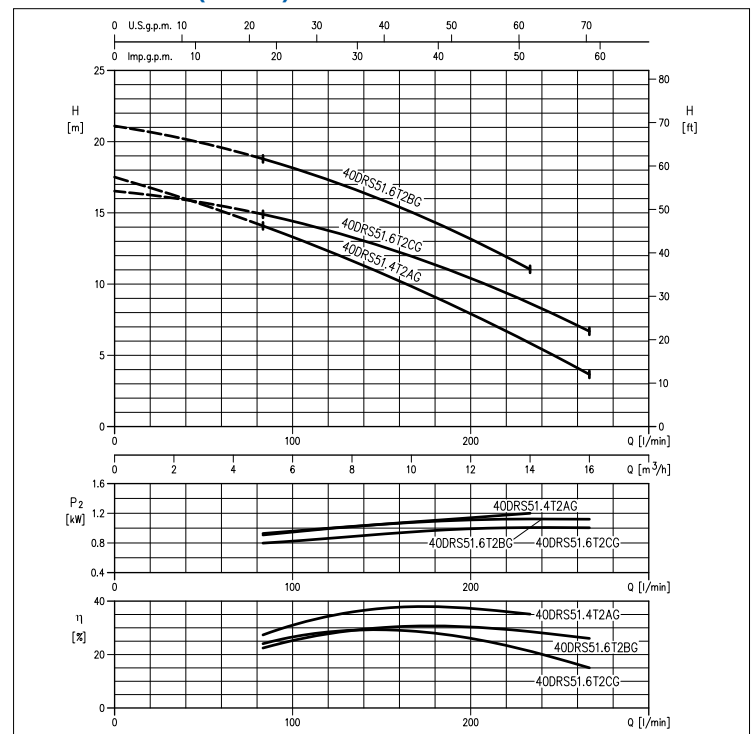
PERFORMANCE CURVES (per ISO 9906 Annex A)
40DRS51.2M2CG (1.2 kW)
40DRS51.5M2BG (1.5 kW)
40DRS51.9M2AG (1.9 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
40DRS51.1T2CG (1.1 kW)
40DRS51.1T2BG (1.1 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
40DRS51.4T2AG (1.4 kW)
40DRS51.6T2CG (1.6 kW)
40DRS51.6T2BG (1.6 kW)



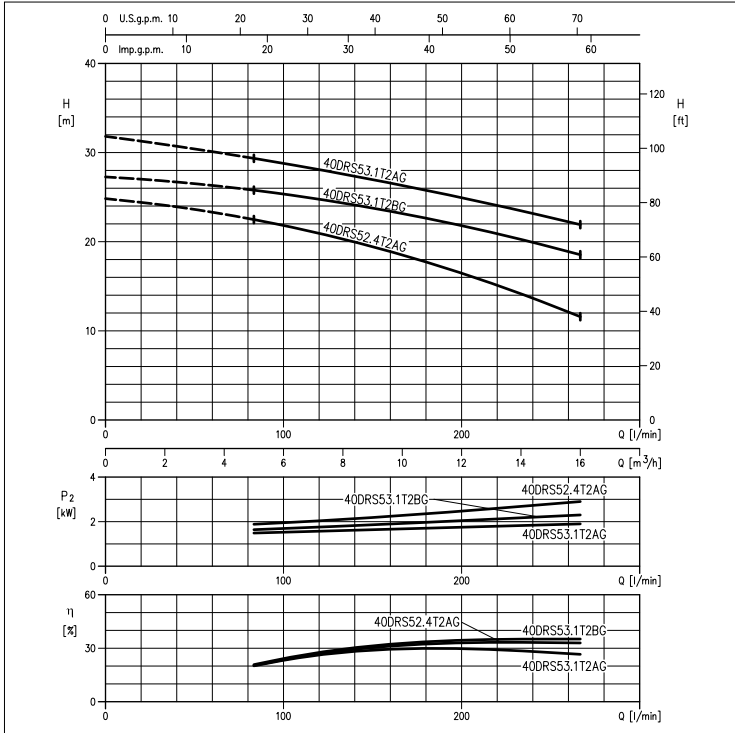
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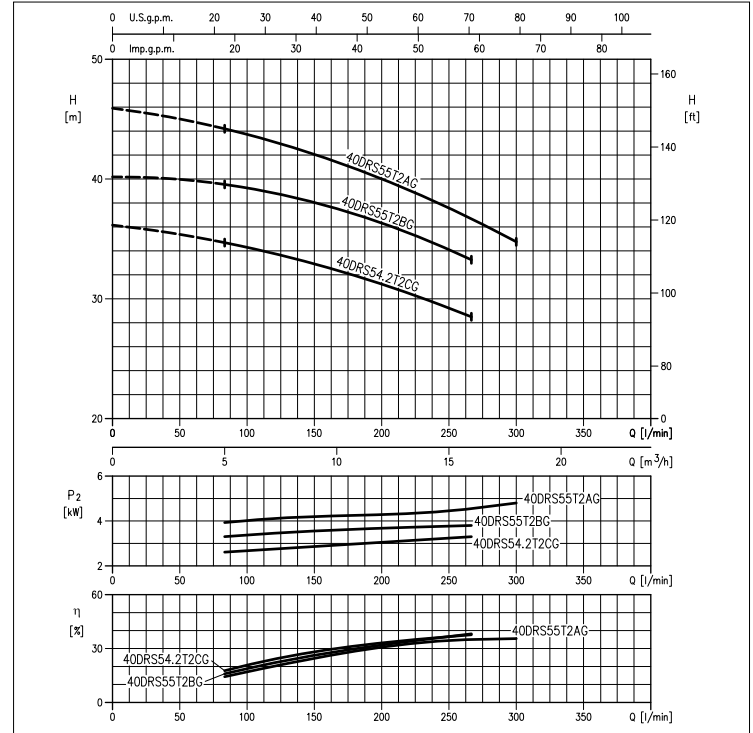
DRS

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS) in cast iron

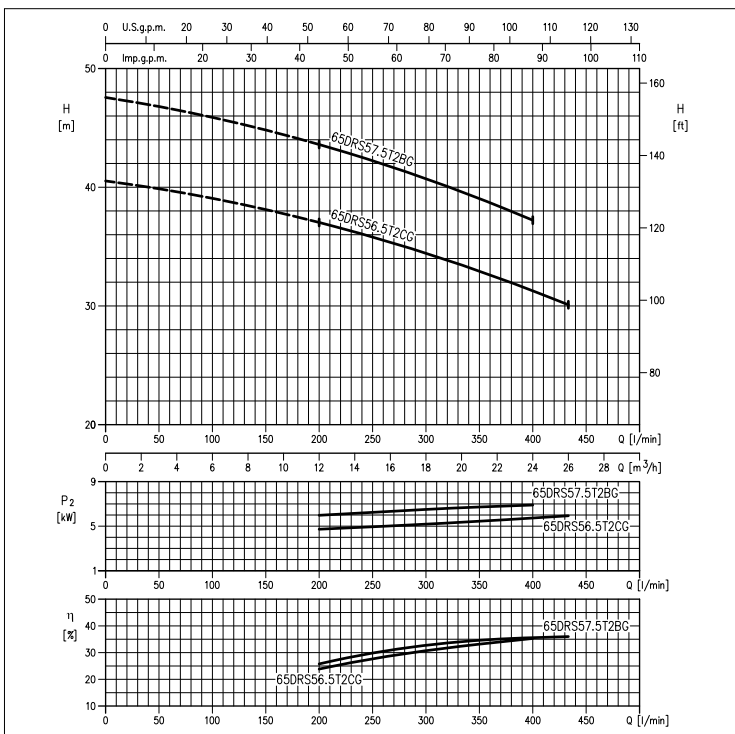
PERFORMANCE CURVES (per ISO 9906 Annex A)
40DRS52.4T2AG (2.4 kW)
40DRS53.1T2BG (3.1 kW)
40DRS53.1T2AG (3.1 kW)



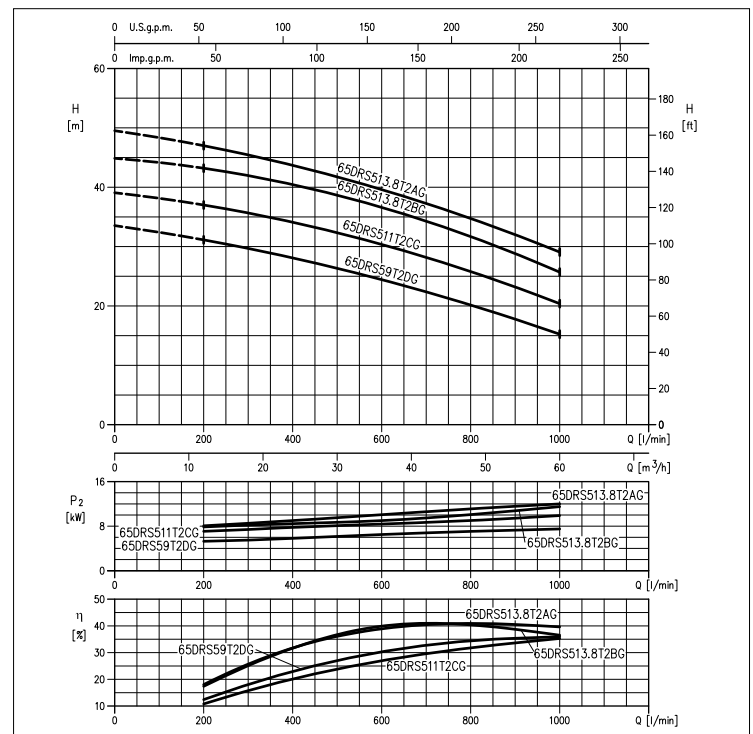
PERFORMANCE CURVES (per ISO 9906 Annex A)
40DRS54.2T2CG (4.2 kW)
40DRS55.2T2BG (5.0 kW)
40DRS55.2T2AG (5.0 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
65DRS57.5T2BG (7.5 kW)
65DRS56.5T2CG (6.5 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
65DRS59T2DG (9.0 kW) - 65DRS511T2CG (11 kW)
65DRS513.8T2BG (13.8 kW) - 65DRS513.8T2AG (13.8 kW)



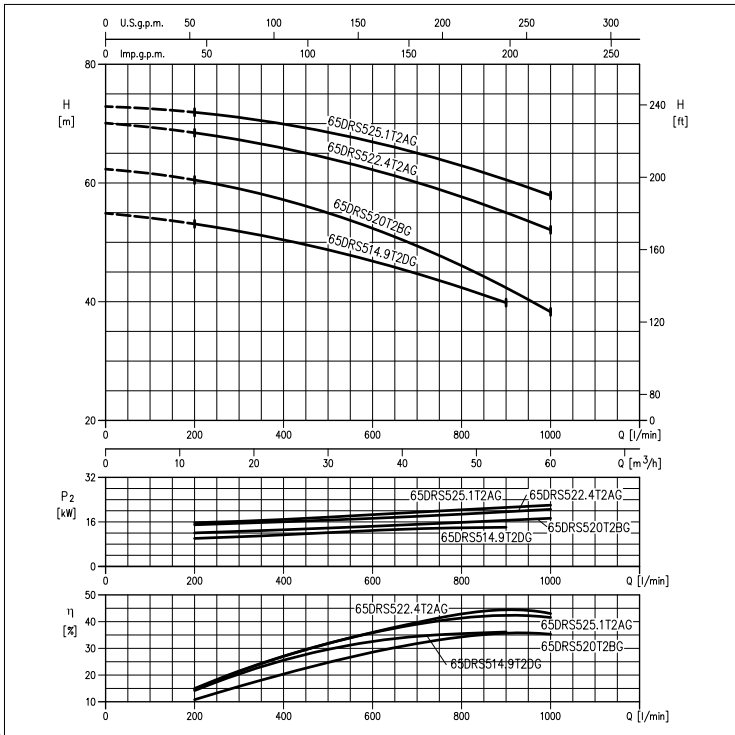
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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS) in cast iron

PERFORMANCE CURVES (per ISO 9906 Annex A)
65DRS514.9T2GG (14.9 kW) - 65DRS520T2BG (20 kW)
65DRS522.4T2AG (22.4 kW) - 65DRS525.1T2AG (25.1 kW)

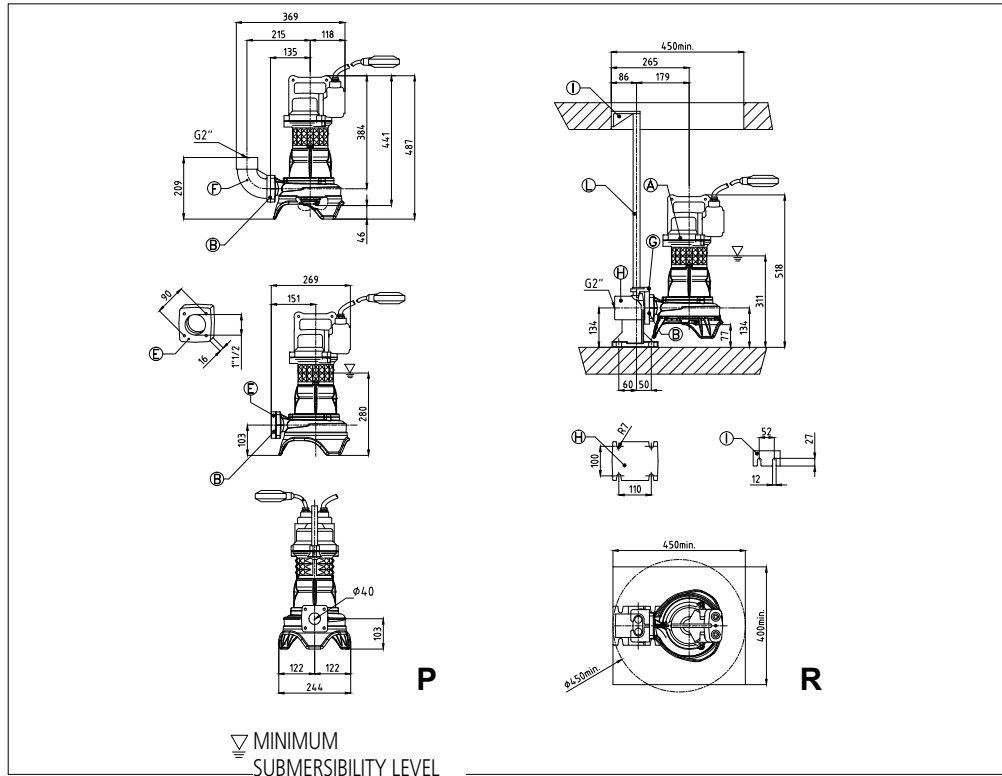


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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS) in cast iron

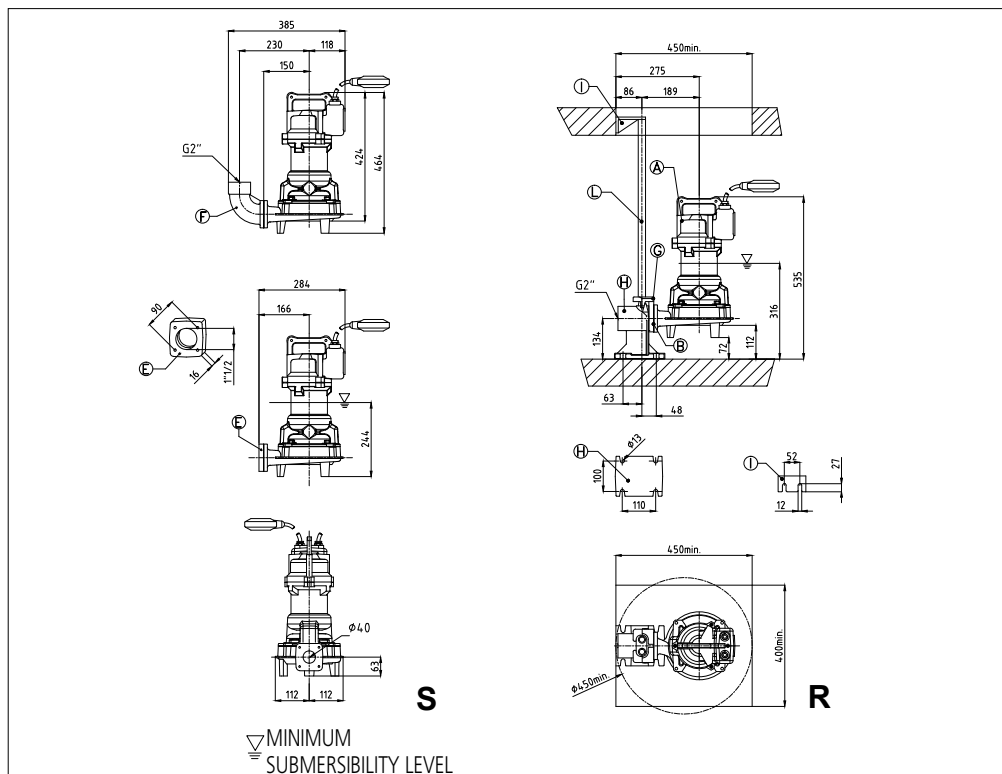
DIMENSIONS 40DRS/40DRS with QDC (1.1 kW)



DIMENSIONS CHART 40DRS/40DRS with QDC (1.1 kW)

DA	Model	[kW]	Weight [kg]
40	40DRS51.1M2CG	1.1	30
	40DRS51.1M2BG	1.1	30
	40DRS51.1M2AG	1.1	30

DIMENSIONS 40DRS/40DRS with QDC (1.1 - 1.9 kW)



DIMENSIONS CHART 40DRS/40DRS with QDC (1.1 - 1.9 kW)

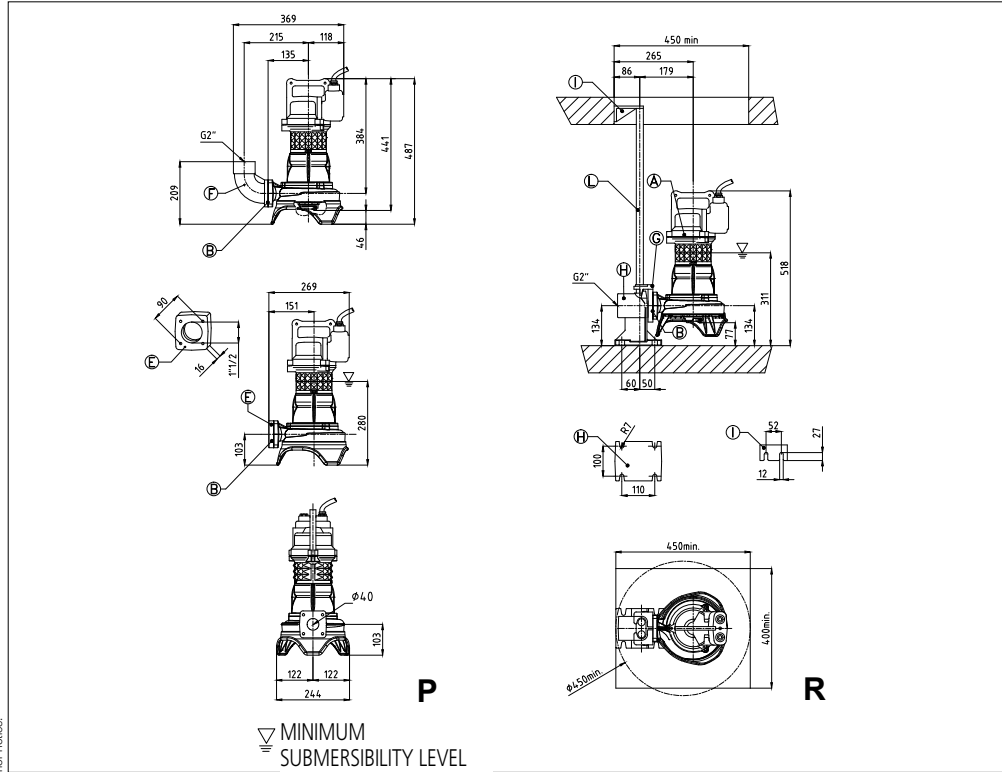
DA	Model	[kW]	Weight [kg]
40	40DRS51.2M2CG	1.1	40
	40DRS51.5M2BG	1.5	40
	40DRS51.9M2AG	1.9	40

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DRS

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS) in cast iron

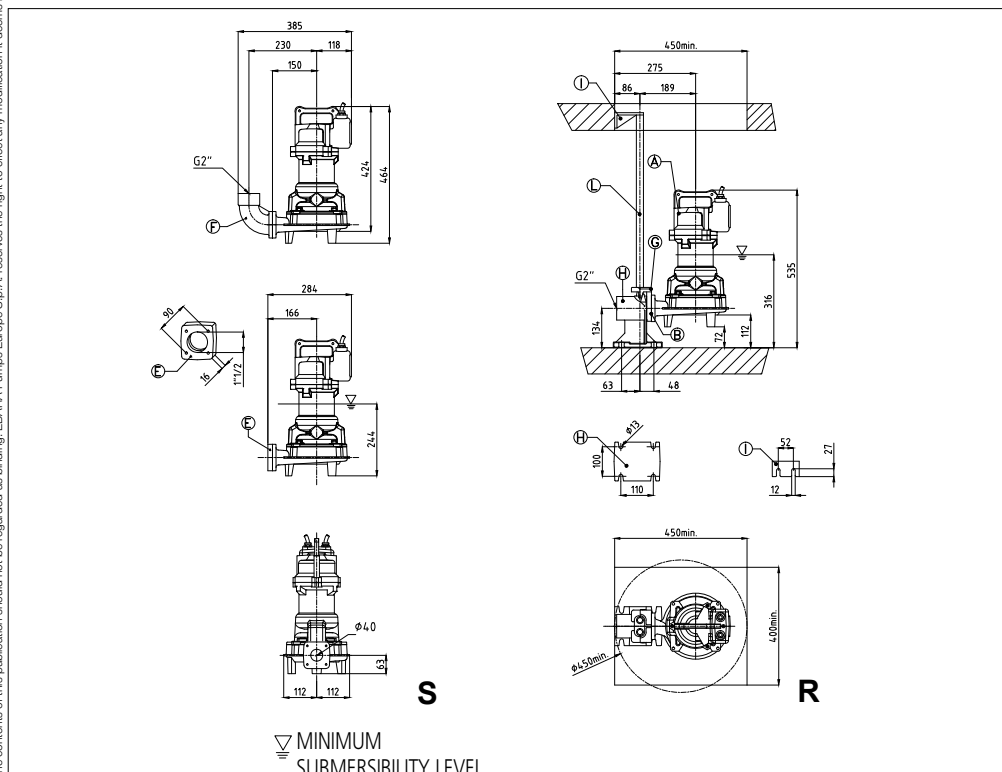
DIMENSIONS 40DRS/40DRS with QDC (1.1 - 1.4 kW)



DIMENSIONS CHART
40DRS/40DRS with QDC (1.1 - 1.4 kW)

DA	Model	[kW]	Weight [kg]
40	40DRS51.1T2CG	1.1	30
	40DRS51.1T2BG	1.1	30
	40DRS51.4T2AG	1.4	30

DIMENSIONS 40DRS/40DRS with QDC (1.6 - 2.4 kW)



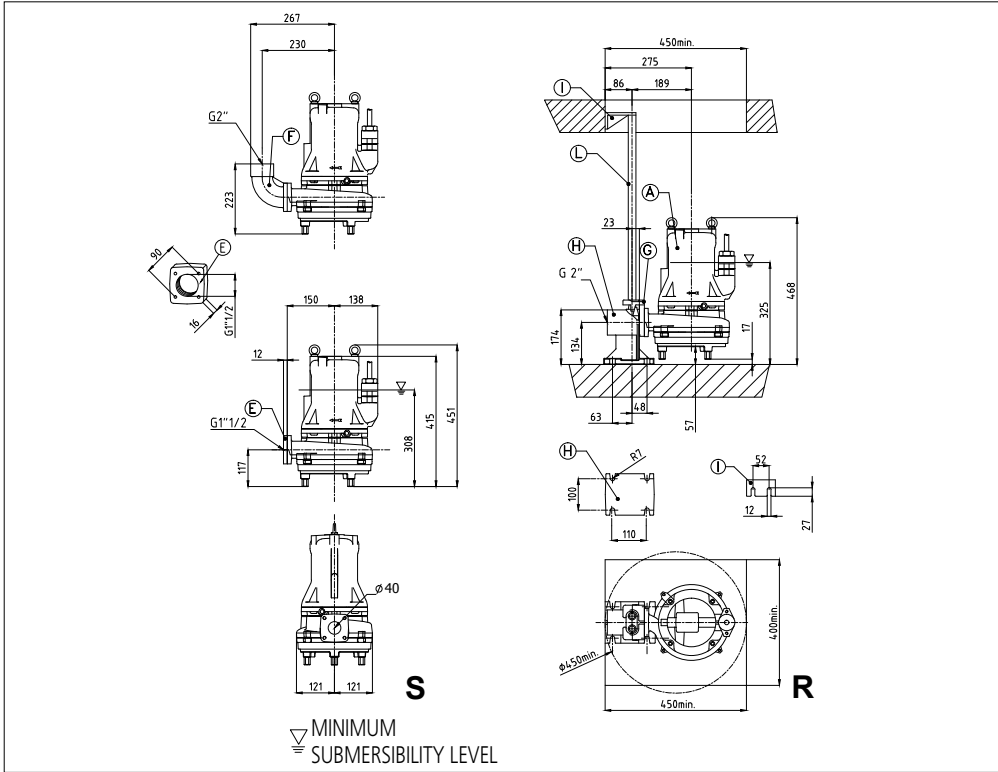
DIMENSIONS CHART
40DRS/40DRS with QDC (1.6 - 2.4 kW)

DA	Model	[kW]	Weight [kg]
40	40DRS51.6T2CG	1.6	40
	40DRS51.6T2BG	1.6	40
	40DRS52.4T2AG	2.4	40

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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS) in cast iron

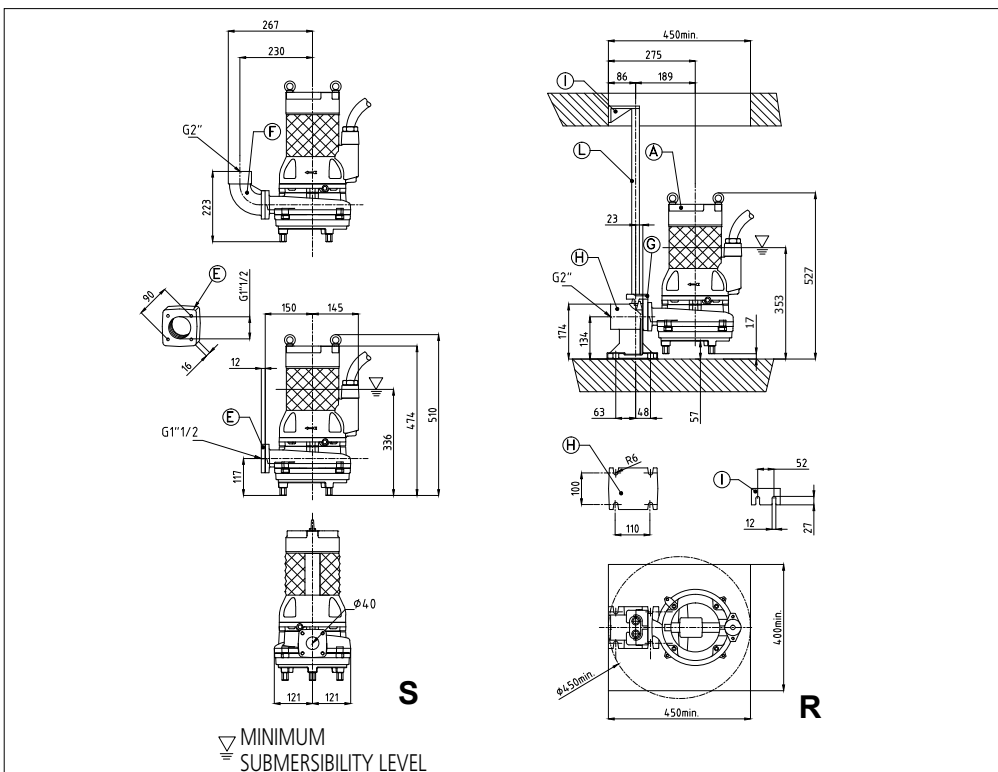
DIMENSIONS 40DRS/40DRS with QDC (3.1 kW)



DIMENSIONS CHART
40DRS/40DRS with QDC (3.1 kW)

DA	Model	[kW]	Weight [kg]
40	40DRS53.1T2BG	3.1	52
	40DRS53.1T2AG	3.1	52

DIMENSIONS 40DRS/40DRS with QDC (4.2 - 5.0 kW)

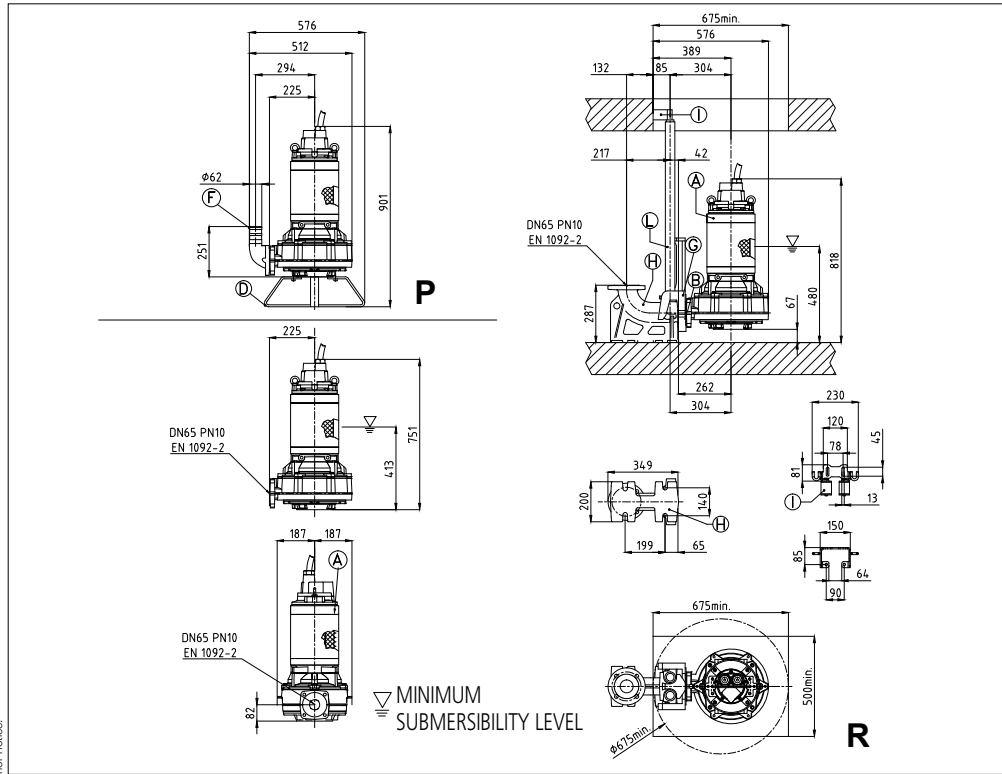


DIMENSIONS CHART
40DRS/40DRS with QDC (4.2 - 5.0 kW)

DA	Model	[kW]	Weight [kg]
40	40DRS54.2T2CG	4.2	67
	40DRS55T2BG	5.0	67
	40DRS55T2AG	5.0	67

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS) in cast iron

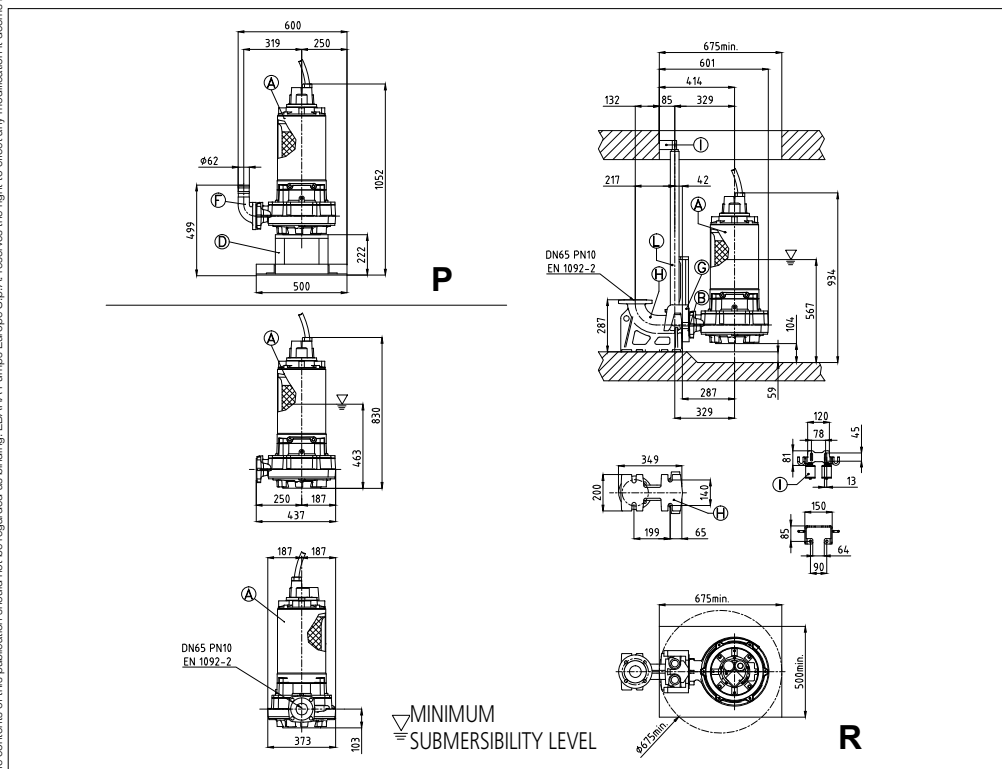
DIMENSIONS 65DRS/65DRS with QDC (6.5 - 7.5 kW)



DIMENSIONS CHART 65DRS/65DRS with QDC (6.5 - 7.5 kW)

DA	Model	[kW]	Weight [kg]
DN65 EN 1092-2	65DRS56.5T2CG 6.5 178	6.5	178
	65DRS57.5T2BG 7.5 178	7.5	178

DIMENSIONS 65DRS/65DRS with QDC (9.0 - 14.9 kW)



DIMENSIONS CHART 65DRS/65DRS with QDC (9.0 - 14.9 kW)

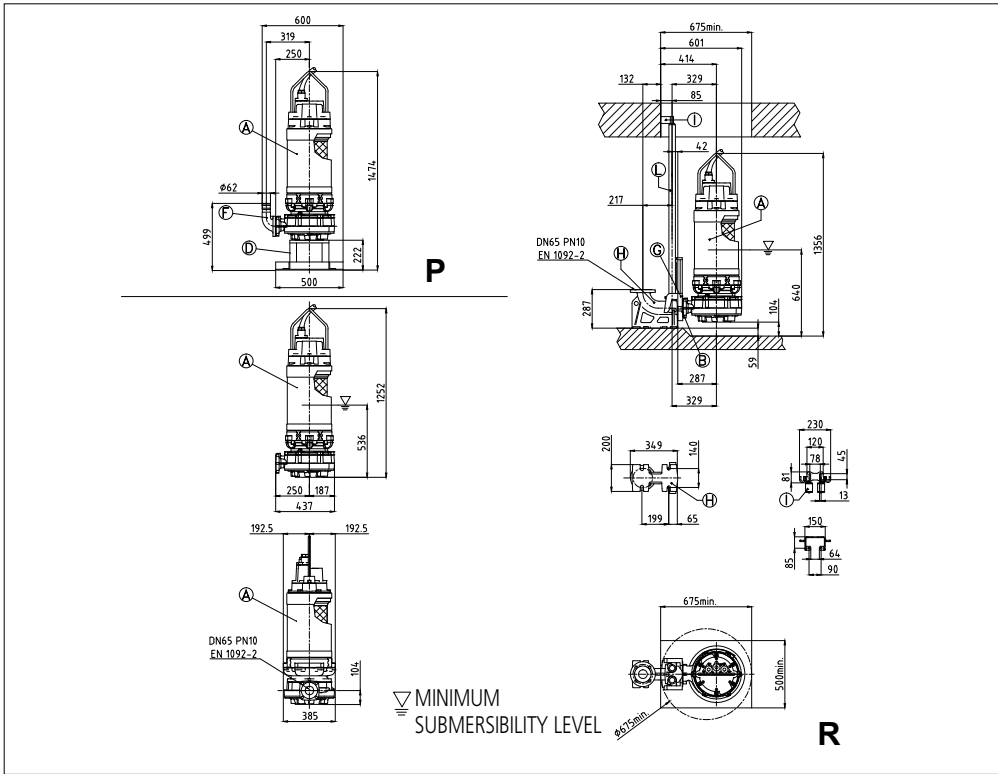
DA	Model	[kW]	Weight [kg]
DN65 EN 1092-2	65DRS59T2DG	9.0	200
	65DRS511T2CG	11.0	200
	65DRS513.8T2BG	13.8	200
	65DRS513.8T2AG	13.8	200
	65DRS514.9T2GG	14.9	200

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DRS

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS) in cast iron

DIMENSIONS 65DRS/65DRS with QDC (20.0 - 25.1 kW)



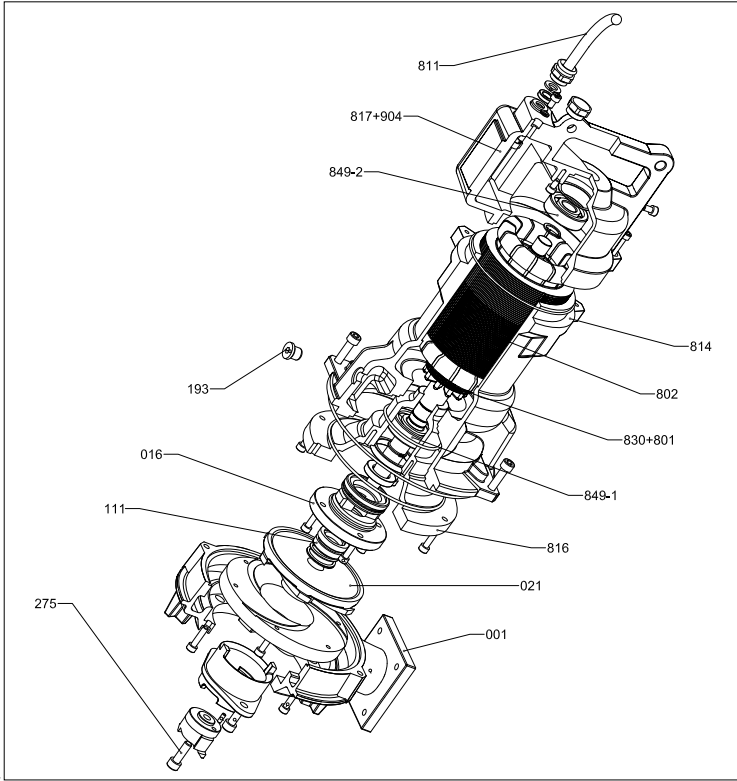
DIMENSIONS CHART 65DRS/65DRS with QDC (20.0 - 25.1 kW)

DA	Model	[kW]	Weight [kg]
DN65 EN 1092-2	65DRS520T2BG	20.0	340
	65DRS522.4T2AG	22.4	340
	65DRS525.1T2AG	25.1	340

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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS) in cast iron

SECTIONAL VIEW 40 DRS (1.1 - 5.0 kW)



SECTIONAL VIEW 65 DRS (6.5 - 25.1 kW)

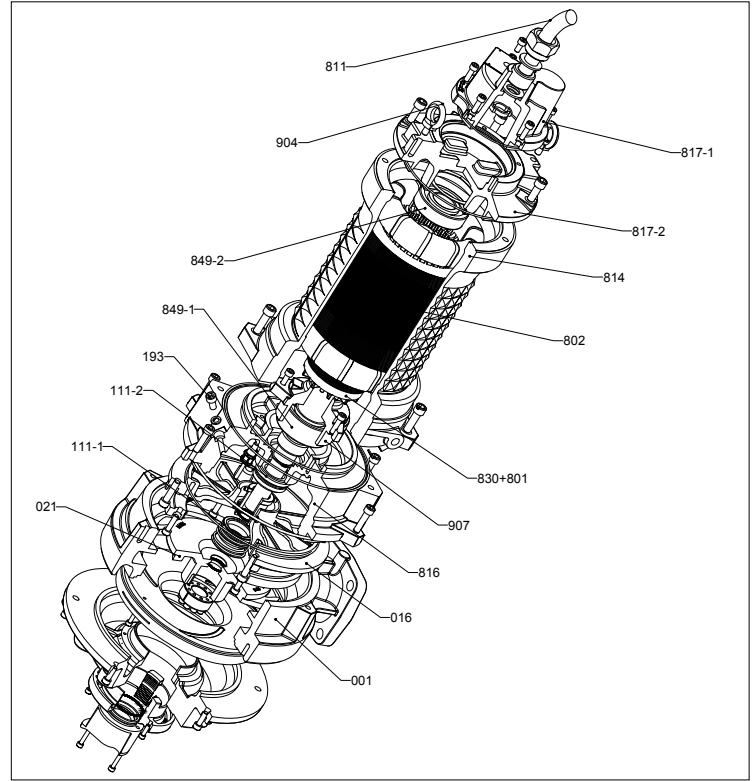


TABLE OF MATERIALS DRS

Ref.	Name	Material	Ref.	Name	Material
001	Pump body	Cast iron EN-GJL-250	814	Motor casing	Cast iron EN-GJL-250
016	Mechanical seal cover	Cast iron EN-GJL-250	816	Upper mount	Cast iron EN-GJL-250
021	Impeller	Ductile cast iron GS400 UNI-EN1563	817	Motor cover	Cast iron EN-GJL-250
111-1	Mechanical seal	-	817-1	Motor cover	Cast iron EN-GJL-250
11-2	Mechanical seal	-	817-2	Motor cover	Cast iron EN-GJL-250
193	Oil cap	NBR/stainless steel	830	Shaft	AISI 420B
275	Impeller nut	AISI304 class A2	849-1	Ball bearing	-
801	Rotor	-	849-2	Ball bearing	-
802	Stator	-	904	Lifting hook	Steel
811	Cable	-	907	Bearing cover	Cast iron

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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (GRINDERS)

in cast iron

ELECTRICAL DATA TABLE DRS (1.1 - 25.1 kW)

[P ₂]	[kW]	1.1	1.1	1.1	1.1	1.5	1.9	1.1	1.1	1.4	1.6	1.6	2.4	3.1*	4.2	5.0	5.0	6.5	7.5	9.0	11.0	13.8*	14.9	20	22.4	25.1																																			
Resistance at 20°C	[Ω]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																		
GD ²	[kg/m ²]	0.0019	0.0020	0.0021	0.0005	0.0021	0.0025	0.0026	0.0027	0.0035	0.0034	0.0035	0.0050	0.0042	0.0055	0.0090	0.0150	0.0090	0.0170	0.0170	0.0230	0.0430	0.0430	0.0510	0.0890	0.0890																																			
Voltage	[V]	230	230	230	230	230	230	400	400	400	400	400	400	400	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690																																			
Full load	0%	Current	[A]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																		
		Power	[W]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																	
		rpm	[min ⁻¹]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																	
	75%	Current	[A]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																	
		Efficiency	[%]	72	72	72	72	72	73	76	76	84	84	84	86	87	88	89	89	89	90	90	91	92	92	92	92	93																																	
		Power factor	[%]	0.97	0.97	0.97	0.97	0.97	0.97	0.83	0.83	0.82	0.82	0.82	0.82	0.86	0.84	0.84	0.84	0.84	0.84	0.84	0.82	0.82	0.82	0.92	0.87	0.87																																	
	100%	Current	[A]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																	
		Efficiency	[%]	73	73	73	73	73	73	84	84	86	86	86	87	88	89	90	90	90	91	91	92	92	92	93	93	93																																	
		Power factor	[%]	0.99	0.99	0.99	0.99	0.99	0.99	0.8	0.8	0.87	0.87	0.87	0.89	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.87	0.87	0.87	0.87	0.89	0.89																																	
	rpm	[min ⁻¹]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																	
	Torque with rotor locked	[%]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																	
	Starting current	[A]	24.4	21	35	35	42.8	124.2	148.5	193.8	283.2	384.4	384.4	384.4	384.4	384.4	384.4	384.4	384.4	384.4	384.4	384.4	384.4	384.4	384.4	384.4	384.4																																		
Phase		2											3																																																
Starts per hour		1											3																																																
Model		M272M-1.1-230/50NY-IE			M271M-1.1-230/50NY-IE			M271M-1.5-230/50NY-IE			M271M-1.9-230/50NY-IE			M272T-1.1-400/50NN-IE3			M272T-1.4-400/50NN-IE3			M271T-1.6-400/50NN-IE3			M271T-2.4-400/50NN-IE3			M209T-3.1-400/50NN-IE3			M210T-4.2-400/50YY-IE3			M210T-5-400/50YY-IE3			M211T-6.5-400/50YY-IE3			M211T-7.5-400/50YY-IE3			M213T-9-400/50YY-IE3			M213T-11-400/50YY-IE3			M213T-13.8-400/50YY-IE3			M213T-14.9-400/50YY-IE3			M216T-20-400/50YY-IE3			M216T-22.4-400/50YY-IE3			M216T-25.1-400/50YY-IE3		
Type of pump		40DRS1.1M2CG	40DRS51.1M2BG	40DRS51.1M2AG	40DRS51.2M2CG	40DRS51.5M2BG	40DRS51.9M2AG	40DRS51.1T2CG	40DRS51.1T2BG	40DRS51.4T2AG	40DRS51.6T2CG	40DRS51.6T2BG	40DRS52.4T2AG	40DRS53.1T2BG	40DRS54.2T2CG	40DRS55T2BG	40DRS55T2AG	65DRS56.5T2CG	65DRS57.5T2BG	65DRS59T2DG	65DRS511T2CG	65DRS513.8T2BG	65DRS513.8T2AG	65DRS514.9T2GG	65DRS520T2BG	65DRS522.4T2AG	65DRS525.1T2AG																																		

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL)

in cast iron



Submersible electric pumps in cast iron for foul waste water with multi-channel impellers

APPLICATIONS

- Handling black water, loaded fluids in general
- Draining infiltration water
- Draining cesspits
- Draining excavations

TECHNICAL DATA

- Maximum fluid temperature: 40°C
- Maximum solid dimensions: 30 - 140mm
- Three phase asynchronous motor
- Versions available: 2, 4, 6, 8 pole
- Insulation class H
- Protection rating IP 68
- Three phase voltage 400V-690V, 50Hz
- Flanges DN65, DN80, DN100, DN150, DN 200, DN 250, DN300, DN350
- Power up to 85 kW

MATERIALS

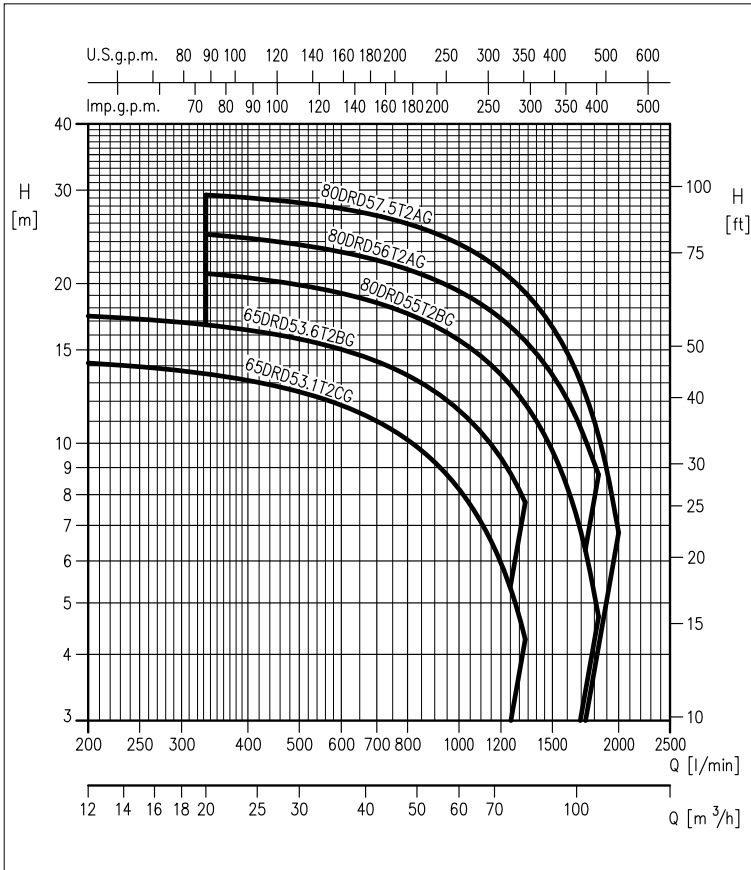
- Pump body, two/three channel impeller, motor casing, volute base, upper cover in cast iron
- Shaft made of AISI 420B
- Mechanical seal:
 - SiC/SiC/NBR (pump side)
 - Carbon/Ceramic/NBR (motor side)

ACCESSORIES (on request)

For accessories, see page 151 onwards

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

PERFORMANCE RANGE 65-80 DRD (per ISO 9906 Annex A)

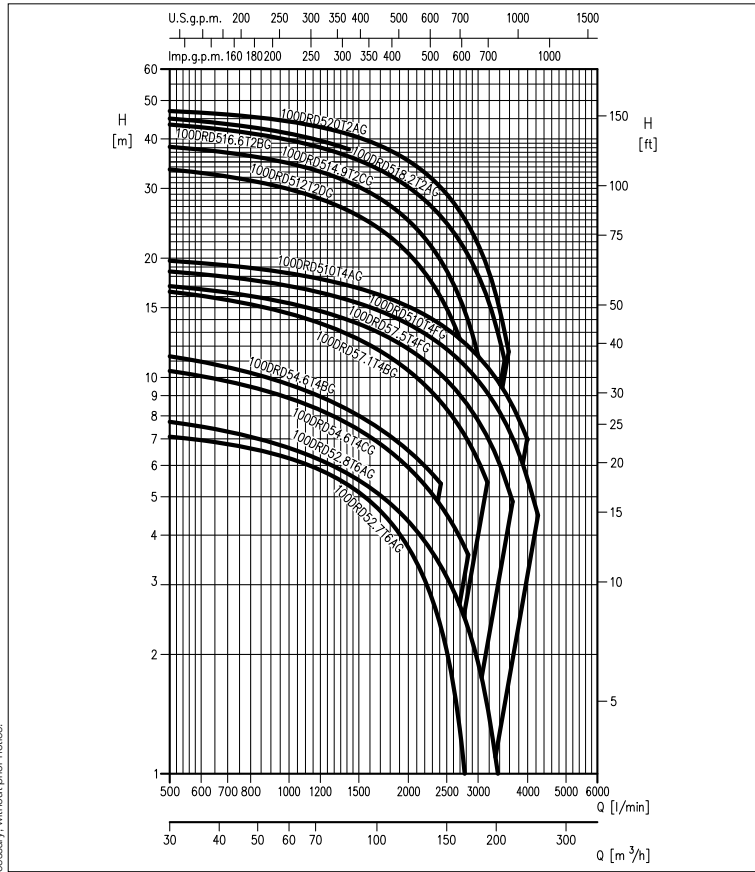


PERFORMANCE TABLE

Model	P ₂		Q=Flow rate						
	[HP]	[kW]	l/min 0 m³/h 0	200 12	333 20	833 50 H=Head [m]	1333 80	1833 110	2000 120
65DRD53.1T2CG	4.2	3.1	14.9	14.2	13.5	9.8	4.3	-	-
65DRD53.6T2BG	4.8	3.6	18.1	17.4	16.7	13.1	7.8	-	-
80DRD55T2BG	6.7	5	22.4	-	20.9	17.3	11.9	4.7	-
80DRD56T2AG	8.0	6	26.4	-	24.8	21	15.6	8.7	-
80DRD57.5T2AG	10.1	7.5	30.5	-	29.4	25.6	19.2	10.3	6.8

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

PERFORMANCE RANGE 100 DRD (per ISO 9906 Annex A)



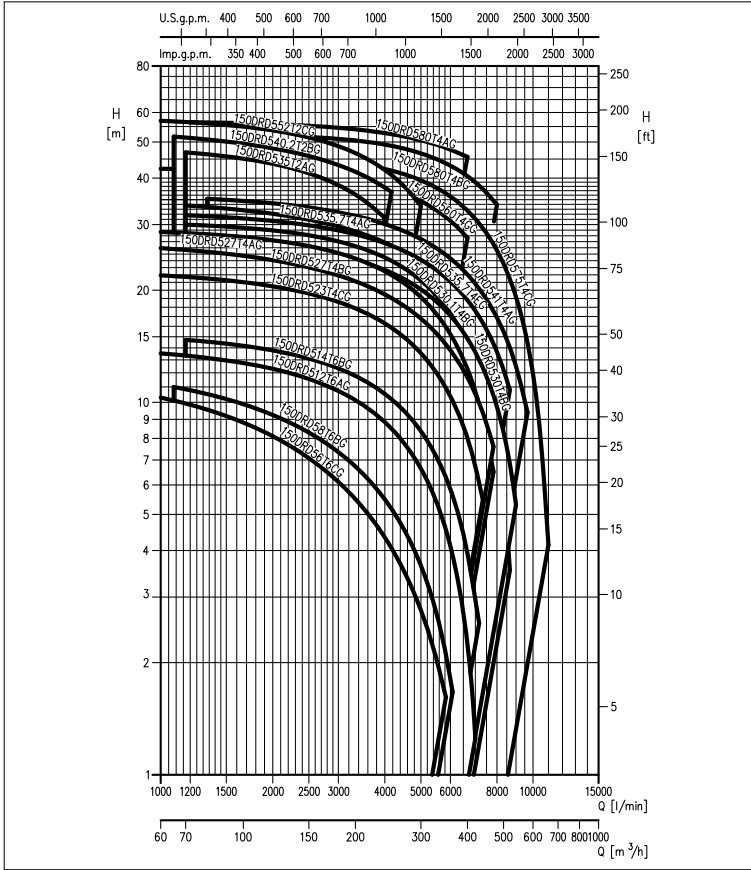
PERFORMANCE TABLE

Model	P ₂		l/min 0 m ³ /h 0	500 30	833 50	1417 85	2417 145	2833 170	Q=Flow rate H=Head [m]							
	[HP]	[kW]							3000 180	3167 190	3333 200	3500 210	3583 215	3667 220	4000 240	4250 255
100DRD52.7T6AG	3.6	2.7	7.6	7.1	6.6	5.3	2.3	0.8	-	-	-	-	-	-	-	-
100DRD52.8T6AG	3.8	2.8	8.8	7.7	7	5.7	3.3	2.3	1.9	1.5	1.1	-	-	-	-	-
100DRD54.6T4CG	6.2	4.6	12	10.4	9.4	7.6	4.7	3.6	-	-	-	-	-	-	-	-
100DRD54.6T4BG	6.2	4.6	13.1	11.3	10.2	8.3	5.4	-	-	-	-	-	-	-	-	-
100DRD57.1T4BG	9.5	7.1	18.4	16.5	15.2	12.5	8.3	6.9	6.2	5.5	4.7	-	-	-	-	-
100DRD57.5T4FG	10.1	7.5	18.6	17	15.9	13.7	9.8	8.5	7.8	7.1	6.3	5.6	5.2	4.9	-	-
100DRD510T4FG	13.4	10	20	18.5	15.4	11.8	10.5	9.8	9.1	8.5	7.7	7.4	7	5.6	4.4	-
100DRD510T4AG	13.4	10	21	19.7	18.8	16.8	13.3	12	11.3	10.6	9.9	9.2	8.8	8.5	7	-
100DRD512T2DG	16.1	12	36.5	33.5	31.2	26.3	15.9	10.8	8.6	-	-	-	-	-	-	-
100DRD514.9T2CG	20.0	14.9	41	38.2	36	31.1	19.7	13.9	11.3	8.7	6	-	-	-	-	-
100DRD516.6T2BG	22.3	16.6	46.5	43.5	41	36.1	25.5	20.3	18.1	15.8	13.5	11.1	-	-	-	-
100DRD518.2T2AG	24.4	18.2	48	45	42.5	37.7	-	-	-	-	-	-	-	-	-	-
100DRD520T2AG	26.8	20	48.5	47	45.5	41	30.1	24.2	21.7	18.9	16.1	13.1	11.6	-	-	-

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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

PERFORMANCE RANGE 150 DRD (per ISO 9906 Annex A)



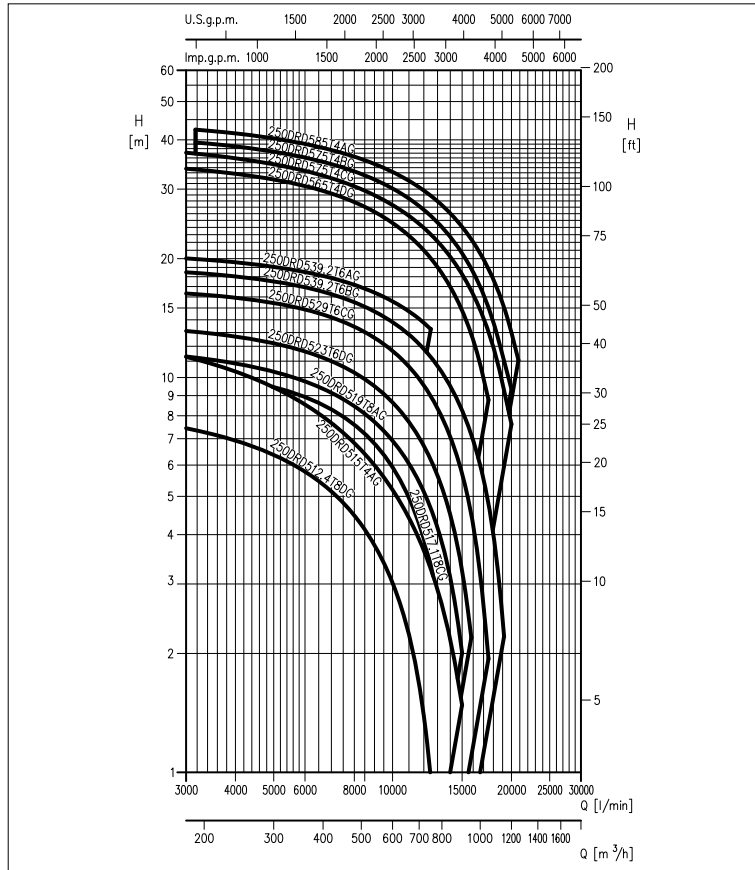
PERFORMANCE TABLE

Model	P ₂		Q=Flow rate																					
	[HP]	[kW]	H=Head [m]																					
			1000 m³/h	1083 65	1167 70	1333 80	2667 160	4000 240	4167 250	5000 300	5500 330	5833 350	6083 365	6667 400	7000 420	7167 430	7333 440	7833 470	8000 480	8667 520	9000 540	9667 580	11000 660	
150DRD56T6CG	8.0	6	10.3	10.1	9.9	9.6	6.8	4.3	4.1	2.8	2.1	1.6	-	-	-	-	-	-	-	-	-	-	-	-
150DRD58T6BG	10.7	8	-	11	10.8	10.5	8	5.5	5.2	3.6	2.7	2.1	1.7	-	-	-	-	-	-	-	-	-	-	-
150DRD512T6AG	16.1	12	13.5	13.5	13.4	13.2	11.3	8.8	8.5	6.6	5.4	4.5	3.9	2.2	1.2	-	-	-	-	-	-	-	-	-
150DRD514T6BG	18.8	14	-	-	14.7	14.5	12.9	10.5	10.2	8.4	7.1	6.3	5.6	3.9	3	2.5	-	-	-	-	-	-	-	-
150DRD523T4CG	30.8	23	21.9	21.8	21.7	21.5	19.3	16.3	15.9	13.5	12	10.9	10.1	8	6.8	6.1	5.5	-	-	-	-	-	-	-
150DRD527T4BG	36.2	27	26	25.8	25.7	25.4	22.7	19.5	19	16.8	15.3	14.3	13.5	11.7	10.5	10	9.4	7.6	-	-	-	-	-	-
150DRD527T4AG	36.2	27	28.7	28.6	28.5	28.3	25.9	22.5	22	19.2	17.3	15.9	14.9	12.3	10.7	9.9	9	6.4	-	-	-	-	-	-
150DRD530T4BG	40.2	30	-	-	27.5	27.4	25.4	22.7	22.3	20.1	18.6	17.6	16.8	14.8	13.6	13	12.4	10.4	9.7	6.9	5.4	-	-	-
150DRD530.1T4BG	40.2	30	-	-	30	29.8	27.8	24.5	24	21.2	19.4	18	17	14.3	12.7	11.9	11.1	8.4	7.5	3.6	-	-	-	-
150DRD535T2AG	46.9	35	-	-	47	46.5	40.5	31.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150DRD535.7T4EG	47.9	35.7	-	-	31.8	31.7	29.6	26.8	26.3	24.1	22.7	21.6	20.8	18.8	17.6	17	16.3	14.4	13.7	10.8	-	-	-	-
150DRD535.7T4AG	47.9	35.7	-	-	33.8	30.5	26.9	26.4	23.6	21.9	20.7	-	-	-	-	-	-	-	-	-	-	-	-	-
150DRD540.2T2BG	53.9	40.2	-	51.7	51.4	50.8	45	37.7	36.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150DRD541T4AG	55.0	41	-	-	-	35.3	33	30.1	29.7	27.4	25.9	24.9	24.1	22	20.8	20.2	19.6	17.6	16.9	14	12.5	9.4	-	-
150DRD552T2CG	69.7	52	57	56.8	56.6	56.1	50.6	42	40.8	33.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150DRD560T4CG	80.5	60	42.5	42.5	42.5	42	41	37.8	37.3	34.7	32.8	31.4	30.4	27.6	-	-	-	-	-	-	-	-	-	-
150DRD575T4CG	100.6	75	-	-	-	45.5	45	42.5	42	39.5	37.7	36.4	35.4	32.7	31.1	30.2	29.4	26.6	25.6	21.4	19.2	14.4	3.8	-
150DRD580T4BG	107.3	80	52	52	52	52	51.5	49	49	48.5	45	44	43	40.5	39	38.2	37.4	34.8	33.9	-	-	-	-	-
150DRD580T4AG	107.3	80	-	-	56.5	55	53	52.5	50.5	49	49	48	47.5	45.5	-	-	-	-	-	-	-	-	-	-

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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

PERFORMANCE RANGE 250 DRD (per ISO 9906 Annex A)



PERFORMANCE TABLE

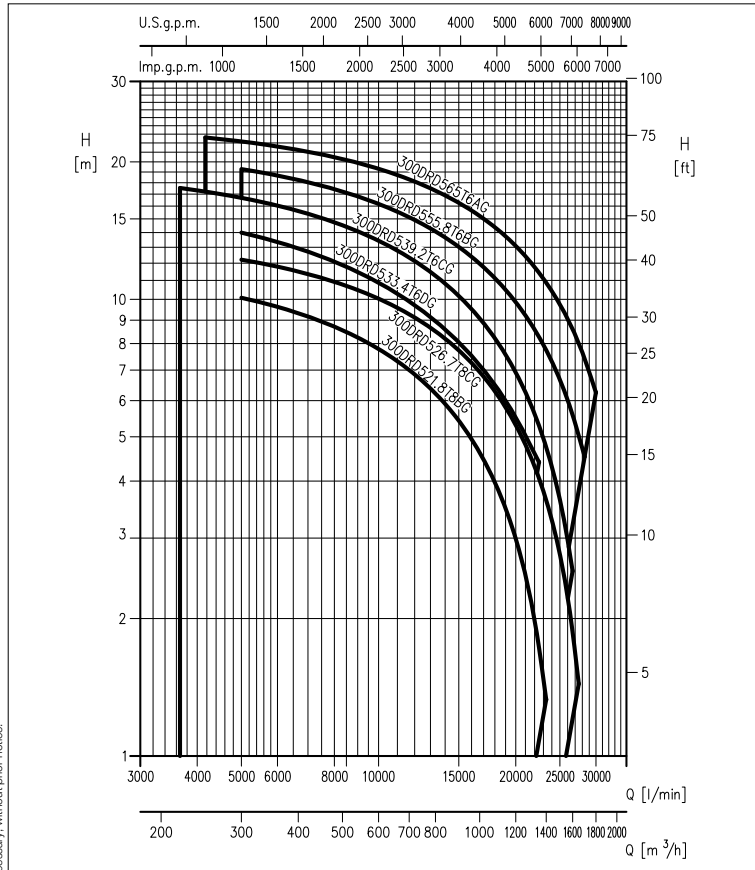
Model	P ₁		Q=Flow rate															
	[HP]	[kW]	l/min 0	3000	3167	5000	8333	12500	12667	14000	15000	15833	17500	19167	19833	20000	20833	
			m³/h 0	180	190	300	500	750	760	840	900	950	1,050	1,150	1,190	1,200	1,250	
H=Head [m]																		
250DRD512.4T8DG	16.6	12.4	8.7	7.4	7.4	6.4	4	1	0.8	-	-	-	-	-	-	-	-	-
250DRD517.1T8CG	22.9	17.1	10.8	10.3	10.2	9.5	7.1	3.3	3.1	1.5	-	-	-	-	-	-	-	-
250DRD519T8AG	25.5	19	12.3	11.3	11.2	10.3	8	4.7	4.5	3.1	2	-	-	-	-	-	-	-
250DRD515T4AG	20.1	15	14.2	11.3	11.1	9.4	6.3	3.3	3.1	2.2	1.5	-	-	-	-	-	-	-
250DRD523T6DG	30.8	23	13.9	13.1	13.1	12.2	9.8	6.2	6	4.5	3.3	2.2	-	-	-	-	-	-
250DRD529T6CG	38.9	29	17	16.3	16.3	15.4	12.9	9	8.8	7.1	5.7	4.5	1.9	-	-	-	-	-
250DRD539.2T6BG	52.6	39.2	19.4	18.5	18.4	17.5	15	11.3	11.1	9.5	8.3	7.1	4.8	2.2	-	-	-	-
250DRD539.2T6AG	52.6	39.2	21	20	20	19.1	16.7	13.3	-	-	-	-	-	-	-	-	-	-
250DRD565T4DG	87.2	65	36.1	33.8	33.7	31.7	26.8	20	19.7	17	14.8	12.8	8.8	-	-	-	-	-
250DRD575T4CG	100.6	75	40.5	37.1	36.9	34.7	29.5	23	22.7	20.2	18.3	16.6	13	9.3	7.8	7.4	-	-
250DRD575T4BG	100.6	75	42.5	-	39.4	37.3	32.3	25.7	25.3	22.7	20.6	18.8	15	11	9.4	-	-	-
250DRD585T4AG	114.0	85	45.5	-	42.5	40.5	35.3	28.9	28.6	26.1	24.1	22.4	18.8	15	13.5	13.1	11.1	-



DRD

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

PERFORMANCE RANGE 300 DRD (per ISO 9906 Annex A)



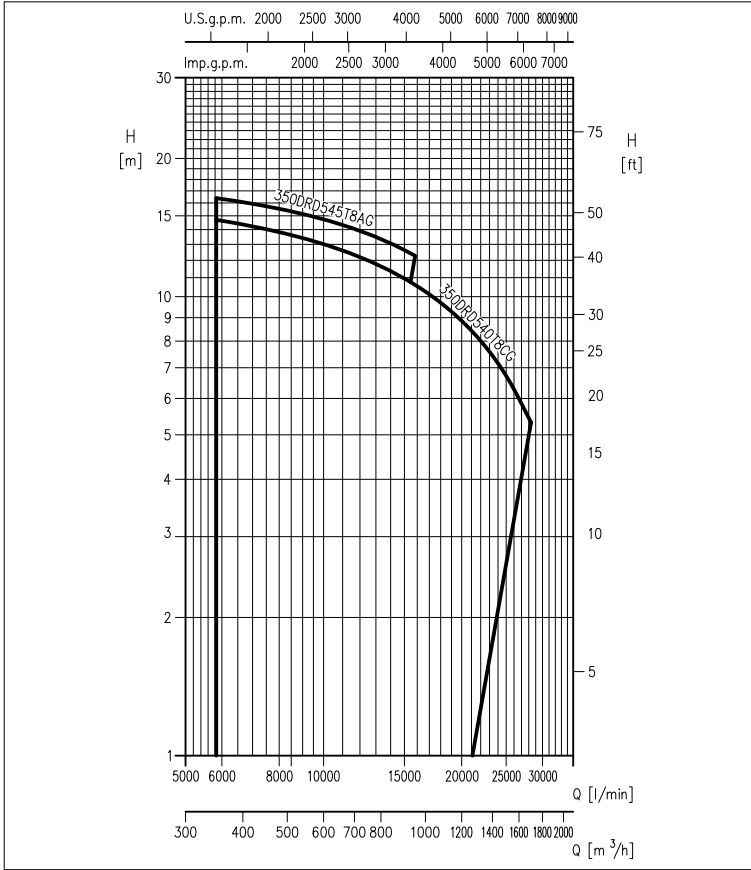
PERFORMANCE TABLE

Model	P ₂		Q=Flow rate														
	[HP]	[kW]	l/min 0	3667	4167	5000	8333	11667	15000	18333	22500	23333	26667	27500	28333	30000	
			m ³ /h 0	220	250	300	500	700	900	1,100	1,350	1,400	1,600	1,650	1,700	1,800	
				H=Head [m]													
300DRD521.8T8BG	29.2	21.8	12.3	-	-	10.1	8.6	7	5.4	3.8	1.7	1.3	-	-	-	-	
300DRD526.7T8CG	35.8	26.7	14.3	-	-	12.2	10.8	9.3	7.7	6.1	4.1	3.6	1.9	1.4	-	-	
300DRD533.4T6DG	44.8	33.4	17.4	-	-	14	11.9	9.9	8	6.3	4.3	-	-	-	-	-	
300DRD539.2T6CG	52.6	39.2	20	17.6	17.2	16.7	14.5	12.4	10.2	8	5.3	4.7	2.6	-	-	-	
300DRD555.8T6BG	74.8	55.8	22.4	-	-	19.3	17.2	15.1	13	10.9	8.3	7.7	5.6	5.1	4.5	-	
300DRD565T6AG	87.2	65	24.9	-	22.6	22.2	20.3	18.3	16.3	14.2	11.4	10.9	8.6	8	7.4	6.2	

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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

PERFORMANCE RANGE 350 DRD (per ISO 9906 Annex A)



PERFORMANCE TABLE

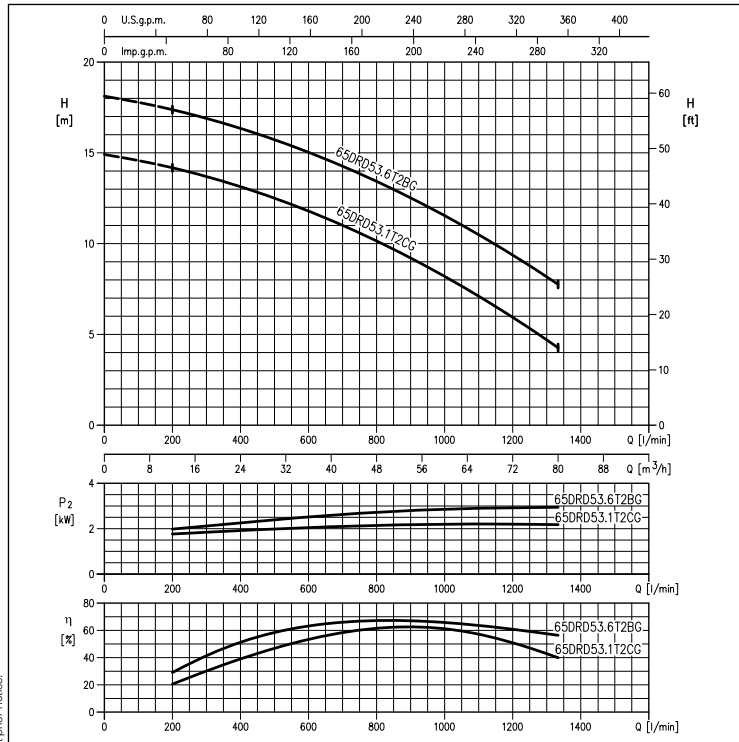
Model	P ₂		Q=Flow rate							
	[HP]	[kW]	l/min 0 m³/h 0	5833 350	8333 500	11667 700	15833 950	20000 1,200	25000 1,500	28333 1,700
			H=Head [m]							
350DRD540T8CG	53.6	40	17	14.7	13.7	12.3	10.6	8.9	6.7	5.3
350DRD545T8AG	60.3	45	18.6	16.4	15.4	14.1	12.3	-	-	-



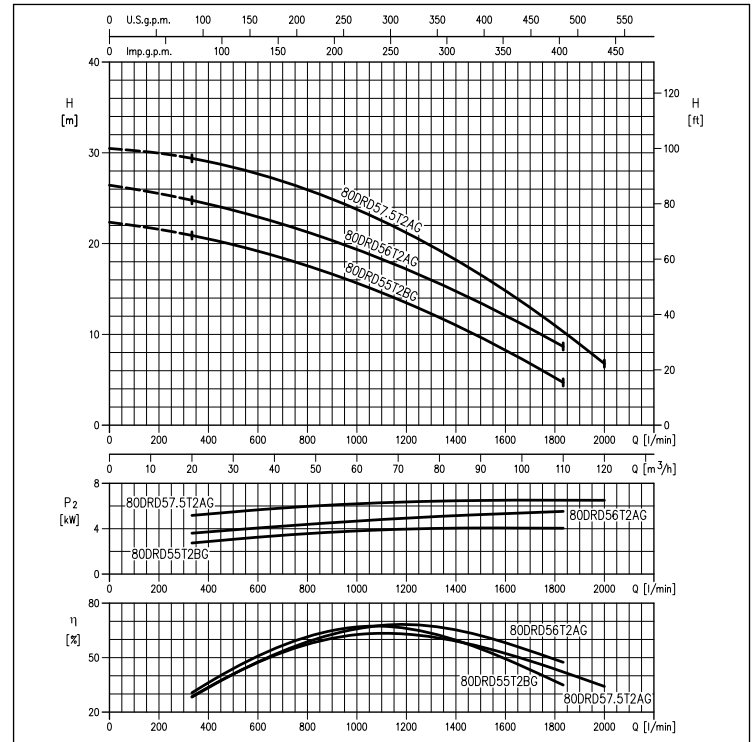
DRD

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

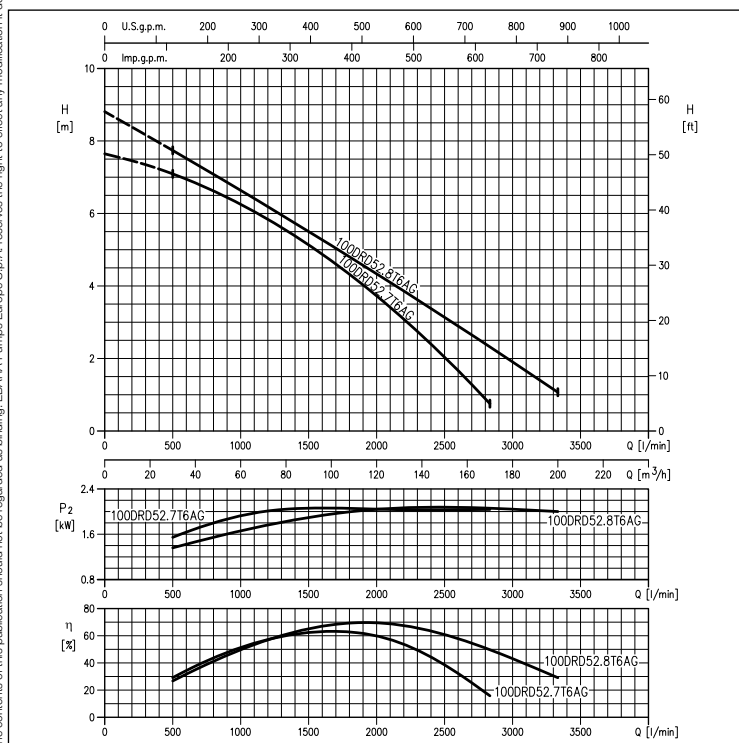
PERFORMANCE CURVES (per ISO 9906 Annex A)
65DRD53.1T2CG (3.1 kW)
65DRD53.6T2BG (3.6 kW)



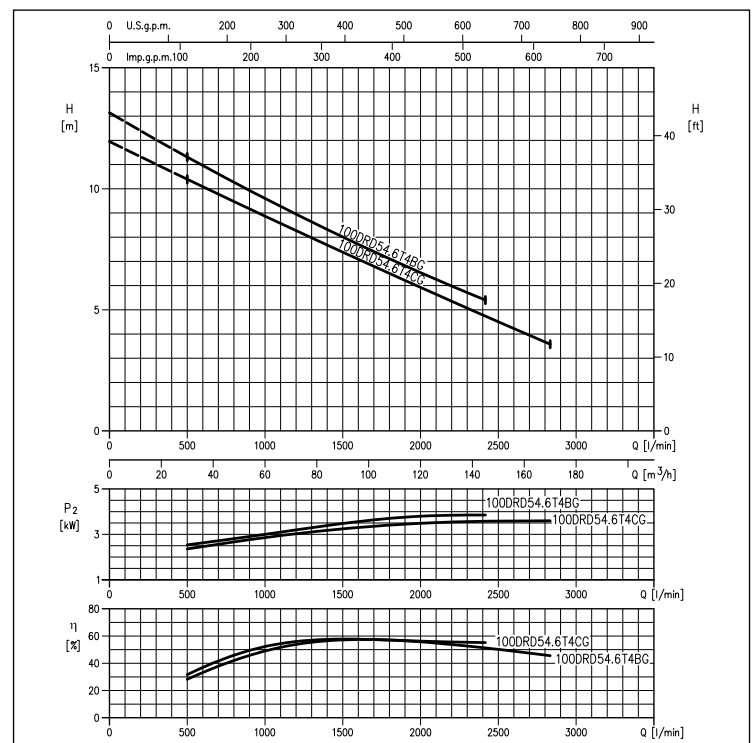
PERFORMANCE CURVES (per ISO 9906 Annex A)
80DRD55T2BG (5.0 kW) - 80DRD56T2AG (6.0 kW)
80DRD57.5T2AG (7.5 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
100DRD52.7T6AG (2.7 kW)
100DRD52.8T6AG (2.8 kW)



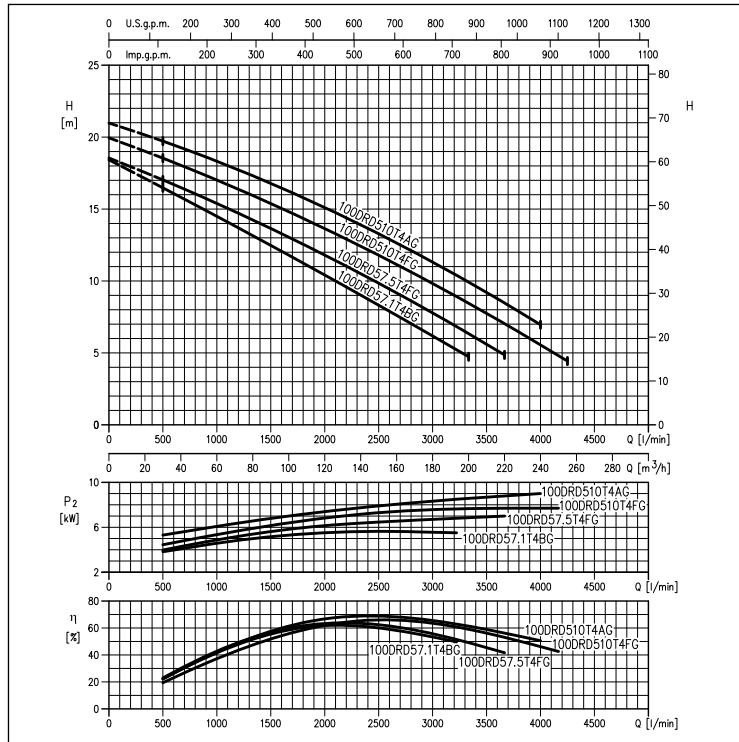
PERFORMANCE CURVES (per ISO 9906 Annex A)
100DRD54.6T4CG (4.6 kW)
100DRD54.6T4BG (4.6 kW)



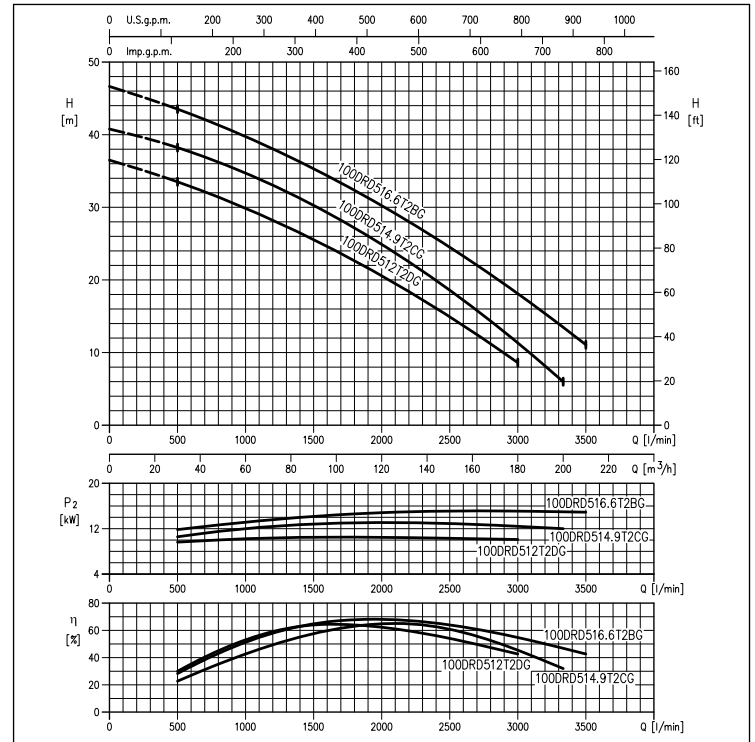
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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

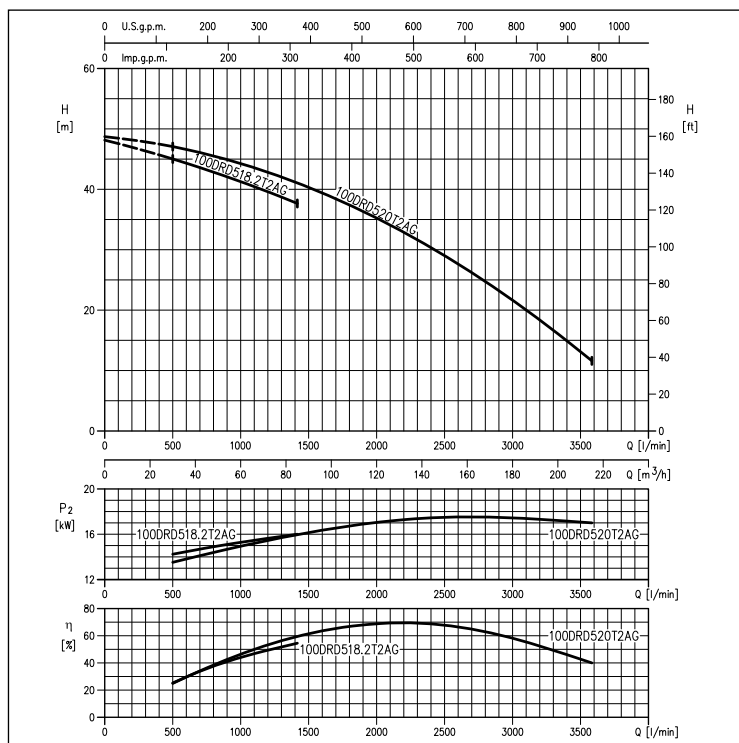
PERFORMANCE CURVES (per ISO 9906 Annex A)
100DRD57.1T4BG (7.1 kW) - 100DRD57.5T4FG (7.5 kW)
100DRD510T4FG (10 kW) - 100DRD510T4AG (10 kW)



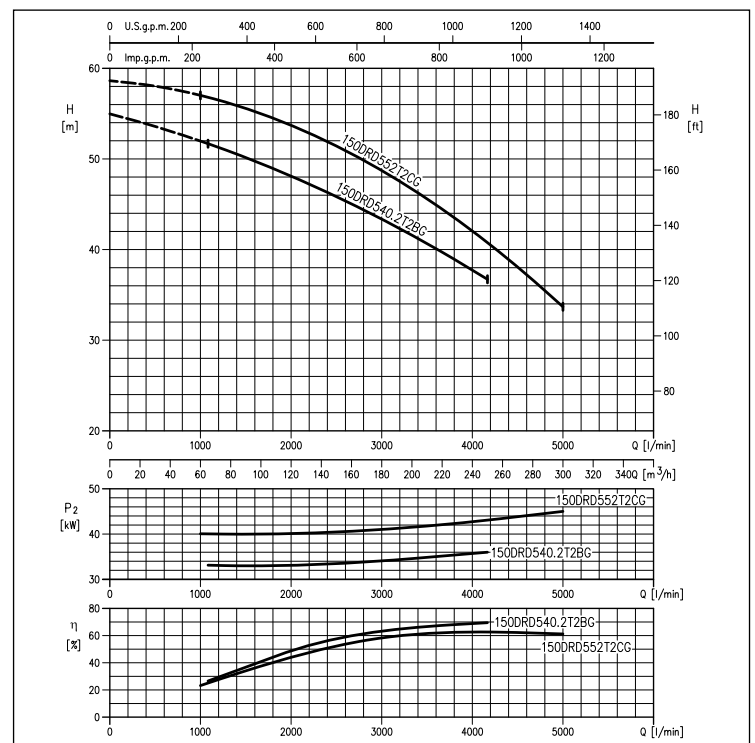
PERFORMANCE CURVES (per ISO 9906 Annex A)
100DRD512T2DG (12 kW) - 100DRD514.9T2CG (14.9 kW)
100DRD516.6T2BG (16.6 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
100DRD518.2T2AG (18.2 kW)
100DRD520T2AG (20 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
150DRD540.2T2BG (40.2 kW)
150DRD552T2CG (52 kW)

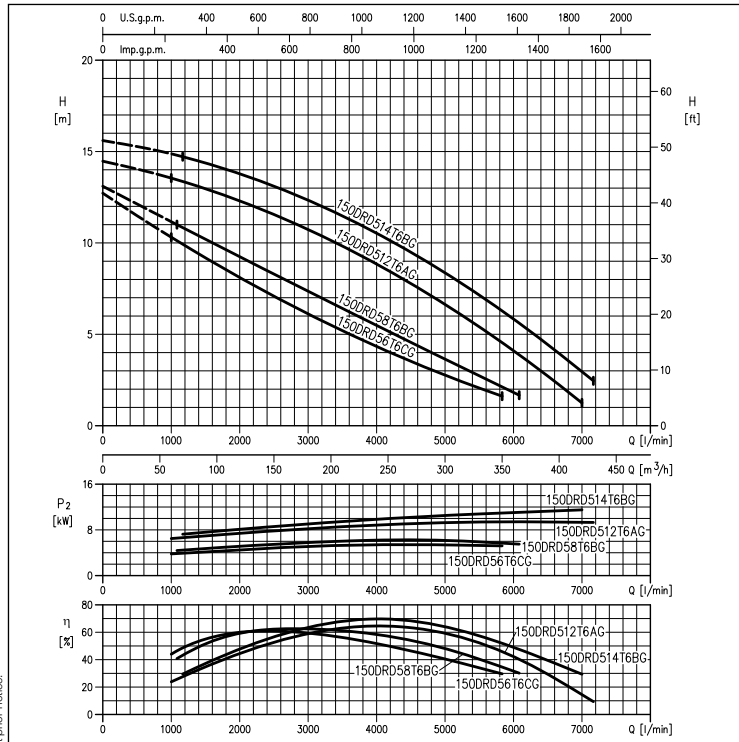




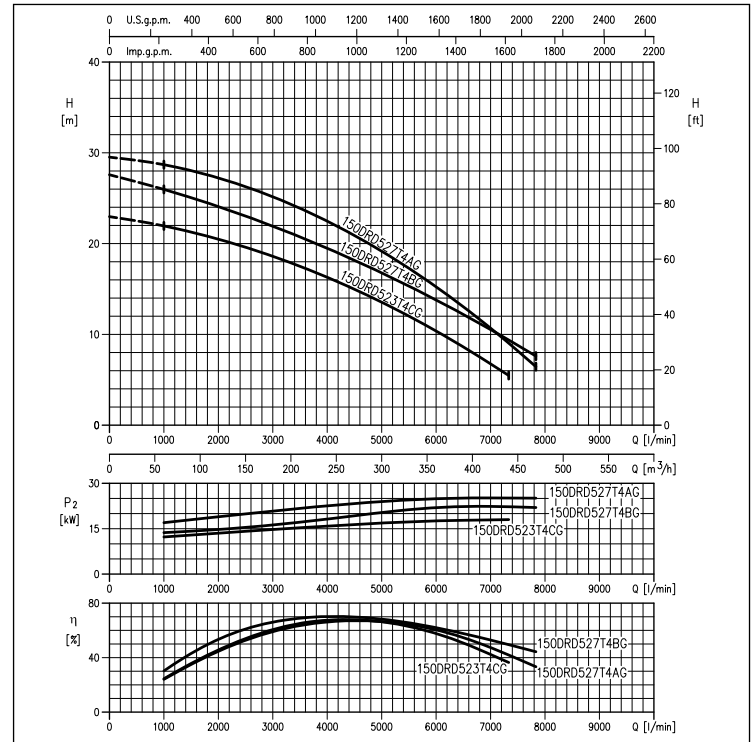
DRD

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

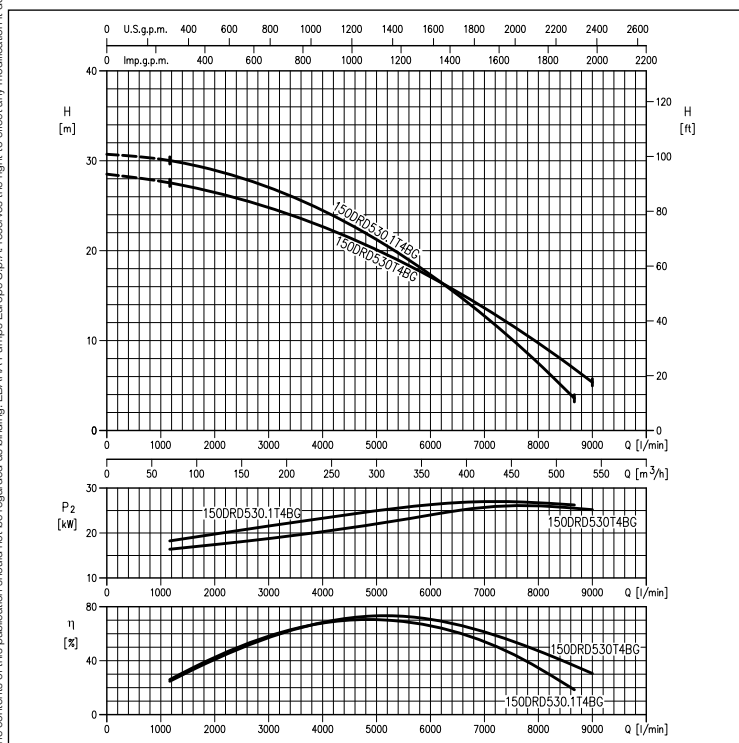
PERFORMANCE CURVES (per ISO 9906 Annex A)
150DRD56T6CG (6.0 kW) - 150DRD58T6BG (8.0 kW)
150DRD512T6AG (12 kW) - 150DRD514T6BG (14 kW)



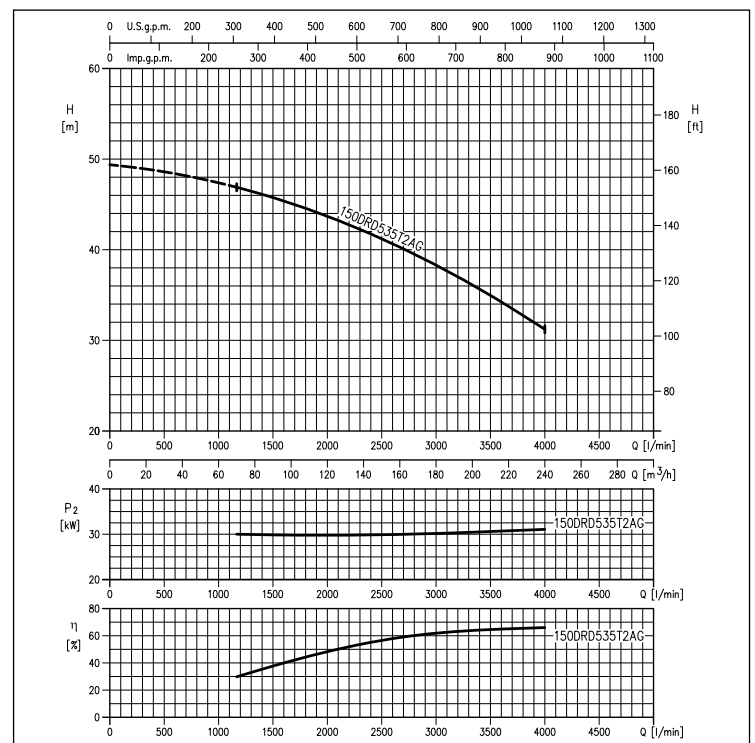
PERFORMANCE CURVES (per ISO 9906 Annex A)
150DRD523T4CG (23 kW) - 150DRD527T4BG (27 kW)
150DRD527T4AG (27 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
150DRD530T4BG (30 kW)
150DRD530.1T4BG (30.1 kW)



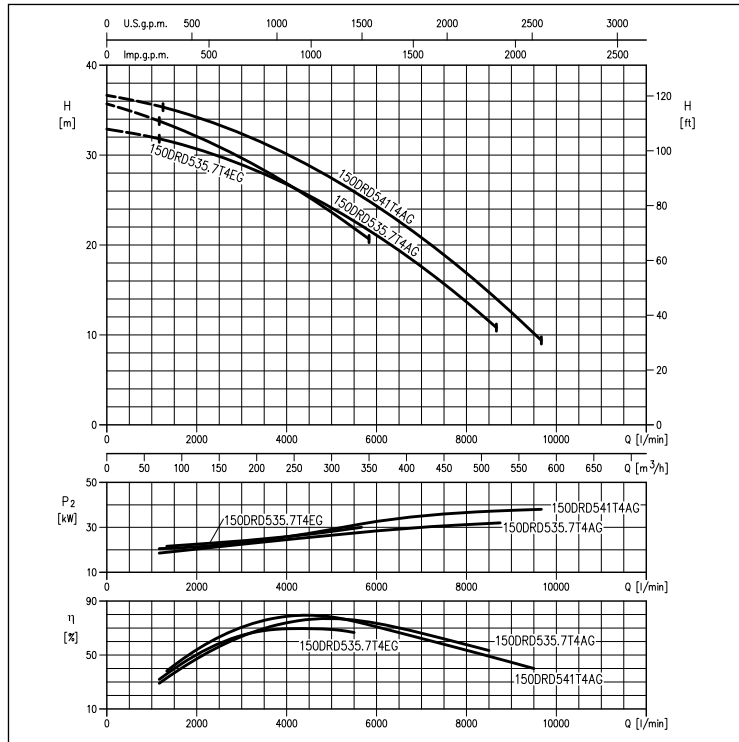
PERFORMANCE CURVES (per ISO 9906 Annex A)
150DRD535T2AG (35 kW)



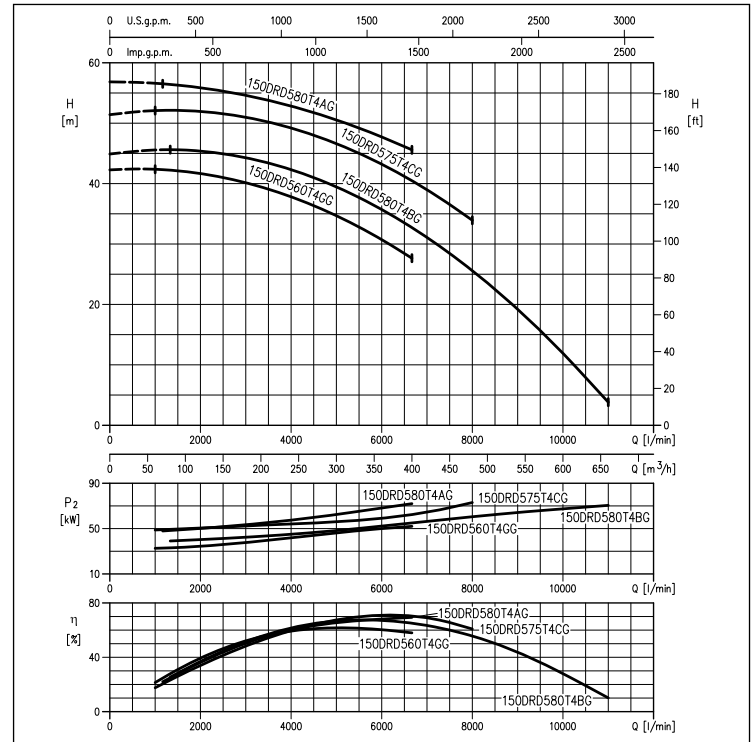
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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

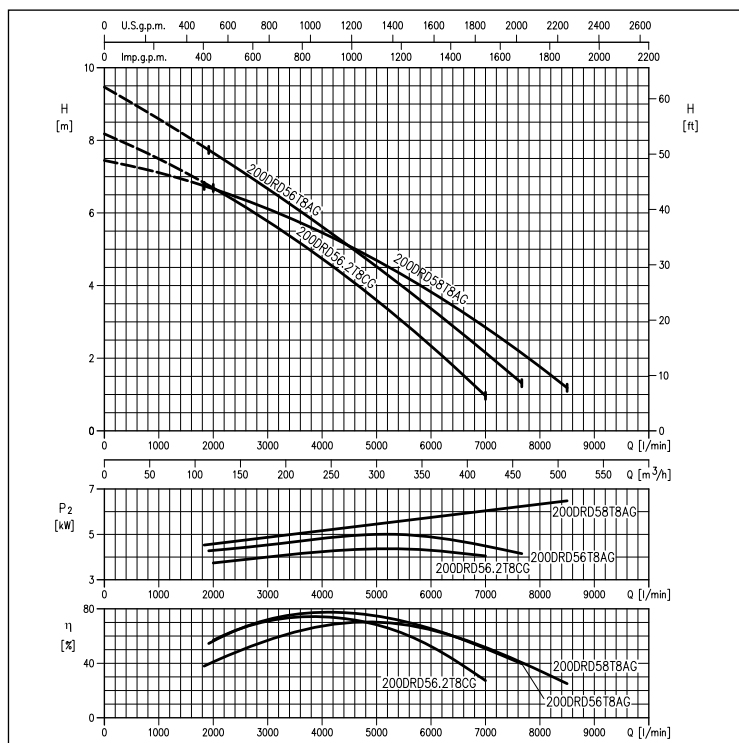
PERFORMANCE CURVES (per ISO 9906 Annex A)
150DRD535.7T4EG (35.7 kW) - 150DRD535.7T4AG (35.7 kW)
150DRD541T4AG (41 kW)



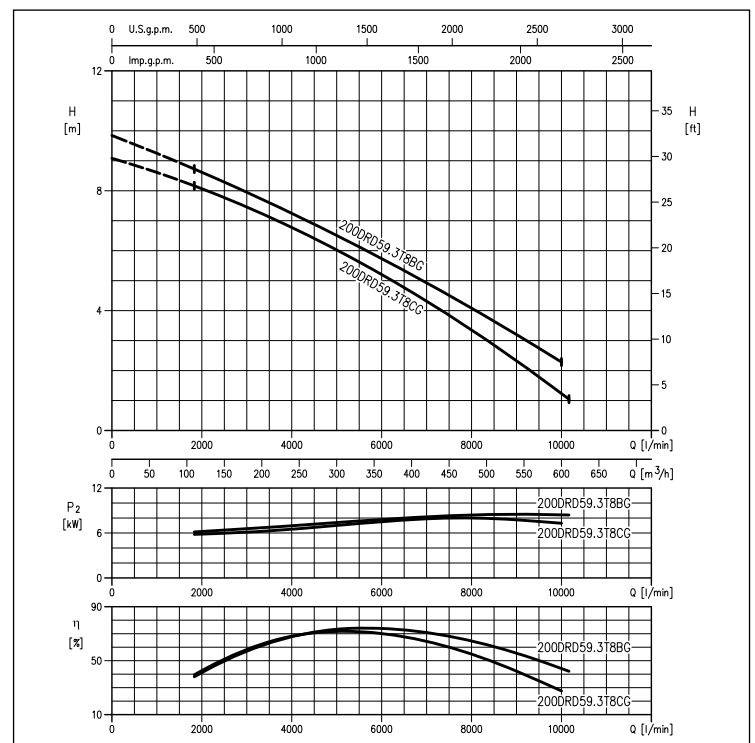
PERFORMANCE CURVES (per ISO 9906 Annex A)
150DRD560T4GG (60 kW) - 150DRD575T4CG (75 kW)
150DRD580T4BG (80 kW) - 150DRD580T4AG (80 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
200DRD56T8AG (6.0 kW) - 200DRD56.2T8CG (6.2 kW)
200DRD58T8AG (8.0 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
200DRD59.3T8CG (9.3 kW)
200DRD59.3T8BG (9.3 kW)



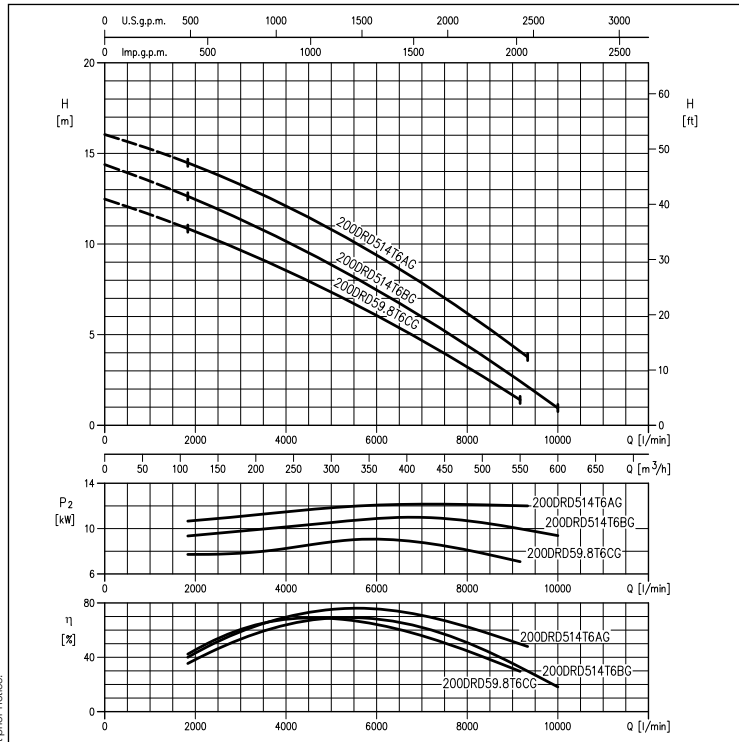
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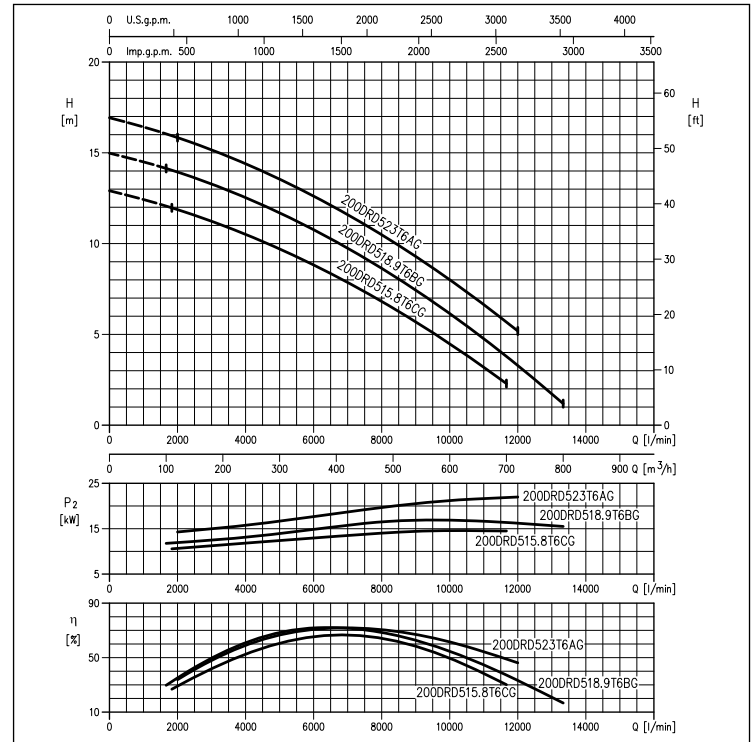
DRD

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

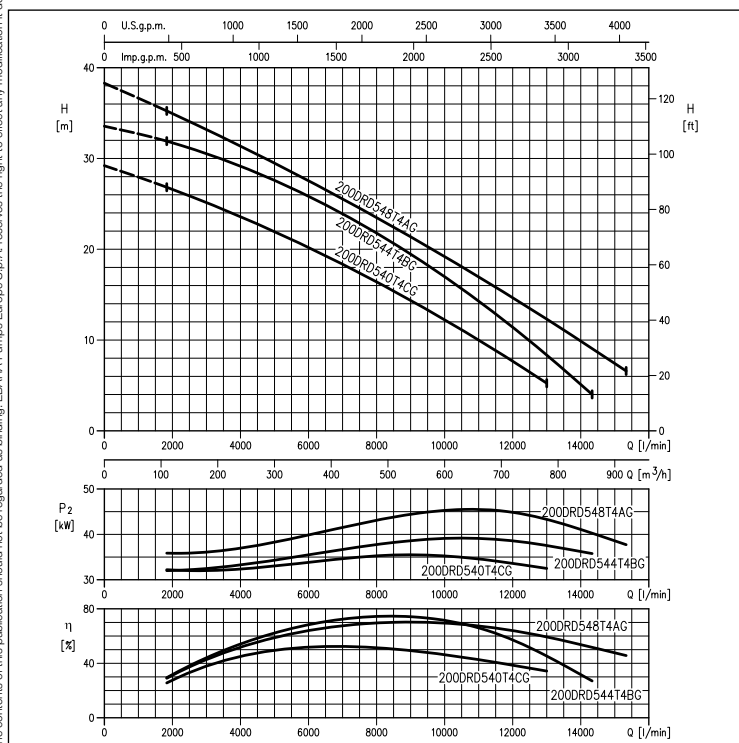
PERFORMANCE CURVES (per ISO 9906 Annex A)
200DRD59.8T6CG (9.8 kW) - 200DRD514T6BG (14 kW)
200DRD514T6AG (14 kW)



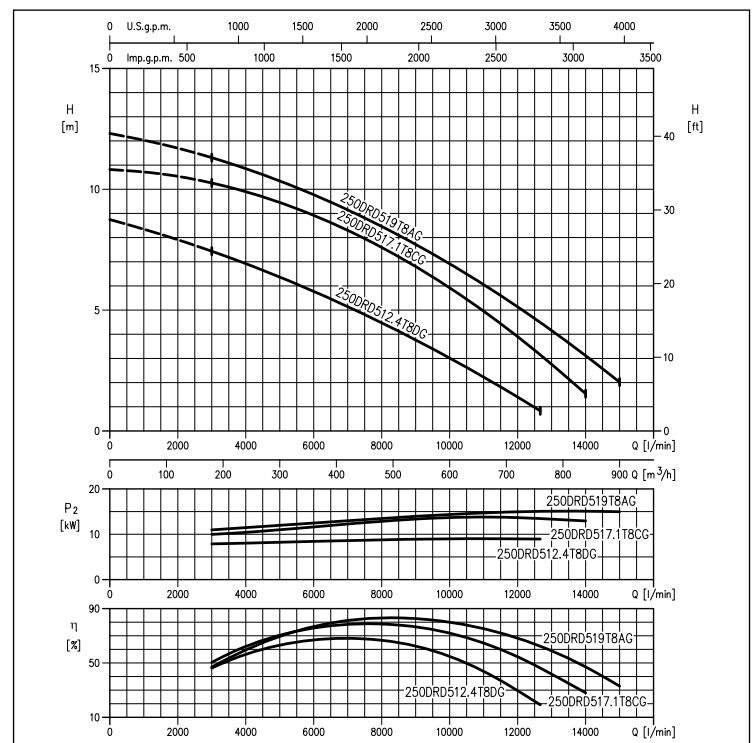
PERFORMANCE CURVES (per ISO 9906 Annex A)
200DRD515.8T6CG (15.8 kW) - 200DRD518.9T6BG (18.9 kW)
200DRD523T6AG (23 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
200DRD540T4CG (40 kW) - 200DRD544T4BG (44 kW)
200DRD548T4AG (48 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
250DRD512.4T8DG (12.4 kW) - 250DRD517.1T8CG (17.1 kW)
250DRD519T8AG (19 kW)



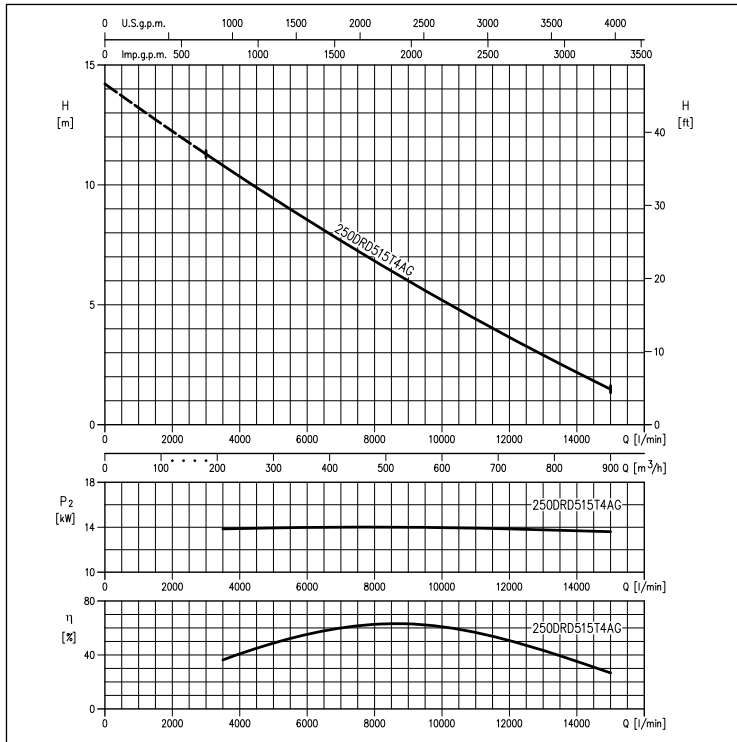
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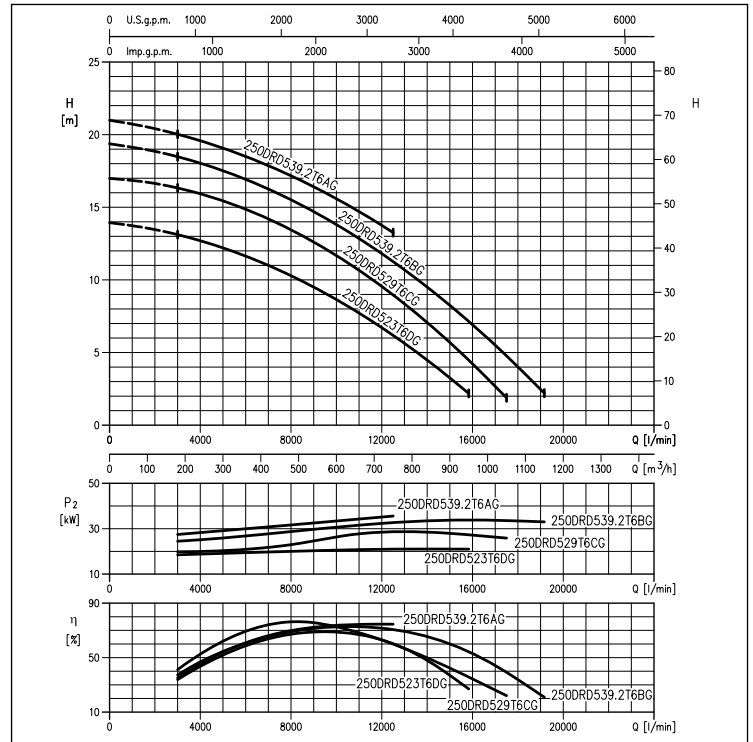
DRD

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

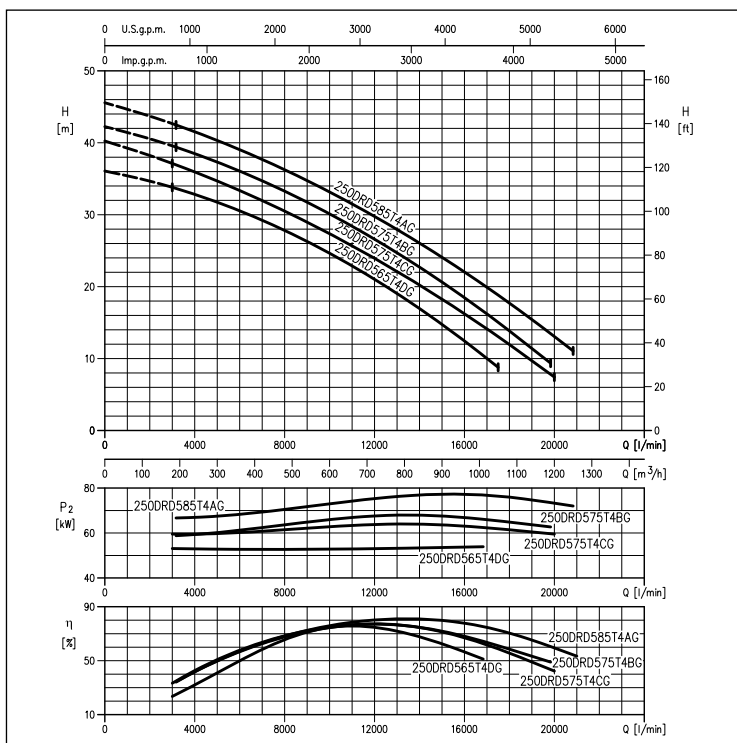
PERFORMANCE CURVES (per ISO 9906 Annex A)
250DRD515T4AG (15 kW)



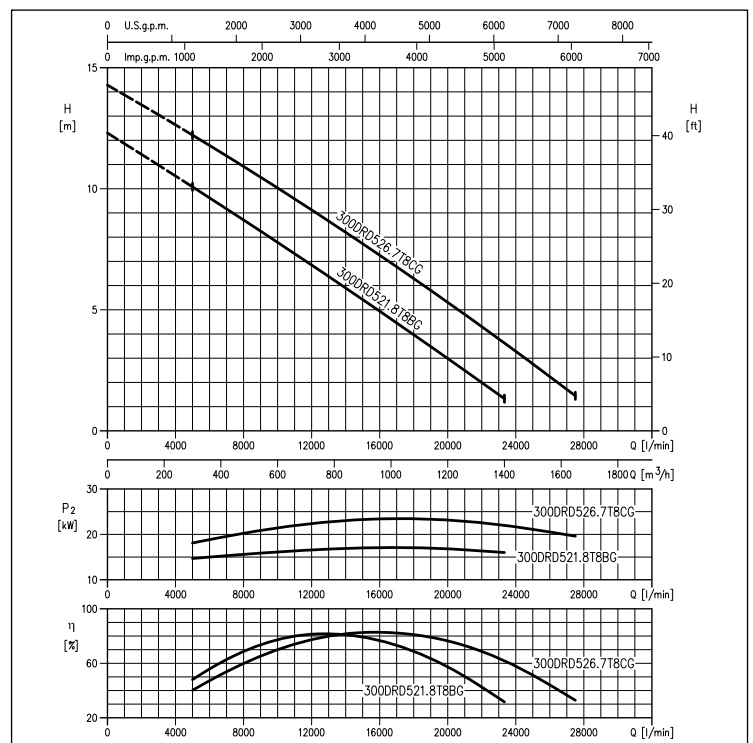
PERFORMANCE CURVES (per ISO 9906 Annex A)
250DRD523T6DG (23 kW) - 250DRD529T6CG (29 kW)
250DRD539.2T6BG (39.2 kW) - 250DRD539.2T6AG (39.2 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
250DRD565T4DG (65 kW) - 250DRD575T4CG (75 kW)
250DRD575T4BG (75 kW) - 250DRD585T4AG (85 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
300DRD521.8T8BG (21.8 kW)
300DRD526.7T8CG (6.7 kW)

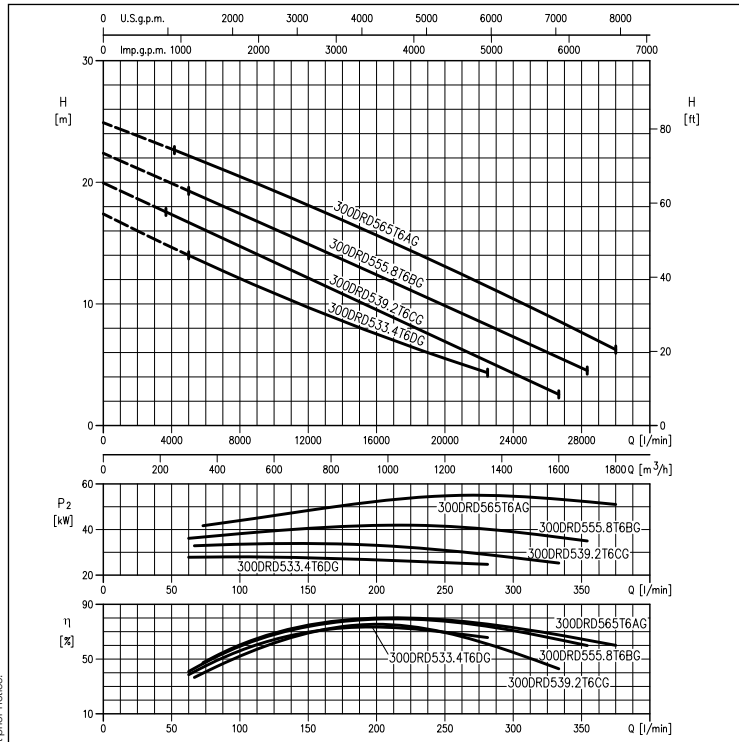




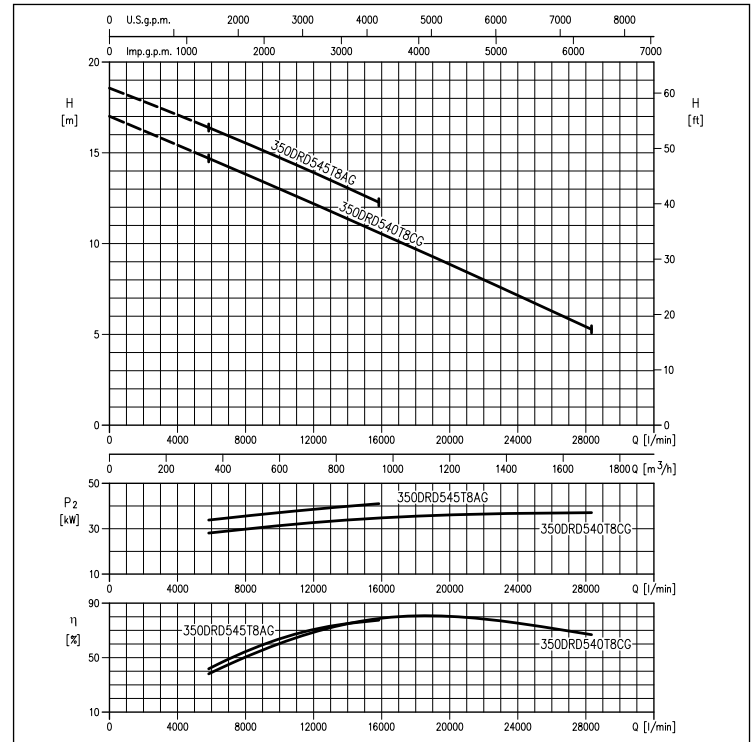
DRD

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

PERFORMANCE CURVES (per ISO 9906 Annex A)
300DRD533.4T6DG (33.4 kW) - 300DRD539.2T6CG (39.2 kW)
300DRD555.8T6BG (55.8 kW) - 300DRD565T6AG (65 kW)



PERFORMANCE CURVES (per ISO 9906 Annex A)
350DRD540T8CG (40 kW)
350DRD545T8AG (45 kW)



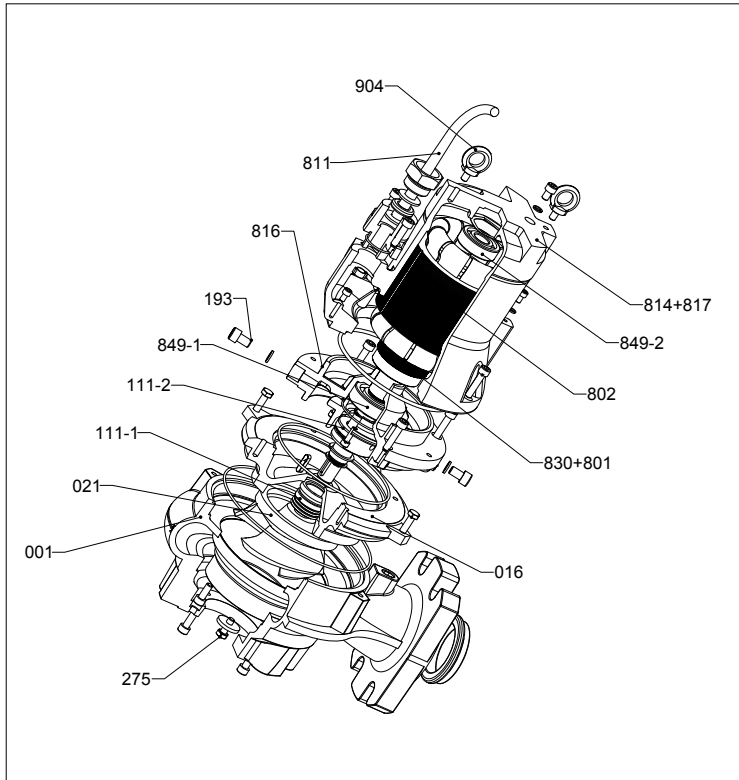
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DRD

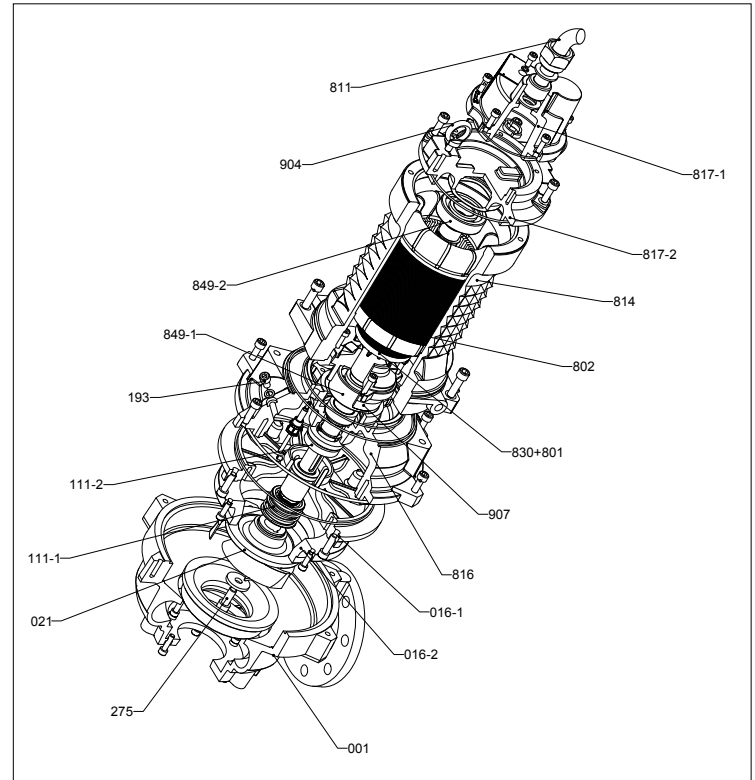
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL)

in cast iron

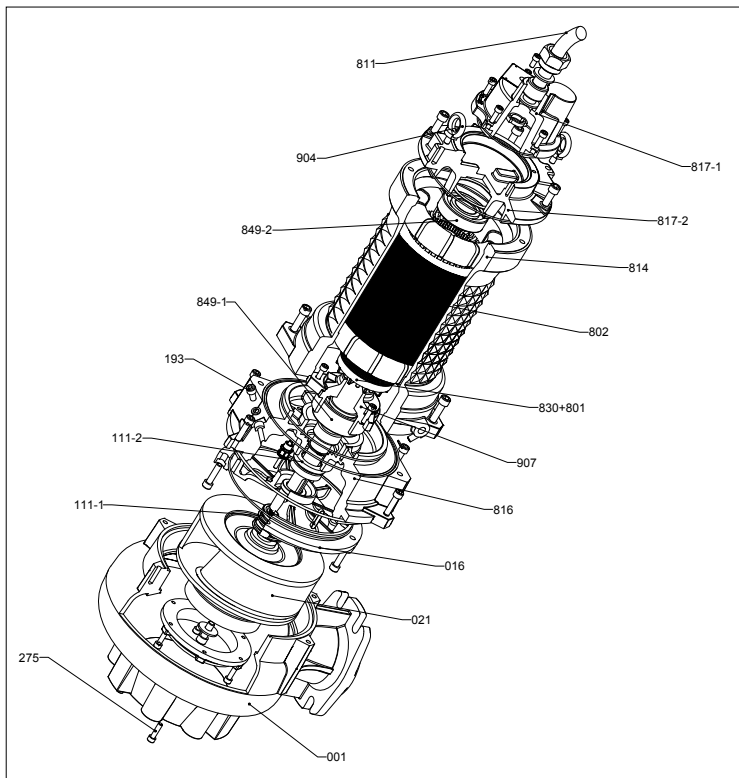
SECTIONAL VIEW 65 DRD (3.1 - 3.6 kW)



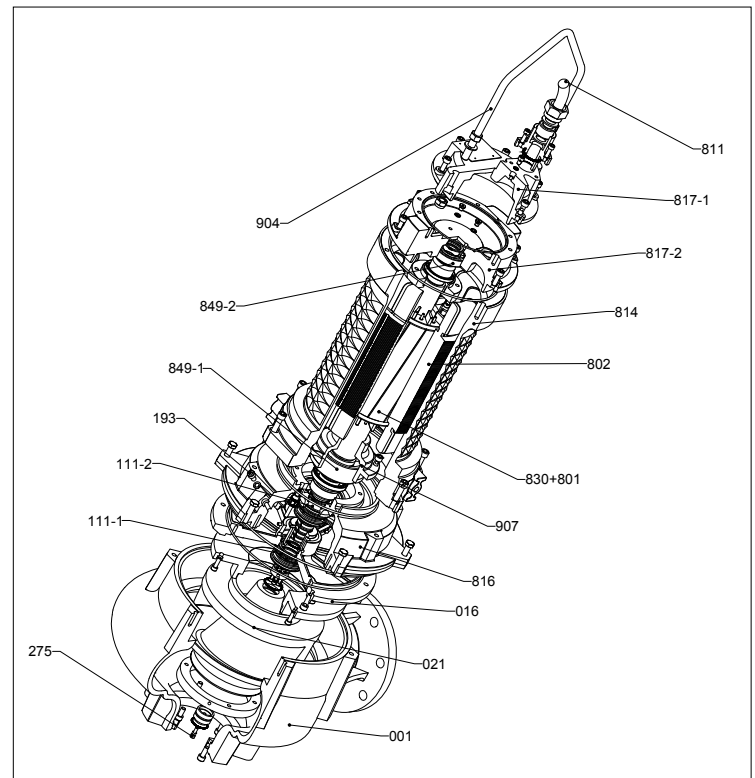
SECTIONAL VIEW 80 DRD (5.0 - 7.5 kW)



SECTIONAL VIEW 100 DRD (2.7 - 20.0 kW)



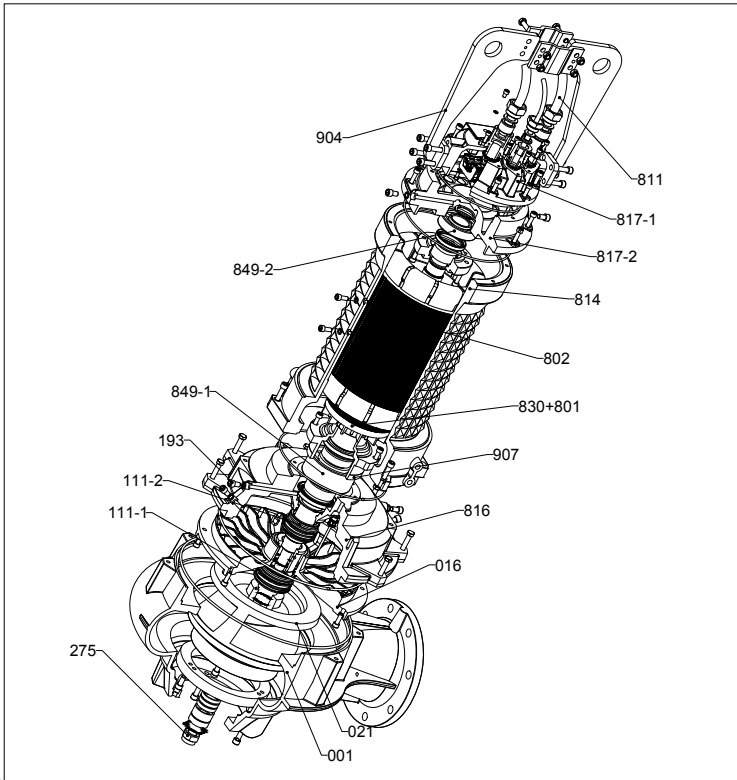
SECTIONAL VIEW 150 DRD (6.0 - 80.0 kW)



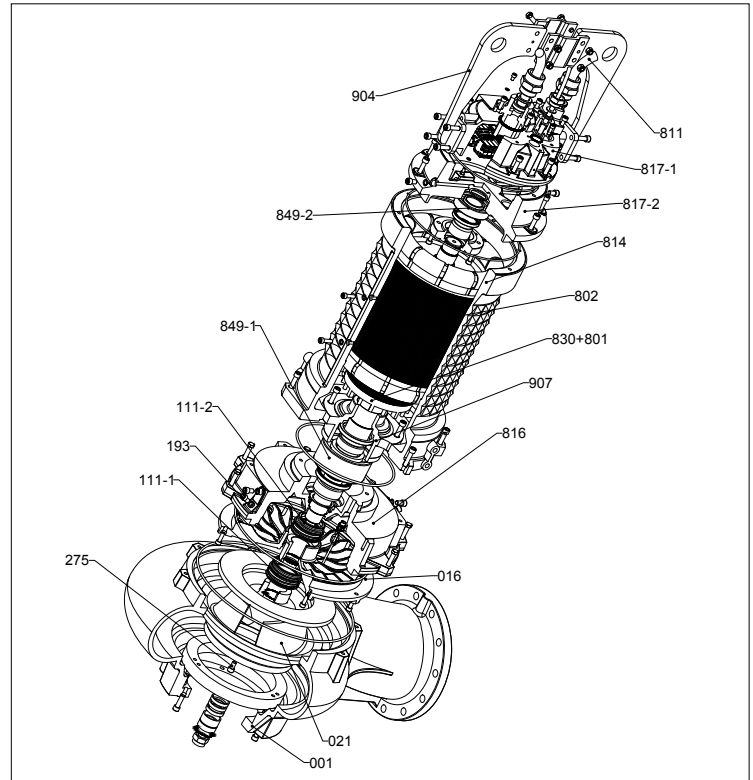
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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

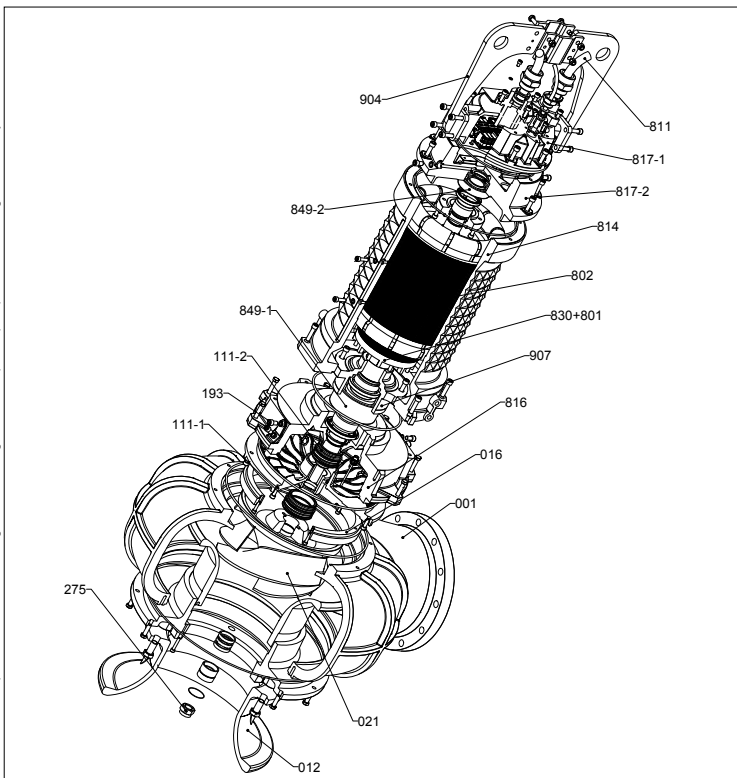
SECTIONAL VIEW 200 DRD (6.0 - 48.0 kW)



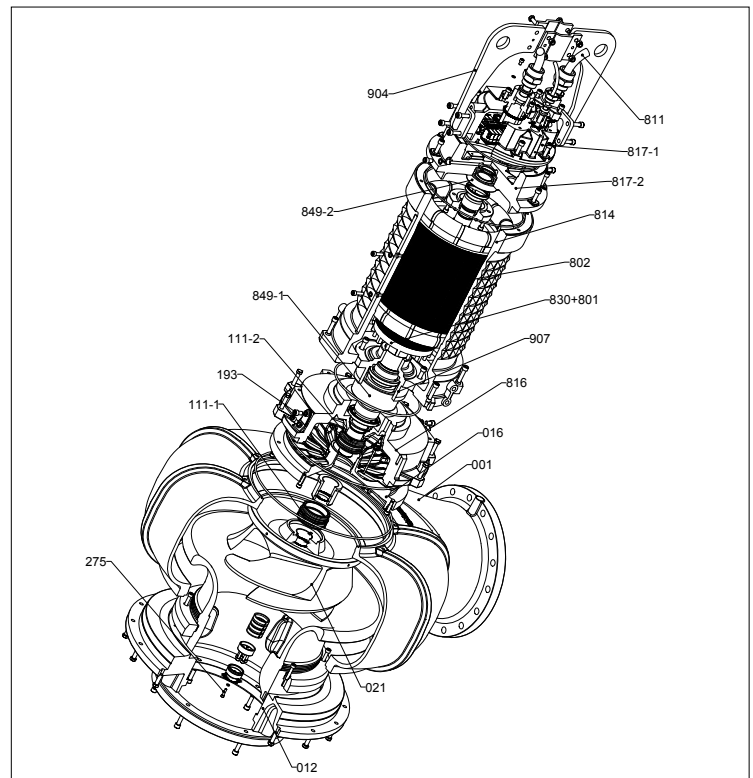
SECTIONAL VIEW 250 DRD (12.4 - 85.0 kW)



SECTIONAL VIEW 300 DRD (21.8 - 65.0 kW)



SECTIONAL VIEW 350 DRD (40.0 - 45.0 kW)



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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

TABLE OF MATERIALS DRD

Ref.	Name	Material	Ref.	Name	Material
001	Pump body	Cast iron EN-GHJL-250	811	Cable	-
012	Suction side cover	Cast iron EN-GHJL-250	814	Motor casing	Cast iron EN-GHJL-250
016	Mechanical seal cover	Cast iron EN-GHJL-250	816	Upper mount	Cast iron EN-GHJL-250
021	Impeller	Cast iron EN-GHJL-250+Ni	817	Lower bearing	Cast iron EN-GHJL-250
111	Mechanical seal	-	817-1	Lower mount [1]	Cast iron EN-GHJL-250
111-1	Mechanical seal	-	817-2	Lower mount [1]	Cast iron EN-GHJL-250
111-2	Mechanical seal	-	830	Shaft	AISI 420B
193	Oil cap	NBR/stainless steel	849-1	Ball bearing	-
275	Impeller nut	AISI304 class A2	849-2	Ball bearing	-
801	Rotor	-	904	Lifting hook [2]	Steel
802	Stator	-	907	Bearing cover	Cast iron EN-GHJL-250

ELECTRICAL DATA TABLE DRD (3.1 - 14.0 kW)

[P ₂]	[kW]	3.1	3.6	5.0	6.0	7.5	2.7	2.8	4.6	4.6	7.1	7.5	10.0	10.0	12.0	14.9	16.6	18.2	20.0	6.0	8.0	12.0	14.0		
Resistance at 20°C	[Ω]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
GD ²	[kg/m ²]	0.0066	0.0055	0.0117	0.0118	0.0222	0.1050	0.1050	0.0719	0.0210	0.1183	0.0390	0.1168	0.0390	0.0230	0.0556	0.0430	0.0655	0.0664	0.2600	0.3220	0.5034	0.5602		
Voltage	[V]	400	400	400/690	400/690	400/690	400	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690		
Full load	0%	Current	[A]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Power	[W]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Efficiency	[%]	87	87	89	89	90	86	86	89	84	90	90	91	91	91	92	92	92	92	88	89	90	91
	75%	Power factor	[%]	0.86	0.84	0.84	0.84	0.84	0.72	0.72	0.74	0.82	0.76	0.76	0.76	0.76	0.82	0.82	0.82	0.82	0.82	0.73	0.75	0.79	0.79
		rpm	[min ⁻¹]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Current	[A]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	100%	Efficiency	[%]	88	89	90	90	91	87	87	90	86	91	91	91	92	92	92	92	93	93	88	90	91	92
		Power factor	[%]	0.88	0.88	0.88	0.88	0.88	0.77	0.77	0.80	0.87	0.93	0.93	0.83	0.83	0.87	0.87	0.87	0.87	0.87	0.81	0.81	0.83	0.84
		rpm	[min ⁻¹]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Torque with rotor locked	[%]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Starting current	[A]	34.2	38.9	53.7	64.3	79.6	33.6	34.8	46.5	46.5	79.6	84.4	112.1	112.1	128.0	158.1	175.8	192.3	211.2	70.8	93.2	135.1	154.6	
	Poles		2				6				4				2				6						
Phase		3																							
Starts per hour		15																							
Model		M209F-3.1-400/50Nn-IE3	M209F-3.6-400/50Nn-IE3	M210T-5-400/50YY-IE3	M210T-6-400/50YY-IE3	M211T-7.5-400/50YY-IE3	M609-2.7-400/50NN-IE3	M610T-2.8-400/50YY-IE3	M610T-4.6-400/50YY-IE3	M610T-4.6-400/50YY-IE3	M411T-7.1-400/50YY-IE3	M411T-7.5-400/50YY-IE3	M413T-10-400/50YY-IE3	M213T-12-400/50YY-IE3	M213T-14.9-400/50YY-IE3	M213T-16.6-400/50YY-IE3	M213T-18.2-400/50YY-IE3	M216T-20-400/50YY-IE3	M611T-6-400/50YY-IE3	M613T-8-400-50YY-IE3	M616T-12-400/50YY-IE3	M616T-14-400/50YY-IE3			
Type of pump		65DRD53.1T2CG	65DRD53.6T2BG	80DRD55T2BG	80DRD56T2AG	40DRS51.5M2BG	100DRD52.7T6AG	40DRS51.1T2CG	100DRD54.6T4CG	100DRD54.6T4BG	100DRD57.1T4BG	100DRD57.5T4FG	100DRD510T4AG	100DRD510T4FG	100DRD512T2DG	100DRD514.9T2CG	100DRD516.6T2BG	100DRD518.2T2AG	100DRD520T2AG	150DRD56T6CG	150DRD58T6BG	150DRD512T6AG	150DRD514T6BG		

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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

ELECTRICAL DATA TABLE DRD (14.0 - 85.0 kW)

[P ₂]		[kW]	23.0	27.0	27.0	30.0	30.0	35.7	35.7	41.0	35.0	40.2	52.0	60.0	75.0	80.0	80.0	6.0	9.3*	15.8	18.9	23.0	6.2	8.0	9.8	14.0	14.0			
Resistance at 20°C		[Ω]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
GD ²		[kg/m ²]	0.3364	0.1600	0.4546	0.5657	0.6358	0.6972	0.7525	0.3900	0.2799	0.1800	0.4930	1.7423	1.9338	1.9797	2.0255	0.1090	0.1540	0.8259	0.8868	1.1274	0.1090	0.1540	0.1090	0.6802	0.7721			
Voltage		[V]	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690			
Full load	0%	Current	[A]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
		Power	[W]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	75%	Current	[A]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Efficiency	[%]	93	93	93	94	94	94	94	94	93	94	94	95	95	95	95	82	89	91	92	92	82	84	90	91	91		
		Power factor	[%]	0.80	0.80	0.80	0.84	0.84	0.83	0.83	0.83	0.82	0.82	0.83	0.86	0.86	0.86	0.86	0.70	0.72	0.79	0.81	0.84	0.70	0.72	0.75	0.79	0.79		
		rpm	[min ⁻¹]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	100%	Current	[A]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Efficiency	[%]	94	94	94	94	94	94	94	94	94	94	95	95	95	95	95	84	89	92	92	93	84	89	90	92	92		
		Power factor	[%]	0.84	0.84	0.84	0.85	0.85	0.86	0.86	0.86	0.87	0.87	0.88	0.90	0.90	0.90	0.90	0.74	0.76	0.84	0.85	0.88	0.74	0.76	0.81	0.84	0.84		
		rpm	[min ⁻¹]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Torque with rotor locked		[%]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Starting current		[A]	249.0	292.6	292.6	320.4	320.4	375.2	375.2	431.3	364.6	418.9	531.6	597.7	745.2	795.3	795.3	75.1	101.0	174.6	205.3	239.5	77.8	87.2	113.9	154.6	154.6		
Poles			4				2				4				8				6				8				6			
Phase			3																											
Starts per hour			15																											
Model			M416T-23-400/50YY-IE3	M416T-27-400/50YY-IE3	M418T-30-400/50YY-IE3	M418T-35.7-400/50YY-IE3	M418T-41-400/50YY-IE3	M218T-35-400/50YY-IE3	M218T-40.2-400/50YY-IE3	M218T-52-400/50YY-IE3	M420T-60-400/50YY-IE3	M425T-75-400/50YY-IE3	M425T-80-400/50YY-IE3	M816T-6-400/50YY-IE	M816T-9.3-400/50YY-IE	M816T-15.8-400/50YY-IE	M816T-18.9-400/50YY-IE	M816T-23-400/50YY-IE	M813T-6.2-400/50YY-IE	M813T-6.2-400/50YY-IE	M813T-6.2-400/50YY-IE	M813T-6.2-400/50YY-IE	M616T-14-400/50YY-IE3	M616T-14-400/50YY-IE3	M616T-14-400/50YY-IE3	M616T-14-400/50YY-IE3	M616T-14-400/50YY-IE3			
Type of pump			150DRD523T4CG	150DRD527T4BG	150DRD527T4AG	150DRD530T4BG	150DRD530.1T4BG	150DRD535.7T4EG	150DRD535.7T4AG	150DRD541T4AG	150DRD535T2AG	150DRD540.2T2BG	150DRD552T2CG	150DRD560T4GG	150DRD575T4CG	150DRD580T4BG	150DRD580T4AG	200DRD56T8AG	200DRD59.3T8CG	200DRD59.3T8BG	200DRD515.8T6CG	200DRD518.9T6BG	200DRD523T6AG	200DRD56.2T8CG	200DRD58T8AG	200DRD59.8T6CG	200DRD514T6BG	200DRD514T6AG		

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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (MULTI CHANNEL) in cast iron

ELECTRICAL DATA TABLE DRD (14.0 - 85.0 kW)

[P ₂]	[kW]	40.0	44.0	48.0	12.4	17.1	23.0	19.0	29.0	15.0	39.2	39.2	65.0	75.0	75.0	85.0	21.8	26.7	33.4	39.2	55.8	65.0	40.0	45.0		
Resistance at 20°C	[Ω]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
GD ²	[kg/m ²]	0.8331	0.9750	0.9994	0.3450	0.5770	1.0678	0.5770	1.3011	0.0980	2.0871	2.1452	1.8865	2.0663	2.0250	2.1029	1.4606	1.5040	1.2610	1.9286	2.9559	2.9720	2.1200	2.4300		
Voltage	[V]	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	400/690	
Full load	0%	Current	[A]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Power	[W]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	75%	Current	[A]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Efficiency	[%]	94	94	94	89	89	92	89	93	92	93	95	95	95	95	93	89	93	93	94	94	91	91	
		Power factor	[%]	0.83	0.83	0.83	0.72	0.75	0.84	0.75	0.82	0.79	0.80	0.80	0.86	0.86	0.86	0.86	0.80	0.76	0.82	0.80	0.82	0.82	0.76	0.76
		rpm	[min ⁻¹]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	100%	Current	[A]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Efficiency	[%]	94	95	95	89	89	93	89	93	93	94	95	95	95	95	94	90	93	94	95	95	91	92	
		Power factor	[%]	0.86	0.86	0.86	0.76	0.79	0.88	0.79	0.85	0.84	0.85	0.85	0.90	0.90	0.90	0.90	0.85	0.80	0.85	0.85	0.86	0.86	0.80	0.80
	rpm	[min ⁻¹]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Torque with rotor locked	[%]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Starting current	[A]	420.7	460.8	502.7	143.1	186.0	239.5	206.7	311.5	164	418.9	418.9	647.2	745.2	745.2	844.9	240.4	294.2	358.7	418.9	584.1	680.3	404.4	485.6	
Poles		4			8		6	8	6	4	6		4			8		6			8					
Phase																										
Starts per hour																										
Model		M420T-40-400/50YY-E3	M420T-44-400/50YY-E3	M420T-48-400/50YY-E3	M816T-12.4-400/50YY-E	M816T-17.1-400/50YY-E	M816T-23-400/50YY-E	M818T-19-400/50YY-E	M818T-19-400/50YY-E	M416T-15-400/50YY-E3	M620T-39.2-400/50YY-E3		M425T-65-400/50YY-E3	M425T-75-400/50YY-E3		M425T-85-400/50YY-E3	M620T-21.8-400/50YY-E3	M620T-26.7-400/50YY-E3	M620T-33.4-400/50YY-E3	M620T-39.2-400/50YY-E3	M626T-55.8-400/50YY-E3	M626T-65-400/50YY-E3	M825T-40-400/50YY-E	M825T-45-400/50YY-E		
Type of pump		200DRD540T4CG	200DRD544T4BG	200DRD548T4AG	250DRD512.4T8DG	250DRD517.1T8CG	250DRD523T6DG	250DRD519T8AG	250DRD529T6CG	250DRD515T4AG	250DRD539.2T6BG	250DRD539.2T6AG	250DRD565T4DG	250DRD575T4CG	250DRD575T4BG	250DRD585T4AG	300DRD521.8T8BG	300DRD526.7T8CG	300DRD533.4T6DG	300DRD539.2T6CG	300DRD555.8T6BG	300DRD565T6AG	350DRD540T8CG	350DRD545T8AG		

EBAMIX

SUBMERSIBLE MIXERS



Submersible mixers for mixing, homogenising and agitating heavy sludge and fluids loaded with solid particles, and for removing bottom deposit.

TECHNICAL DATA

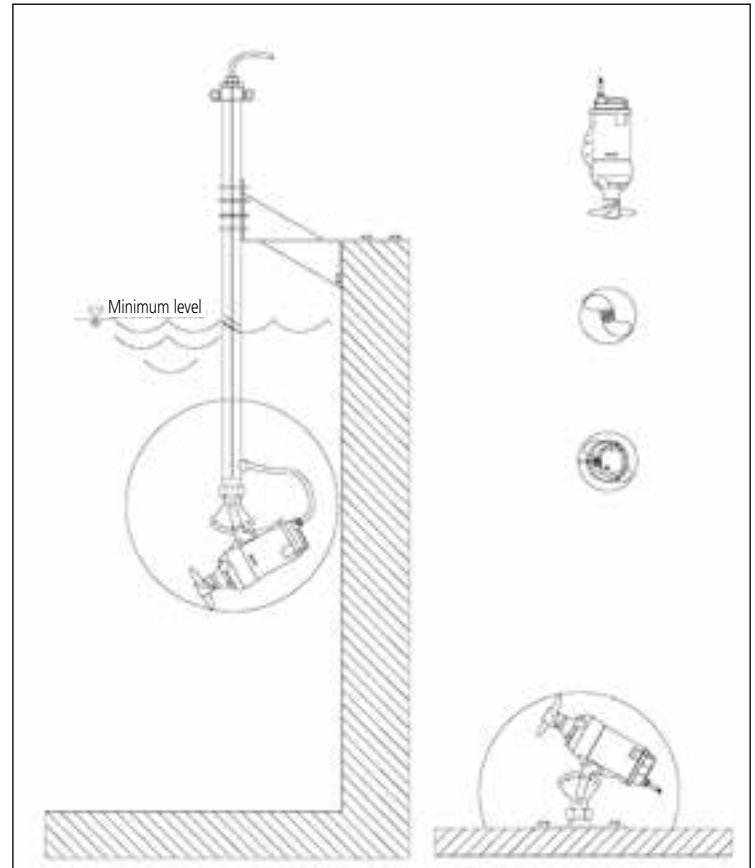
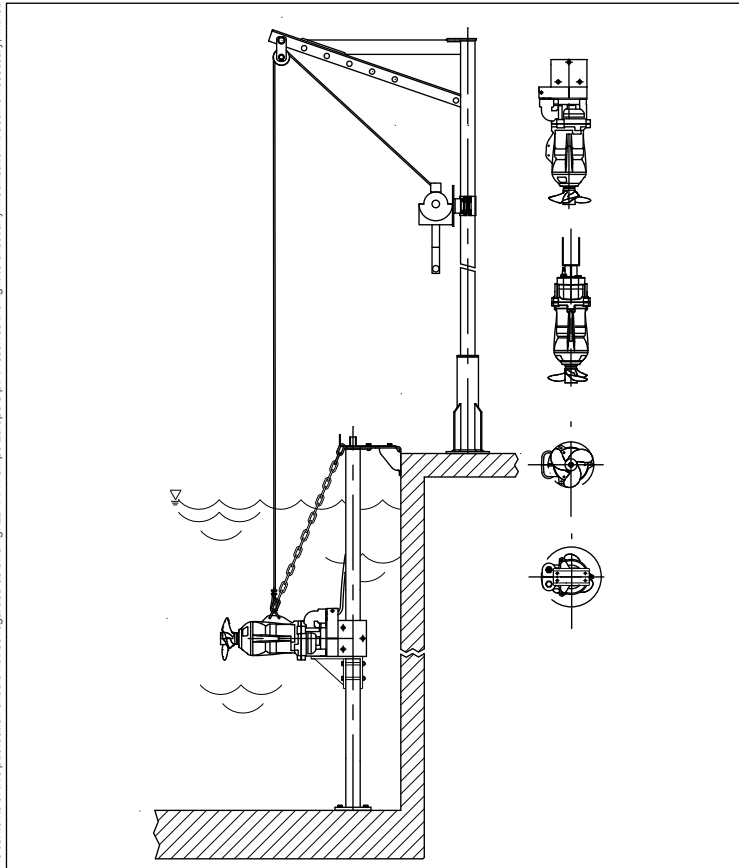
- Maximum fluid temperature: 40°C
- Asynchronous motor
- Insulation class H
- Protection rating IP68
- Three phase voltage 400/690V±10%, 50Hz

MATERIALS

- Pump body available in both cast iron and steel
- Screw in AISI 316
- Shaft in AISI 420
- Mechanical seal: SiC/SiC and SiC/Si/FPM
- Cable: Neoprene H07RN/F

For further information, please contact our sales network.

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BEST BOX

COLLECTION TANK

Garage, Wash basin, Shower



BEST BOX G



BEST ONE VOX



BEST BOX D



BEST ONE

Prefabricated, robust lift stations.

APPLICATIONS

• Best Box G (Garage model)

Lifting rainwater, from wash areas, garage downramps, etc.

• Best Box L (Wash basin model)

Lifting domestic and bathroom water (basin, dishwasher, washing machine)

• Best Box D (Shower model)

Particularly suited to shower water, does not need to be installed underground with the tank inlet located 90 mm from the base and a check device

TECHNICAL FEATURES

- Quick, easy installation
- Robust, compact construction
- Available with/without electric pump

TECHNICAL DATA

Tank

- Model G (Garage): High strength PVC grille
- Model L (Wash basin): cover with overflow vent
- Model D (Shower): cover with overflow vent
- Tank capacity: 30 litres
- Tank weight: 7 kg (BEST BOX L and BEST BOX D), 10 kg (BEST BOX G)

Electric pump (selected models)

- BEST BOX G can be equipped with the BEST ONE VOX (vortex impeller) electric pump, with float switch for automatic operation
- BEST BOX L and BEST BOX D can be equipped with the BEST ONE pump with float switch for automatic operation. BEST BOX L is configured to receive water from above, while BEST BOX D receives water from below
- 5 metre cable + standardised plug
- 2800 rpm
- Single phase voltage: 230V +/- 10%
- Insulation class F
- Protection rating IP68
- Maximum fluid temperature: 50°C
- Maximum solid passage: 10 mm BEST ONE
20 mm BEST ONE VOX

MATERIALS

Tank

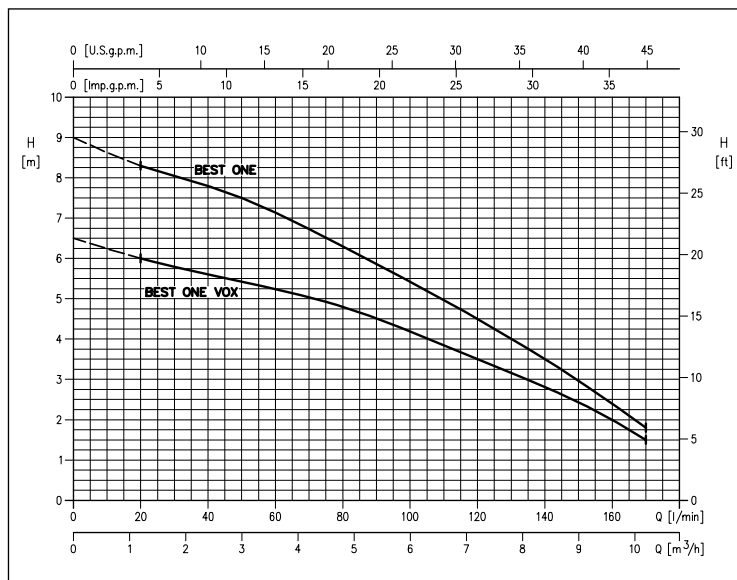
- High density polyethylene

Electric pump (selected models)

- AISI 304 stainless steel construction throughout
- Mechanical seal as standard supply

For the technical data of the BEST ONE/ BEST ONE VOX pumps (see page 5)

PERFORMANCE CURVES (per ISO 9906 Annex A)

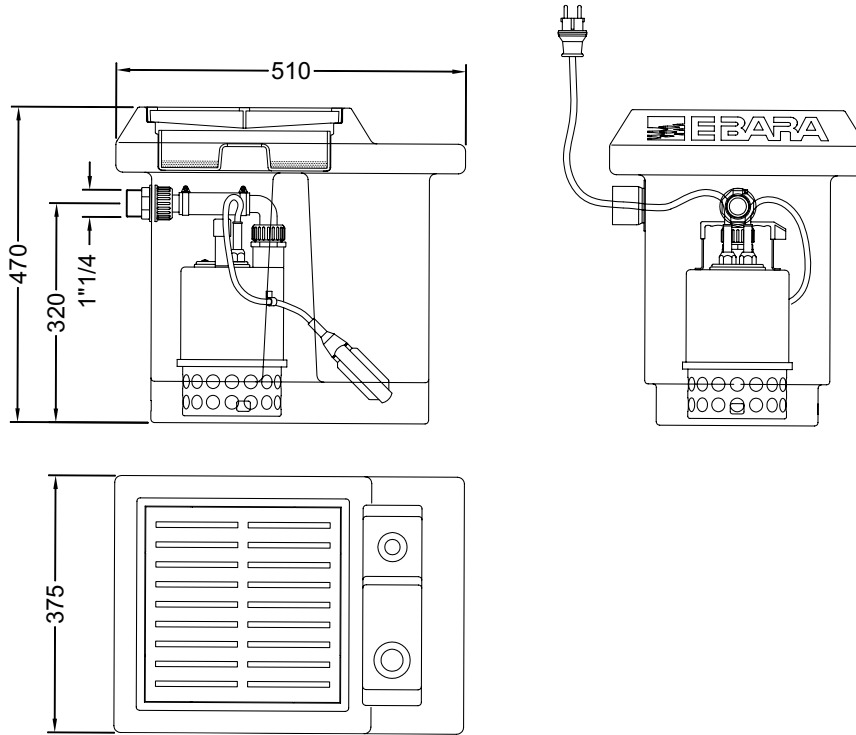


BEST BOX

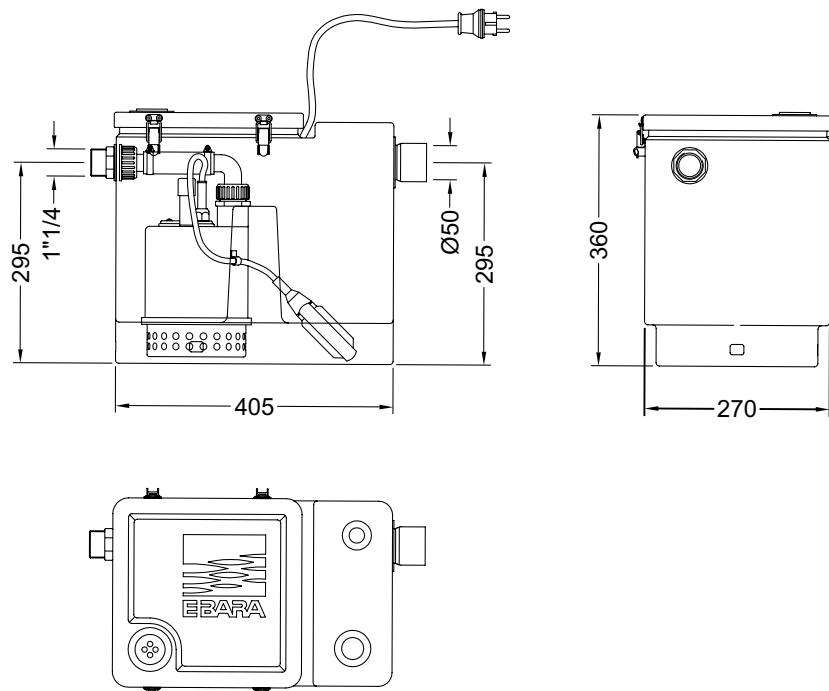
COLLECTION TANK

Garage, Wash basin, Shower

DIMENSIONS BEST BOX G



DIMENSIONS BEST BOX L



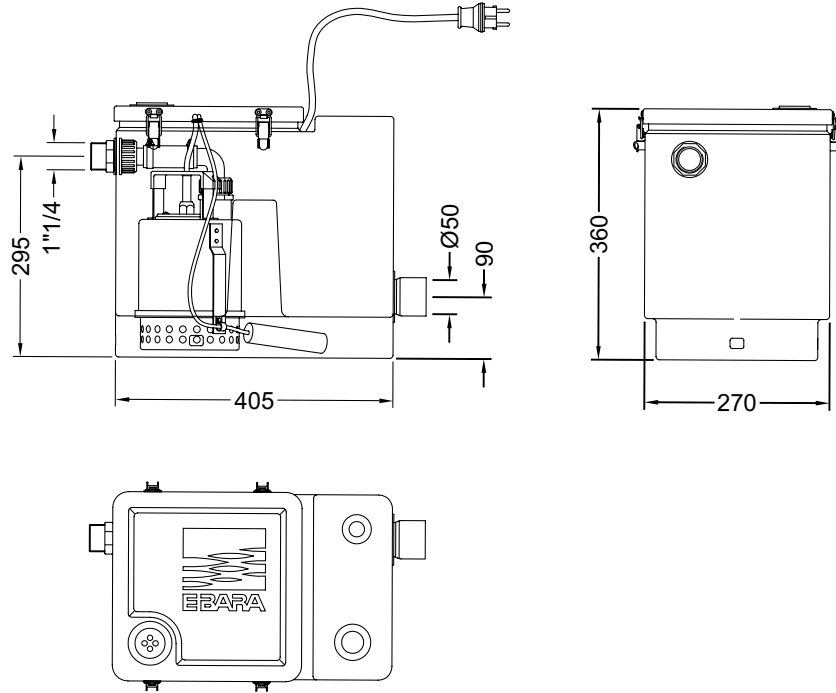
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BEST BOX

COLLECTION TANK

Garage, Wash basin, Shower

DIMENSIONS BEST BOX D

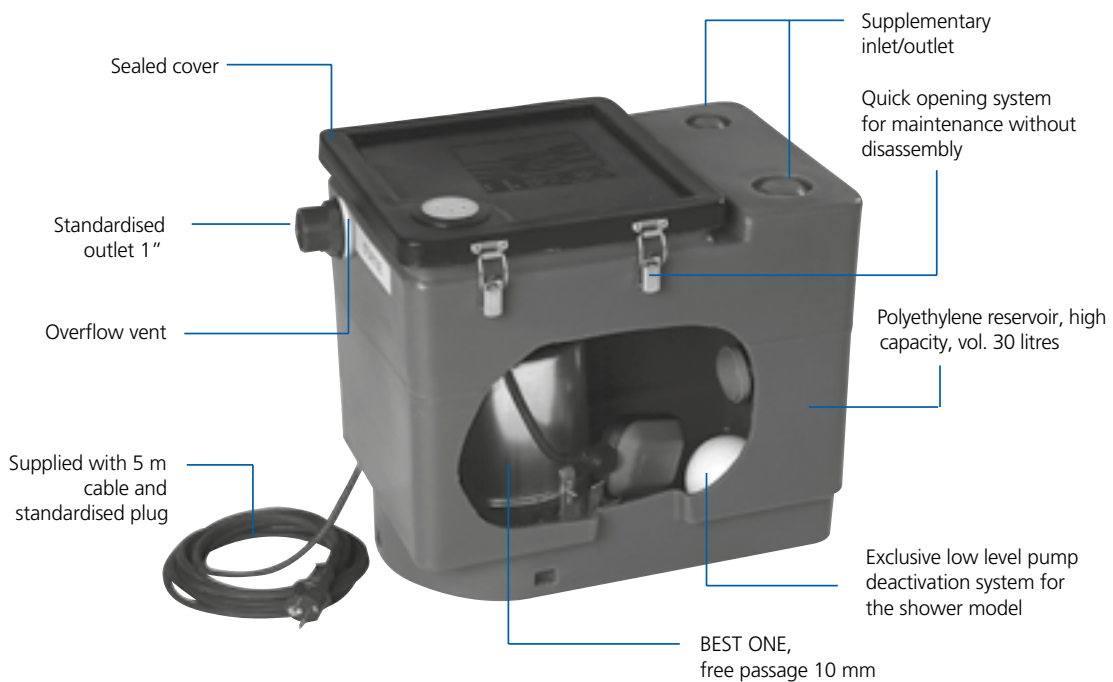


BEST BOX

COLLECTION TANK

Garage, Wash basin, Shower

TECHNICAL SPECIFICATIONS



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D-TANK 100 (E), 200 (E) AND 600 (E)

WASTE WATER COLLECTION TANKS

D-TANK 100



D-TANK 200



D-TANK 600



TECHNICAL FEATURES

- Robust construction
- Easy installation
- Equipped with rapid passage bend (D-TANK 200-600)

TECHNICAL DATA

- Polyethylene tank, 100, 200 and 600 litres, complete with cover with expanded EPDM gasket
- Inlet: DN 110 with gasket
- Outlet: - DN 50 with gasket (D-TANK 100)
- DN 63 with gasket (D-TANK 200 e 600)
- Power supply: - 3 M20 cable glands + 2 closing caps (D-TANK 100)
- 4 M20 cable glands + 3 closing caps (D-TANK 200)
- 6 M20 cable glands + 4 closing caps (D-TANK 600)

VERSIONS AVAILABLE

Basic version

D-TANK 100

100 litre tank with gaskets and cable glands

D-TANK 200 (fig. 1)

200 litre tank (delivery pipe in PVC Ø 2" for 63 mm, 2 collars for float switch cable, vertical outlet with bend)

D-TANK 600 (fig. 1)

600 litre tank (delivery pipe in PVC Ø 2" for 63 mm, 3 collars for float switch cable, vertical outlet with bend)

Version "E"

D-TANK 100E (fig. 1)

100 litre tank (delivery pipe in PVC Ø 1 1/2" for 50 mm, 2 collars for float switch cable, vertical outlet with bend)

D-TANK 200E (fig. 2)

200 litre tank + rapid coupling kit pre-installed with guide tubes (delivery pipe in PVC Ø 2" for 63 mm, 2 collars for float switch cable, vertical outlet with bend, plate on floor for weight up to 40 kg)

D-TANK 600E (fig. 2)

600 litre tank + rapid coupling kit pre-installed with guide tubes (delivery pipe in PVC Ø 2" for 63 mm, 3 collars for float switch cable, vertical outlet with bend, plate on floor for weight up to 40 kg)



Fig. 1

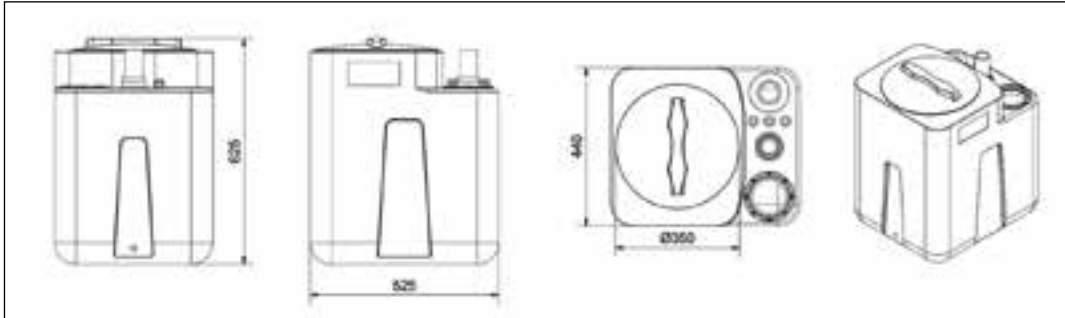


Fig. 2

D-TANK 100 (E), 200 (E) AND 600 (E)

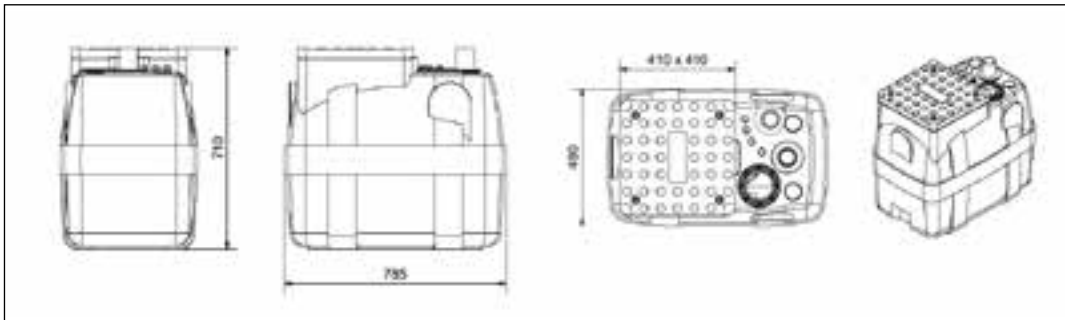
WASTE WATER COLLECTION TANKS

DIMENSIONS D-TANK 100



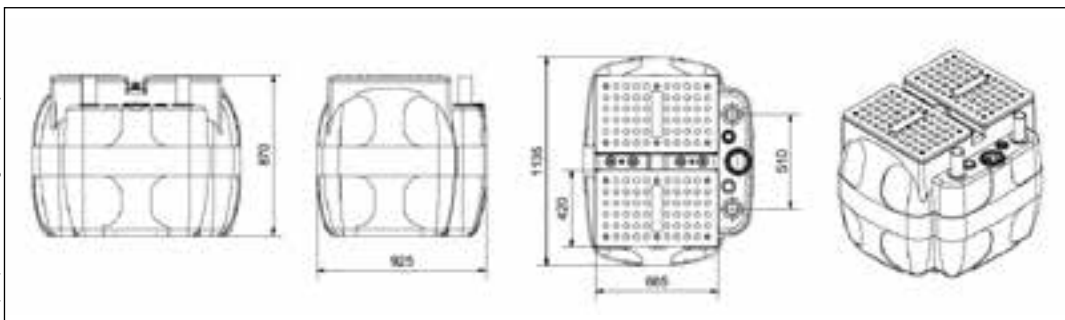
Model	Weight [kg]
D-TANK 100	9.2
D-TANK 100 E	9.5

DIMENSIONS D-TANK 200



Model	Weight [kg]
D-TANK 200	13.0
D-TANK 200 E	23.0

DIMENSIONS D-TANK 600



Model	Weight [kg]
D-TANK 600	33.0
D-TANK 600 E	53.0

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D-TANK 200 (E) AND 600 (E)

WASTE WATER COLLECTION TANKS

ACCESSORIES D-TANK

Model	
Plate D-TANK 600E (max 60 kg)	photo (1)
Flange D-TANK/DRS 2" cast iron (with countersunk holes for flush bolt heads)	photo (2) - (3)
Flange D-TANK/DRS 1"½ cast iron (with countersunk holes for flush bolt heads)	photo (2) - (3)
RID. D-TANK 2" - 1"½ PVC	photo (4)
Tank delivery kit 100 litre	



(1)



(2)-(3)



(4)

QM1 SERIES

ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE



Single phase electromechanical enclosure for an electric pump.
Drainage/Sewer - Surface - Submersible.

TECHNICAL DATA

- Power supply 1~ 50/60Hz 230V ±10%
- Master power switch with door interlock
- Transformer for control circuit power
- Contactor
- Protection rating IP55

INPUTS

- 4 very low voltage inputs for:
 - emergency stop SL/SP STOP (e.g.: float switch to protect against dry running) active in both AUTOMATIC and MANUAL modes
 - functional start/stop SL/SP 1 (e.g.: control float switch)
 - max level alarm SL/SP MAX
 - motor stopped by thermal cutout

COMMANDS AND SIGNALS

- AUTOMATIC-OFF-MANUAL switch
- 3 warning lamps:
 - Power on
 - Pump running
 - Protection device tripped

ALARMS AND PROTECTION DEVICES

- Thermal relay sensitive to phase loss, internal re-arm
- Motor fuses
- Control circuit fuses
- 24V AC alarm output, excited when overload or max level protection trips
- Motor stopped by thermal cutout

CONDITIONS OF SERVICE

- Ambient temperature -5 / +40 °C
- Relative humidity 50% with max temp. 40°C

NOTES

- The power rating is approximate; or a correct selection of the enclosure check that the motor's power draw (amps) is within the enclosure's operating current range
- Thermoplastic housing (P)
- Configured for starting capacitor

ELECTRICAL DATA TABLE

Model	V~50/60Hz	Nominal current [A]	kW	Weight [kg]	Dimensions [mm]		
					A	B	C
ENCLOSURE QMDE10/4A-T-AR -1	1~230	2.8-3.8	0.25	4.5	385	305	160
ENCLOSURE QMDE10/5A-T-AR -1	1~230	3.8-5.2	0.37	4.5	385	305	160
ENCLOSURE QMDE10/7A-T-AR -1	1~230	5.2-6.9	0.55	4.5	385	305	160
ENCLOSURE QMDE10/9A-T-AR -1	1~230	6.9-9.1	0.75	4.5	385	305	160
ENCLOSURE QMDE10/12A-T-AR -1	1~230	9.1-12	1.1	4.5	385	305	160
ENCLOSURE QMDE10/15A-T-AR -1	1~230	12-14.5	1.5	4.5	385	305	160
ENCLOSURE QMDE10/18A-T-AR -1	1~230	14.5-18	2.2	4.5	385	305	160

QT1 SERIES

ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE

Three phase electromechanical enclosure for an electric pump.
Drainage/Sewer - Surface - Submersible.

TECHNICAL DATA

- Power supply 3~ 50/60Hz 400V ±10%
- Master power switch with door interlock
- Transformer for control circuit power
- Contactor
- Protection rating IP55

INPUTS

- 4 very low voltage inputs for:
 - emergency stop SL/SP STOP (e.g.: float switch to protect against dry running) active in both AUTOMATIC and MANUAL modes
 - functional start/stop SL/SP 1 (e.g.: control float switch)
 - max level alarm SL/SP MAX
 - motor stopped by thermal cutout

COMMANDS AND SIGNALS

- AUTOMATIC-OFF-MANUAL switch
- 3 warning lamps:
 - Power on
 - Pump running
 - Protection device tripped

ALARMS AND PROTECTION DEVICES

- Thermal relay sensitive to phase loss, internal re-arm
- Motor fuses
- Control circuit fuses
- 24V AC alarm output, excited when overload or max level protection trips
- Motor stopped by thermal cutout

CONDITIONS OF SERVICE

- Ambient temperature -5 / +40 °C
- Relative humidity 50% with max temp. 40°C

NOTES

- The power rating is approximate; or a correct selection of the enclosure check that the motor's power draw (amps) is within the enclosure's operating current range
- Thermoplastic housing (P)



ELECTRICAL DATA TABLE

Model	V~50/60Hz	Nominal current [A]	kW	Weight [kg]	Dimensions [mm]		
					A	B	C
ENCLOSURE QTDE10/4A-T-AR -1*	3~400	2.8-3.8	1.1	6	385	305	160
ENCLOSURE QTDE10/5A-T AR -1*	3~400	3.8-5.2	1.5	6	385	305	160
ENCLOSURE QTDE10/7A-T-AR -1	3~400	5.2-6.9	2.2	6	385	305	160
ENCLOSURE QTDE10/9A-T-AR -1*	3~400	6.9-9.1	3	6	385	305	160
ENCLOSURE QTDE10/12A-T-AR -1*	3~400	9.1-12	4	6.5	385	305	160
ENCLOSURE QTDE10/15A-T-AR -1*	3~400	12-14.5	5.5	6.5	385	305	160
ENCLOSURE QTDE10/18A-T-AR -1*	3~400	14.5-18	7.5	6.5	385	305	160
ENCLOSURE QTDE10/22A-T-AR -1*	3~400	18-22	9	6.5	385	305	160
ENCLOSURE QTDE10/26A-T-AR -1*	3~400	22-26	11	6.5	385	305	160
ENCLOSURE QTDE10/32A-T-AR -1*	3~400	26-32	13	8	385	305	160

* Direct starting

QM2 SERIES

ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE



Single phase electromechanical enclosure for two electric pumps.
Drainage/Sewer - Surface - Submersible.

TECHNICAL DATA

- Power supply 1~ 50/60Hz 230V $\pm 10\%$
- Master power switch with door interlock
- Transformer for control circuit power
- Contactor for each motor
- Heat exchanger
- Protection rating IP55

INPUTS

- 6 very low voltage inputs for:
 - emergency stop SL/SP STOP (e.g.: float switch to protect against dry running) active in both AUTOMATIC and MANUAL modes
 - functional start/stop SL/SP 1 and 2 (e.g.: control float switch)
 - max level alarm SL/SP MAX
 - motor stopped by thermal cutout

COMMANDS AND SIGNALS

- AUTOMATIC-OFF-MANUAL switch for each motor
- 5 warning lamps:
 - Power on
 - Electric pump 1 or 2 running
 - Motor protection 1 or 2 tripped

ALARMS AND PROTECTION DEVICES

- Thermal relay sensitive to phase loss, internal re-arm, per motor
- Motor fuses for each motor
- Control circuit fuses
- 24V AC alarm output, excited when overload or max level protection trips
- Motor stopped by thermal cutout

CONDITIONS OF SERVICE

- Ambient temperature -5 / +40 °C
- Relative humidity 50% with max temp. 40°C

NOTES

- The power rating is approximate; or a correct selection of the enclosure check that the motor's power draw (amps) is within the enclosure's operating current range The operating current and power values given in the table refer to a single motor
- Thermoplastic housing (P) up to 12A

ELECTRICAL DATA TABLE

Model	V~50/60Hz	Nominal current [A]	kW	Weight [kg]	Dimensions [mm]		
					A	B	C
ENCLOSURE QMDE20/4A-T-AR -1	1~230	2.8-3.8	0.25	9.9	460	385	160
ENCLOSURE QMDE20/5A-T-AR -1	1~230	3.8-5.2	0.37	9.9	460	385	160
ENCLOSURE QMDE20/7A-T-AR -1	1~230	5.2-6.9	0.55	9.9	460	385	160
ENCLOSURE QMDE20/9A-T-AR -1	1~230	6.9-9.1	0.75	9.9	460	385	160
ENCLOSURE QMDE20/12A-T-AR -1	1~230	9.1-12	1.1	9.9	460	385	160
ENCLOSURE QMDE20/15A-T-AR -1	1~230	12-14.5	1.5	23	500	400	240
ENCLOSURE QMDE20/18A-T-AR -1	1~230	14.5-18	2.2	23	500	400	240

QT2 SERIES

ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE



Three phase electromechanical enclosure for two electric pumps.
Drainage/Sewer - Surface - Submersible.

TECHNICAL DATA

- Power supply 3~ 50/60Hz 400V $\pm 10\%$
- Master power switch with door interlock
- Transformer for control circuit power
- Contactor for each motor
- Heat exchanger
- Protection rating IP55

INPUTS

- 6 very low voltage inputs for:
 - emergency stop SL/SP STOP (e.g.: float switch to protect against dry running) active in both AUTOMATIC and MANUAL modes
 - functional start/stop SL/SP 1 and 2 (e.g.: control float switch)
 - max level alarm SL/SP MAX
 - motor stopped by thermal cutout

COMMANDS AND SIGNALS

- AUTOMATIC-OFF-MANUAL switch
- 5 warning lamps:
 - Power on
 - Electric pump 1 or 2 running
 - Motor protection 1 or 2 tripped

ALARMS AND PROTECTION DEVICES

- Thermal relay sensitive to phase loss, internal re-arm
- Motor fuses
- Control circuit fuses
- 24V AC alarm output, excited when overload or max level protection trips
- Motor stopped by thermal cutout

CONDITIONS OF SERVICE

- Ambient temperature $-5 / +40$ °C
- Relative humidity 50% with max temp. 40°C

NOTES

- The power rating is approximate; or a correct selection of the enclosure check that the motor's power draw (amps) is within the enclosure's operating current range
- Thermoplastic housing (P) up to 26A, metal (M) for larger sizes 26 - 32A

ELECTRICAL DATA TABLE

Model	V~50/60Hz	Nominal current [A]	kW	Weight [kg]	Dimensions [mm]		
					A	B	C
ENCLOSURE QTDE20/3A-T-AR -1*	3~400	2.1-2.8	0.75	8.5	460	380	160
ENCLOSURE QTDE20/4A-T-AR -1*	3~400	2.8-3.8	1.1	8.5	460	380	160
ENCLOSURE QTDE20/5A-T-AR -1	3~400	3.8-5.2	1.5	8.5	460	380	160
ENCLOSURE QTDE20/7A-T-AR -1*	3~400	5.2-6.9	2.2	8.5	460	380	160
ENCLOSURE QTDE20/9A-T-AR -1*	3~400	6.9-9.1	3	8.5	460	380	160
ENCLOSURE QTDE20/12A-T-AR -1*	3~400	9.1-12	4	13	460	380	160
ENCLOSURE QTDE20/15A-T-AR -1*	3~400	12-14.5	5.5	13	460	380	160
ENCLOSURE QTDE20/18A-T-AR -1*	3~400	14.5-18	7.5	13	460	380	160
ENCLOSURE QTDE20/22A-T-AR -1*	3~400	18-22	9	13	460	380	160
ENCLOSURE QTDE20/26A-T-AR -1*	3~400	22-26	11	13	460	380	160
ENCLOSURE QTDE20/32A-T-AR -1*	3~400	26-32	13	23	500	400	240

* Direct starting

QT3 SERIES

ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE

Three phase electromechanical enclosure for three electric pumps. Drainage/Sewer - Surface - Submersible.

TECHNICAL DATA

- Power supply 3~ 50/60Hz 400V ±10%
- Master power switch with door interlock
- Transformer for control circuit power
- Contactor for each motor
- Heat exchanger
- Protection rating IP55

INPUTS

- 8 very low voltage inputs for:
 - emergency stop SL/SP STOP (e.g.: float switch to protect against dry running) active in both AUTOMATIC and MANUAL modes;
 - functional start/stop SL/SP 1 - 3 (e.g.: control float switch) for each motor
 - max level alarm SL/SP MAX
 - motor stopped by thermal cutout

COMMANDS AND SIGNALS

- AUTOMATIC-OFF-MANUAL switch for each motor
- 7 warning lamps:
 - Power on
 - Electric pump 1 - 3 running
 - Motor protection 1 - 3 tripped

ALARMS AND PROTECTION DEVICES

- Thermal relay sensitive to phase loss, internal re-arm, per motor
- Motor fuses for each motor
- Control circuit fuses
- 24V AC alarm output, excited when overload or max level protection trips
- Motor stopped by thermal cutout

CONDITIONS OF SERVICE

- Ambient temperature -5 / +40 °C
- Relative humidity 50% with max temp. 40°C

NOTES

- The power rating is approximate; or a correct selection of the enclosure check that the motor's power draw (amps) is within the enclosure's operating current range The operating current and power values given in the table refer to a single motor
- Metal housing (M) up to 22A



ELECTRICAL DATA TABLE

Model	V~50/60Hz	Nominal current [A]	kW	Weight [kg]	Dimensions [mm]		
					A	B	C
ENCLOSURE QTDE30/3A-T-AR -1*	3~400	2.1-2.8	0.75	20	700	500	240
ENCLOSURE QTDE30/4A-T-AR -1*	3~400	2.8-3.8	1.1	20	700	500	240
ENCLOSURE QTDE30/5A-T-AR -1*	3~400	3.8-5.2	1.5	20	700	500	240
ENCLOSURE QTDE30/7A-T-AR -1*	3~400	5.2-6.9	2.2	20	700	500	240
ENCLOSURE QTDE30/9A-T-AR -1*	3~400	6.9-9.1	3	30	700	500	240
ENCLOSURE QTDE30/12A-T-AR -1*	3~400	9.1-12	4	31	700	500	240
ENCLOSURE QTDE30/15A-T-AR -1*	3~400	12-14.5	5.5	31	700	500	240
ENCLOSURE QTDE30/18A-T-AR -1*	3~400	14.5-18	7.5	31	700	500	240
ENCLOSURE QTDE30/22A-T-AR -1*	3~400	18-22	9	31	700	500	240
ENCLOSURE QTDE30/26A-T-AR -1*	3~400	22-26	11	-	-	-	-
ENCLOSURE QTDE30/32A-T-AR -1*	3~400	26-32	13	-	-	-	-
ENCLOSURE QTDE30/35A-T-AR -1*	3~400	32-35	15	-	-	-	-

* Direct starting

QS1 SERIES

ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE

Three phase electromechanical enclosure for an electric pump.
Drainage/Sewer - Surface - Submersible.

TECHNICAL DATA

- Power supply 3~ 50/60Hz 400V ±10%
- Master power switch with door interlock
- Transformer for control circuit power
- Contactors
- Adjustable star/delta switching timer (0.1 - 600 s)
- Protection rating IP55

INPUTS

- 4 very low voltage inputs for:
 - emergency stop SL/SP STOP (e.g.: float switch to protect against dry running) active in both AUTOMATIC and MANUAL modes
 - functional start/stop SL/SP 1 (e.g.: control float switch)
 - max level alarm
 - motor stopped by thermal cutout

COMMANDS AND SIGNALS

- AUTOMATIC-OFF-MANUAL switch
- 3 warning lamps:
 - Power on
 - Pump running
 - Protection device tripped

ALARMS AND PROTECTION DEVICES

- Thermal relay sensitive to phase loss, internal re-arm
- Motor fuses
- Control circuit fuses
- 24V AC alarm output, excited when overload or max level protection trips
- Motor stopped by thermal cutout

CONDITIONS OF SERVICE

- Ambient temperature -5 / +40°C
- Relative humidity 50% with max temp. 40°C

NOTES

- The power rating is approximate; or a correct selection of the enclosure check that the motor's power draw (amps) is within the enclosure's operating current range
- Thermoplastic housing (P) up to 20.5A, metal (M) for larger sizes 20.5 - 170A



ELECTRICAL DATA TABLE

Model	V~50/60Hz	Nominal current [A]	kW	Weight [kg]	Dimensions [mm]		
					A	B	C
ENCLOSURE QTSE 10/9A-T-AR -1*	3~400	6.5-9	3	7.5	460	385	160
ENCLOSURE QTSE 10/12A-T-AR -1*	3~400	9-12	4	7.5	460	385	160
ENCLOSURE QTSE 10/16A-T-AR -1*	3~400	12-15.5	5.5	8.5	460	385	160
ENCLOSURE QTSE 10/21A-T-AR -1*	3~400	15.5-20.5	7.5	8.5	460	385	160
ENCLOSURE QTSE 10/25A-T-AR -1*	3~400	20.5-25	9	21	500	400	240
ENCLOSURE QTSE 10/31A-T-AR -1*	3~400	25-31	11	21	500	400	240
ENCLOSURE QTSE 10/37A-T-AR -1*	3~400	31-37	15	21	500	400	240
ENCLOSURE QTSE 10/45A-T-AR -1*	3~400	37-45	18.5	21	500	400	240
ENCLOSURE QTSE 10/55A-T-AR -1*	3~400	45-55	22	36	700	500	240
ENCLOSURE QTSE 10/73A-T-AR -1*	3~400	56-73	30	36	700	500	240
ENCLOSURE QTSE 10/83A-T-AR -1*	3~400	69-83	37	36	700	500	240
ENCLOSURE QTSE 10/105A-T-AR-1*	3~400	90-105	45	-	-	-	-
ENCLOSURE QTSE 10/135A-T-AR-1*	3~400	120-135	55	-	-	-	-
ENCLOSURE QTSE 10/170A-T-AR-1*	3~400	130-170	70	-	-	-	-

* Star/delta starting

QS2 SERIES

ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE

Three phase electromechanical enclosure for two electric pumps.
Drainage/Sewer - Surface - Submersible.

TECHNICAL DATA

- Power supply 3~ 50/60Hz 400V ±10%
- Master power switch with door interlock
- Transformer for control circuit power
- Contactor for each motor
- Adjustable star/delta switching timer (0.1 - 600 s) for each motor
- Heat exchanger
- Protection rating IP55

INPUTS

- 6 very low voltage inputs for:
 - emergency stop SL/SP STOP (e.g.: float switch to protect against dry running) active in both AUTOMATIC and MANUAL modes
 - functional start/stop SL/SP 1 and 2 (e.g.: control float switch)
 - max level alarm SL/SP MAX
 - motor stopped by thermal cutout

COMMANDS AND SIGNALS

- AUTOMATIC-OFF-MANUAL switch for each motor
- 5 warning lamps:
 - Power on
 - Electric pump 1 or 2 running
 - Motor protection 1 or 2 tripped

ALARMS AND PROTECTION DEVICES

- Thermal relay sensitive to phase loss, internal re-arm, per motor
- Motor fuses for each motor
- Control circuit fuses
- 24V AC alarm output, excited when overload or max level protection trips
- Motor stopped by thermal cutout

CONDITIONS OF SERVICE

- Ambient temperature -5 / +40 °C
- Relative humidity 50% with max temp. 40°C

NOTES

- The power rating is approximate; or a correct selection of the enclosure check that the motor's power draw (amps) is within the enclosure's operating current range The operating current and power values given in the table refer to a single motor
- Metal housing (M) up to 45A



ELECTRICAL DATA TABLE

Model	V~50/60Hz	Nominal current [A]	kW	Weight [kg]	Dimensions [mm]		
					A	B	C
ENCLOSURE QTSE20/9A-T-AR -1	3~400	6.5-9	3	31	700	500	240
ENCLOSURE QTSE20/12A-T-AR -1	3~400	9-12	4	31	700	500	240
ENCLOSURE QTSE20/16A-T-AR -1	3~400	12-15.5	5.5	33	700	500	240
ENCLOSURE QTSE20/21A-T-AR -1	3~400	15.5-20.5	7.5	33	700	500	240
ENCLOSURE QTSE20/25A-T-AR -1	3~400	20.5-25	9	42	800	600	290
ENCLOSURE QTSE20/31A-T-AR -1	3~400	25-31	11	42	800	600	290
ENCLOSURE QTSE20/37A-T-AR -1	3~400	31-37	15	42	800	600	290
ENCLOSURE QTSE20/45A-T-AR -1	3~400	37-45	18.5	42	800	600	290
ENCLOSURE QTSE20/55A-T-AR -1	3~400	45-55	22	-	-	-	-
ENCLOSURE QTSE20/73A-T-AR -1	3~400	56-73	30	-	-	-	-
ENCLOSURE QTSE20/83A-T-AR -1	3~400	69-83	37	-	-	-	-
ENCLOSURE QTSE20/105A-T-AR -1	3~400	90-105	45	-	-	-	-
ENCLOSURE QTSE20/135A-T-AR -1	3~400	120-135	55	-	-	-	-
ENCLOSURE QTSE20/170A-T-AR -1	3~400	130-170	70	-	-	-	-

QS3 SERIES

ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE

Three phase electromechanical enclosure for three electric pumps.
Drainage/Sewer - Surface - Submersible.

TECHNICAL DATA

- Power supply 3~ 50/60Hz 400V ±10%
- Master power switch with door interlock
- Transformer for control circuit power
- Contactor for each motor
- Adjustable star/delta switching timer (0.1 - 600 s)
- Heat exchanger
- Protection rating IP55

INPUTS

- 8 very low voltage inputs for:
 - emergency stop SL/SP STOP (e.g.: float switch to protect against dry running) active in both AUTOMATIC and MANUAL modes
 - functional start/stop SL/SP 1-3 (e.g.: control float switch) for each motor
 - max level alarm SL/SP MAX
 - motor stopped by thermal cutout

COMMANDS AND SIGNALS

- AUTOMATIC-OFF-MANUAL switch for each motor
- 7 warning lamps:
 - Power on
 - Electric pump 1 - 3 running
 - Motor protection 1 - 3 tripped

ALARMS AND PROTECTION DEVICES

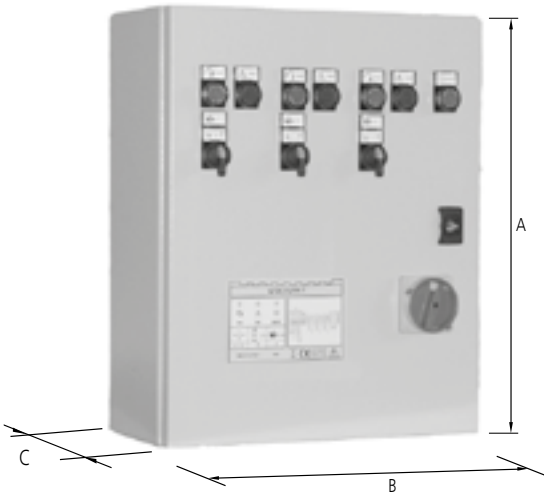
- Thermal relay sensitive to phase loss, internal re-arm, per motor
- Motor fuses for each motor
- Control circuit fuses
- 24V AC alarm output, excited when overload or max level protection trips
- Motor stopped by thermal cutout

CONDITIONS OF SERVICE

- Ambient temperature -5 / +40 °C
- Relative humidity 50% with max temp. 40°C

NOTES

- The power rating is approximate; or a correct selection of the enclosure check that the motor's power draw (amps) is within the enclosure's operating current range The operating current and power values given in the table refer to a single motor



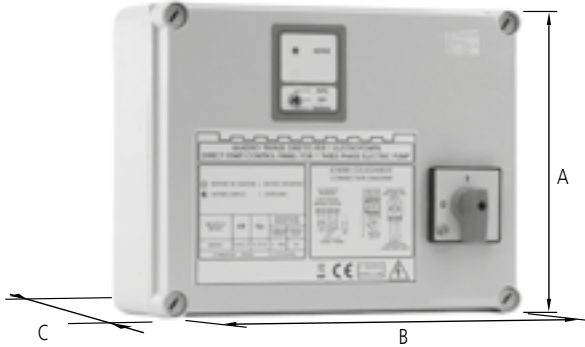
ELECTRICAL DATA TABLE

Model	V~50/60Hz	Nominal current [A]	kW	Weight [kg]	Dimensions [mm]		
					A	B	C
ENCLOSURE QTSE30/9A-T-AR-1*	3~400	6.5-9	3	-	-	-	-
ENCLOSURE QTSE30/12A-T-AR-1*	3~400	9-12	4	-	-	-	-
ENCLOSURE QTSE30/16A-T-AR-1*	3~400	12-15.5	5.5	-	-	-	-
ENCLOSURE QTSE30/21A-T-AR-1*	3~400	15.5-20.5	7.5	-	-	-	-
ENCLOSURE QTSE30/25A-T-AR-1*	3~400	20.5-25	9	-	-	-	-
ENCLOSURE QTSE30/31A-T-AR-1*	3~400	25-31	11	-	-	-	-
ENCLOSURE QTSE30/37A-T-AR-1*	3~400	31-37	15	-	-	-	-
ENCLOSURE QTSE30/45A-T-AR-1*	3~400	37-45	18.5	-	-	-	-
ENCLOSURE QTSE30/55A-T-AR-1*	3~400	45-55	22	-	-	-	-
ENCLOSURE QTSE30/73A-T-AR-1*	3~400	56-73	30	-	-	-	-
ENCLOSURE QTSE30/83A-T-AR-1*	3~400	69-83	37	-	-	-	-
ENCLOSURE QTSE30/105A-T-AR-1*	3~400	90-105	45	-	-	-	-
ENCLOSURE QTSE30/135A-T-AR-1*	3~400	120-135	55	-	-	-	-
ENCLOSURE QTSE30/170A-T-AR-1*	3~400	130-170	70	-	-	-	-

* Star/delta starting

QME1 SERIES

ELECTRONIC ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE



Enclosure with electronic components for a Drainage/Sewer - Surface - Submersible pump.

TECHNICAL DATA

- Power supply 1~ 50/60Hz 230V \pm 10%
- Very low voltage inputs for external control by pressure switch or float switch
- Very low voltage input for sensors, pressure/minimum level float switch to prevent dry running and overflow
- Selector for pressure switch or minimum level float switch (NC or NO) or for FILLING OR EMPTYING sensors
- Indicator lamp: motor running (on) motor thermal cutout tripped (flashing)
- Switch for automatic-off-manual operation (the latter is return-to-centre)
- Current adjustable electronic protection
- Protection trip delay of around 3 s
- Motor fuse
- Door lock main disconnection switch (only for QA/50B)
- Thermoplastic housing
- Protection rating IP 50

SERVICE CONDITIONS:

- Ambient temperature $-5/+40^{\circ}\text{C}$
- Relative humidity 50% with max. temperature 40°C

ELECTRICAL DATA TABLE

Model	HP	kW	Nominal current [A]	Protection range [A]	Dimensions [mm]			Weight [kg]
					A	B	C	
AA/50B *	0.55+3	0.37+2.2	2 - 18	2 - 18	220	255	115	1.5
QA/50B	0.55+3	0.37+2.2	2 - 18	2 - 18	220	255	130	1.5

* Without master switch door interlock

QME2 SERIES

ELECTRONIC ENCLOSURES FOR DRAINAGE AND SEWER PUMPS

Enclosure with electronic components for two Drainage/Sewer pumps.

TECHNICAL DATA

- Power supply 1~ 50/60Hz 230V AC \pm 10%
- Very low voltage inputs for external control by pressure switches or float switches
- Very low voltage input for pressure/minimum level float switch to prevent dry running and overflow
- Microswitches for pressure or minimum level float switch (NC / NO contacts)
- SL/SP2 trip delay of 0 to 4s, selectable with microswitches
- Delay of 0.5s to prevent repeated switching due to float switch fluctuations (debouncing)
- Motor start sequence exchange circuit integrated onto board (can be excluded with microswitches)
- Non-simultaneous motor starting
- Power ON lamp
- Water min/max level alarm lamp
- 2 motors running lamps
- Switch for automatic-off-manual operation (the latter is return-to-centre)
- Thermal protector for each motor, external re-arm
- Control circuit fuse
- Motor fuses
- Master power switch with door interlock
- Thermoplastic housing
- Protection rating IP50

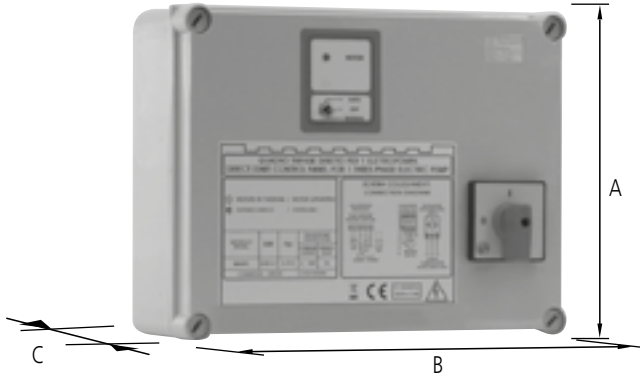


ELECTRICAL DATA TABLE

Model Single phase 230V +10-15% - 50Hz	HP	kW	Nominal current [A]	Protection range [A]	Dimensions [mm]			Weight [kg]
					A	B	C	
QMD20/0.75kW-7T-SI-2	1	0.75	7	7 (fixed)	460	380	150	8.5
QMD20/1.1kW-10T-SI-2	1.5	1.1	10	10 (fixed)	460	380	150	8.5
QMD20/1.5kW-13T-SI-2	2	1.5	13	13 (fixed)	460	380	150	9.5
QMD20/2.2kW-18T-SI-2	3	2.2	18	18 (fixed)	500	400	230	23

QA/60C SERIES

ELECTRONIC ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE



TECHNICAL DATA

Electronic enclosure for a Drainage/Sewer - Surface - Submersible pump.

- Power supply 3~ 50/60Hz 400V $\pm 10\%$
- Very low voltage input for external control by pressure switch or float switch
- Very low voltage input for sensors, pressure/minimum level float switch to prevent dry running and overflow
- Selector for level sensor (NC contact for EMPTYING or NO contact for FILLING)
- Selectors for sensor trip threshold trimmer full range (2-20k; 10-100k)
- Sensor trip threshold trimmer
- Overload amperometric protection trip threshold trimmer: the trip delay is around 3 s
- Switch for AUTOMATIC-OFF-MANUAL operation (the latter is return-to-centre)
- Indicator lamp: motor running (on) motor thermal cutout tripped (flashing)
- Motor fuses
- Control circuit fuses
- Master power switch with door interlock
- Thermoplastic housing
- Protection rating IP50

CONFIGURED FOR THE INSTALLATION OF:

- MIC/1E-..V-2U in 3 versions:
interface module for control by external equipment with power 12V~ / 24V~ / 230V~ no voltage contact output.
Requires a change of housing for models QA/60C and QA/61C.
NOTE: in place of the sensors, 2 flat switches (1 OFF and 1 ON) can be used

SERVICE CONDITIONS:

- Ambient temperature $-5/+40^{\circ}\text{C}$
- Relative humidity 50% with max. temperature 40°C

ELECTRICAL DATA TABLE

Model	kW	Hp	Nominal current		Dimensions [mm]			Weight [kg]
			[A] min	[A] max	A	B	C	
QA/60C	0.55 - 3.7	0.75 - 5	2	8	200	255	130	1.8

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INDICATORS

Acoustic/lamp indicator on box version SALB/6l
Acoustic indicator SA/6l
Acoustic/lamp indicator on 6 input version SAL/6l
Acoustic/lamp indicator on 12 input version SAL/12l
Acoustic/lamp indicator on 18 input version SAL/18l
Probe 1 metre cable SL/1M
Mechanical counter 24V
Mechanical counter 230V

AMMETERS - VOLTMETERS

	Waiting time
Ammeter 5A	direct
Ammeter 10A	direct
Ammeter 15A	direct
Ammeter 25A	direct
Ammeter 40A	direct
Ammeter 60/5A	with waiting time
Ammeter 150/5A	with waiting time
Ammeter 250/5A	with waiting time
Voltmeter 500V	direct

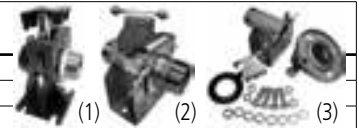
Accessories OPTIMA - BEST ONE

Hose connection 1 1/4" and hose clamp (*)
Low suction device up to 3 mm (OPTIMA and BEST ONE only) (**)



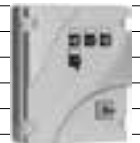
Accessories DW - DW VOX

Cast iron DW lowering device kit - threaded 2" (1)
Steel DW lowering device kit - threaded 2" (2)
Steel DWF lowering device kit - flanged DN50 (3)



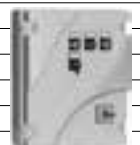
QM1 SERIES - ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE see page 140

ENCLOSURE QMDE10/4A-T-AR -1
ENCLOSURE QMDE10/5A-T-AR -1
ENCLOSURE QMDE10/7A-T-AR -1
ENCLOSURE QMDE10/9A-T-AR -1
ENCLOSURE QMDE10/12A-T-AR -1
ENCLOSURE QMDE10/15A-T-AR -1
ENCLOSURE QMDE10/18A-T-AR -1



QT1 SERIES - ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE see page 141

ENCLOSURE QTDE10/4A-T-AR -1
ENCLOSURE QTDE10/5A-T-AR -1
ENCLOSURE QTDE10/7A-T-AR -1
ENCLOSURE QTDE10/9A-T-AR -1
ENCLOSURE QTDE10/12A-T-AR -1
ENCLOSURE QTDE10/15A-T-AR -1
ENCLOSURE QTDE10/18A-T-AR -1
ENCLOSURE QTDE10/22A-T-AR -1
ENCLOSURE QTDE10/26A-T-AR -1
ENCLOSURE QTDE10/32A-T-AR -1



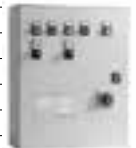
QM2 SERIES - ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE see page 142

- ENCLOSURE QMDE20/4A-T-AR -1
- ENCLOSURE QMDE20/5A-T-AR -1
- ENCLOSURE QMDE20/7A-T-AR -1
- ENCLOSURE QMDE20/9A-T-AR -1
- ENCLOSURE QMDE20/12A-T-AR -1
- ENCLOSURE QMDE20/15A-T-AR -1
- ENCLOSURE QMDE20/18A-T-AR -1



QT2 SERIES - ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE see page 143

- ENCLOSURE QTDE20/3A-T-AR -1
- ENCLOSURE QTDE20/4A-T-AR -1
- ENCLOSURE QTDE20/5A-T-AR -1
- ENCLOSURE QTDE20/7A-T-AR -1
- ENCLOSURE QTDE20/9A-T-AR -1
- ENCLOSURE QTDE20/12A-T-AR -1
- ENCLOSURE QTDE20/15A-T-AR -1
- ENCLOSURE QTDE20/18A-T-AR -1
- ENCLOSURE QTDE20/22A-T-AR -1
- ENCLOSURE QTDE20/26A-T-AR -1
- ENCLOSURE QTDE20/32A-T-AR -1



QT3 SERIES - ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE see page 144

- ENCLOSURE QTDE30/3A-T-AR -1
- ENCLOSURE QTDE30/4A-T-AR -1
- ENCLOSURE QTDE30/5A-T-AR -1
- ENCLOSURE QTDE30/7A-T-AR -1
- ENCLOSURE QTDE30/9A-T-AR -1
- ENCLOSURE QTDE30/12A-T-AR -1
- ENCLOSURE QTDE30/15A-T-AR -1
- ENCLOSURE QTDE30/18A-T-AR -1
- ENCLOSURE QTDE30/22A-T-AR -1
- ENCLOSURE QTDE30/26A-T-AR -1
- ENCLOSURE QTDE30/32A-T-AR -1
- ENCLOSURE QTDE30/35A-T-AR -1



QS1 SERIES - ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE see page 145

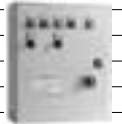
- ENCLOSURE QTSE 10/9A-T-AR -1
- ENCLOSURE QTSE 10/12A-T-AR -1
- ENCLOSURE QTSE 10/16A-T-AR -1
- ENCLOSURE QTSE 10/21A-T-AR -1
- ENCLOSURE QTSE 10/25A-T-AR -1
- ENCLOSURE QTSE 10/31A-T-AR -1
- ENCLOSURE QTSE 10/37A-T-AR -1
- ENCLOSURE QTSE 10/45A-T-AR -1
- ENCLOSURE QTSE 10/55A-T-AR -1
- ENCLOSURE QTSE 10/73A-T-AR -1
- ENCLOSURE QTSE 10/83A-T-AR -1
- ENCLOSURE QTSE 10/105A-T-AR -1
- ENCLOSURE QTSE 10/135A-T-AR -1
- ENCLOSURE QTSE 10/170A-T-AR -1



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QS2 SERIES - ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE see page 146

ENCLOSURE QTSE20/9A-T-AR -1
 ENCLOSURE QTSE20/12A-T-AR -1
 ENCLOSURE QTSE20/16A-T-AR -1
 ENCLOSURE QTSE20/21A-T-AR -1
 ENCLOSURE QTSE20/25A-T-AR -1
 ENCLOSURE QTSE20/31A-T-AR -1
 ENCLOSURE QTSE20/37A-T-AR -1
 ENCLOSURE QTSE20/45A-T-AR -1
 ENCLOSURE QTSE20/55A-T-AR -1
 ENCLOSURE QTSE20/73A-T-AR -1
 ENCLOSURE QTSE20/83A-T-AR -1
 ENCLOSURE QTSE20/105A-T-AR -1
 ENCLOSURE QTSE20/135A-T-AR -1
 ENCLOSURE QTSE20/170A-T-AR -1



QS3 SERIES - ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE see page 147

ENCLOSURE QTSE30/9A-T-AR -1
 ENCLOSURE QTSE30/12A-T-AR -1
 ENCLOSURE QTSE30/16A-T-AR -1
 ENCLOSURE QTSE30/21A-T-AR -1
 ENCLOSURE QTSE30/25A-T-AR -1
 ENCLOSURE QTSE30/31A-T-AR -1
 ENCLOSURE QTSE30/37A-T-AR -1
 ENCLOSURE QTSE30/45A-T-AR -1
 ENCLOSURE QTSE30/55A-T-AR -1
 ENCLOSURE QTSE30/73A-T-AR -1
 ENCLOSURE QTSE30/83A-T-AR -1
 ENCLOSURE QTSE30/105A-T-AR -1
 ENCLOSURE QTSE30/135A-T-AR -1
 ENCLOSURE QTSE30/170A-T-AR -1



QME1 SERIES - ELECTROMECHANICAL ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE see page 148

AA/50B*
 QA/50B



* Without master switch door interlock

ACCESSORIES

Level sensor kit (3 probes)

QME2 SERIES - ELECTRONIC ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, see page 149

QMD20/0.75kW-7T-SI-2
 QMD20/1.1kW-10T-SI-2
 QMD20/1.5kW-13T-SI-2
 QMD20/2.2kW-18T-SI-2



ACCESSORIES

KIT/MSM+MA1 - Kit of external alarm and self-retaining modules

QA/60C SERIES - ELECTRONIC ENCLOSURES FOR DRAINAGE AND SEWER PUMPS, SURFACE AND SUBMERSIBLE see page 150

QA/60C



ACCESSORIES

Level sensor kit (3 probes)

VALVES FOR SUBMERSIBLE PUMPS

Ball check valve, threaded DN 1"¼ PN10
 Ball check valve, threaded DN 1"½ PN10
 Ball check valve, threaded DN 2" PN10
 Ball check valve, flanged DN 65 PN10
 Ball check valve, flanged DN 80 PN10
 Ball check valve, flanged DN 100 PN10
 Ball check valve, flanged DN 125 PN10
 Ball check valve, flanged DN 150 PN10



FLOAT SWITCHES

Float switch key 5 m PVC with counterweight
 Float switch key 10 m PVC with counterweight
 Float switch key 20 m PVC with counterweight
 Float switch for foul sewer water in 20 m
 Float switch Taurus H07RNF 8.8 GTAH3x106GG01 6 m
 Float switch Taurus H07RNF 8.8 GTAH3x110GG01 10 m
 Float switch Taurus H07RNF 8.8 GTAH3x115GG01 15 m
 Float switch Taurus H07RNF 8.8 GTAH3x120GG01 20 m



GUIDE HOOK ADAPTERS

Adapter 80 DIN 1TG F (1 guide tube)
 Adapter 100 DIN 1TG F (1 guide tube)
 Adapter 150 DIN 1TG F (1 guide tube)
 Adapter 65 DIN 2TG F (2 guide tubes)
 Flange for adapter 2TG F DN65*
 Adapter 80/100 DIN 2TG F (2 guide tubes)
 Flange for adapter 2TG F DN80*
 Adapter 100x150 DIN 2TG F (2 guide tubes)
 Flange for adapter 2TG F DN100*
 Adapter 150 DIN 2TG F (2 guide tubes)

* Required for models DS, DVS, DL-DL W/C, DML, DMLV only

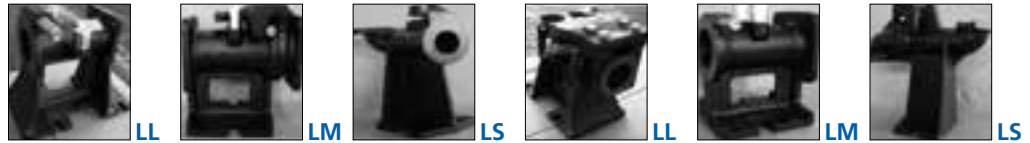
FLANGE ADAPTERS (C40 STEEL) JIS/DIN (DS, DVS, DL-DL W/C, DML, DMLV)

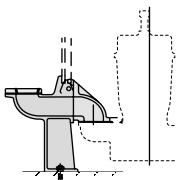
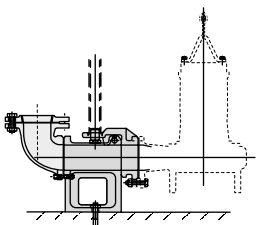
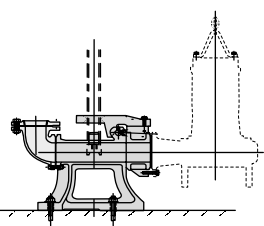
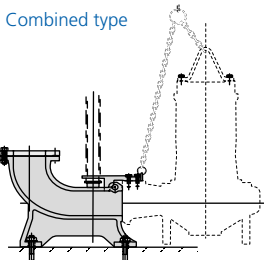
Flange adapter JIS/DIN 80x80
 Flange adapter JIS/DIN 80x100
 Flange adapter JIS/DIN 100x100
 Flange adapter JIS/DIN 100x150
 Flange adapter JIS/DIN 150x150

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ACCESSORIES

SELECTION TABLE QDC (LOWERING DEVICE KIT) (DS, DVS, DL-DL W/C, DML-DMLV)

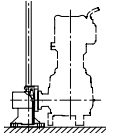
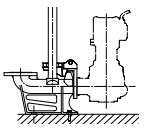
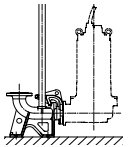
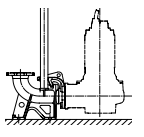
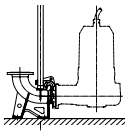
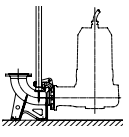
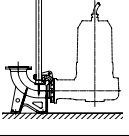
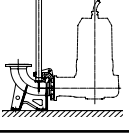
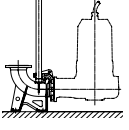


Type	Lowering device kit model (QDC)	Guide pipe DN	Dimensions				Applicable coupling models				
			Delivery flange Ø	Delivery elbow Ø	Lowering device kit body (QDC) Ø	Flange on volute DN Ø	DS	DVS	DL W/C	DL	DML (V)
LS Combined type 	LS50	40x40x5	50	-	50	50	50DS 1.5 kW	50DVS 1.5 kW			
LM Separate type 	LM50	1"	50	50x50	50	50	50DS 2.2 - 3.7 kW				
	LM65	1"	65	65x65	65	65	65DS 1.5 kW	65DVS 1.5 - 3.7 kW	65DLW/C 1.5 kW	65DL 1.5 kW	
			80	65x80	65	65		80DVS 1.5 - 3.7 kW			
LM80	1"	80	80x80	80	80	80DS 2.2 - 3.7 kW		80DLW/C 1.5 - 3.7 kW	80DL 1.5 - 3.7 kW	80&100DML(V) 2.2 - 3.7 kW	
LL Separate type 	LL80	1 1/2"	80	80x80	80	80				80DLC 5.5 - 7.5 kW	
			100	80x100	80	80				100DLC 5.5 - 7.5 kW	
	LL100	1 1/2"	100	100x100	100	100	100DS 5.5 - 7.5 kW		100DLW/C 3.7 - 7.5 kW	100DL&DLB 3.7 - 18.5 kW	100DML(V) 5.5 - 22 kW
			150	100x150	100	100					150DML 5.5 - 22 kW
	LL125	2"	150	125x150	125	125				150DL 5.5 - 22 kW	
	LL150	2"	150	150x150	150	150				150DL 30 - 45 kW	
200			150x200	150	150				200DL 5.5 - 45 kW		
LL Combined type 	LL250	3"	250	-	200x250	200				250DL 7.5 - 22 kW	
	LL300	3"	250	(reducer) 300x250	250x300	250				250DL 30 - 45 kW	
300			-	250x300	250				300DL 11 - 45 kW		

The elbow and counterflange are not included with the lowering device kit (QDC). These components are standard accessories included with the pump (except for DV and DVS 1.5 kW and DL 30 - 45 kW), and are used with the lowering device kit (QDC). In lowering device kit models (QDC) LS50 and LL300, the elbow is not necessary, since it is included with the kit itself.

ACCESSORIES

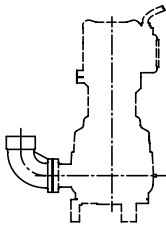
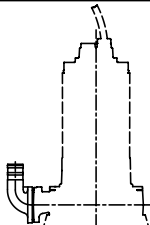
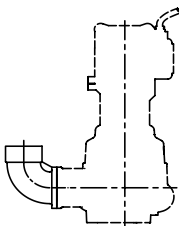
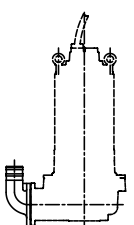
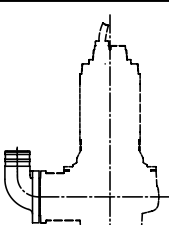
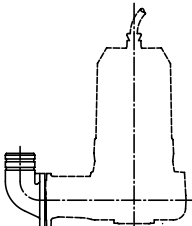
SELECTION TABLE QDC (LOWERING DEVICE KIT) BENDS, TRIPOD AND FLANGES (DSF, DMLF, DMLVF, DRS, DRD)

	Model	Applicable coupling models				
		DSF	DMLF	DMLVF	DRS	DRD
	GPA DN502T	40DSF51.5M2CG 40DSF51.9M2AG 40DSF56T2AG	50DMLF51.4M2BG	50DMLVF51.5M2CG 50DMLVF51.5M2BG 50DMLVF51.9M2AG	40DRS51.1M2CG - 40DRS51.1M2BG 40DRS51.1M2AG - 40DRS51.2M2CG 40DRS51.5M2BG - 40DRS51.9M2AG 40DRS51.1T2CG - 40DRS51.1T2BG 40DRS51.4T2AG - 40DRS51.6T2CG 40DRS51.6T2BG - 40DRS52.4T2AG 40DRS53.1T2BG - 40DRS53.1T2AG 40DRS54.2T2CG - 40DRS55T2BG	
	GPA DN65/8 (*)				(**) 65DRS57.5T2BG - 65DRS56.5T2CG 65DRS59T2DG - 65DRS511T2CG	(***) 65DRD53.1T2CG 65DRD53.6T2BG
	GPA DN65/15 (**)		(*) 65DMLF51.5M2AG 65DMLF51.9M2BG	(*) 65DMLVF51.5M2CG	65DRS513.8T2BG - 65DRS513.8T2AG 65DRS514.9T2GG - 65DRS520T2BG 65DRS522.4T2AG - 65DRS525.1T2AG	
	GPA DN65/L (***)					
	GPA DN80/L			80DMLVF54.9T4AG 80DMLVF516.6T2BG 80DMLVF518.2T2DG		80DRD55T2BG 80DRD56T2AG 80DRD57.5T2AG
	GPA DN100/L			100DMLVF55.2T6BG		100DRD52.8T6AG - 100DRD54.6T4CG 100DRD54.6T4BG - 100DRD57.1T4BG 100DRD57.5T4FG - 100DRD510T4FG 100DRD510T4AG - 100DRD512T2DG 100DRD514.9T2CG - 100DRD516.6T2BG 100DRD518.2T2AG - 100DRD520T2AG
	GPA DN150/L					150DRD540.2T2BG - 150DRD552T2CG 150DRD56T6CG - 150DRD58T6BG 150DRD512T6AG - 150DRD514T6BG 150DRD523T4CG - 150DRD527T4BG 150DRD527T4AG - 150DRD530T4BG 150DRD530.1T4BG - 150DRD535T2AG 150DRD535.7T4EG - 150DRD535.7T4AG 150DRD541T4AG - 150DRD560T4GG
	GPA DN200					200DRD56T8AG - 200DRD56.2T8CG 200DRD58T8AG - 200DRD59.3T8CG 200DRD59.3T8BG - 200DRD59.8T6CG 200DRD514T6BG - 200DRD514T6AG 200DRD515.8T6CG - 200DRD518.9T6BG 200DRD523T6AG - 200DRD540T4CG 200DRD544T4BG - 200DRD548T4AG
	GPA DN250/L					250DRD512.4T8DG - 250DRD517.1T8CG 250DRD519T8AG - 250DRD515T4AG 250DRD523T6DG - 250DRD529T6CG 250DRD539.2T6BG - 250DRD539.2T6AG 250DRD565T4DG - 250DRD575T4CG 250DRD575T4BG - 250DRD585T4AG
	GPA DN300					300DRD521.8T8BG 300DRD526.7T8CG 300DRD533.4T6DG 300DRD539.2T6CG 300DRD555.8T6BG 300DRD565T6AG
	GPA DN350/L					350DRD540T8CG 350DRD545T8AG

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ACCESSORIES


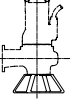
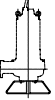
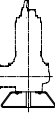
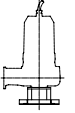

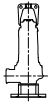


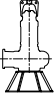



SELECTION TABLE QDC (LOWERING DEVICE KIT) BENDS, TRIPOD AND FLANGES (DSF, DMLF, DMLVF, DRS, DRD)

	Model	Applicable coupling models				
		DSF	DMLF	DMLVF	DRS	DRD
	GCF2	40DSF51.5M2CG 40DSF51.9M2AG 40DSF56T2AG	50DMLF51.4M2BG	50DMLVF51.5M2CG 50DMLVF51.5M2BG 50DMLVF51.9M2AG	40DRS51.1M2CG - 40DRS51.1M2BG 40DRS51.1M2AG - 40DRS51.2M2CG 40DRS51.5M2BG - 40DRS51.9M2AG 40DRS51.1T2CG - 40DRS51.1T2BG 40DRS51.4T2AG - 40DRS51.6T2CG 40DRS51.6T2BG - 40DRS52.4T2AG 40DRS53.1T2BG - 40DRS53.1T2AG 40DRS54.2T2CG - 40DRS55T2BG	
	CG DN65				65DRS57.5T2BG - 65DRS56.5T2CG 65DRS59T2DG - 65DRS51.1T2CG 65DRS513.8T2BG - 65DRS513.8T2AG 65DRS514.9T2GG - 65DRS520T2BG 65DRS522.4T2AG - 65DRS525.1T2AG	65DRD53.1T2CG 65DRD53.6T2BG
	GCF2.1/2		65DMLF51.5M2AG 65DMLF51.9M2BG	65DMLVF51.5M2CG		
	GC DN80/L			80DMLVF516.6T2BG		80DRD55T2BG 80DRD56T2AG
	GC DN100/L			100DMLVF55.2T6BG		100DRD52.7T6AG - 100DRD52.8T6AG 100DRD54.6T4CG - 100DRD54.6T4BG 100DRD57.1T4BG - 100DRD57.5T4FG 100DRD510T4FG - 100DRD510T4AG 100DRD512T2DG - 100DRD514.9T2CG 100DRD516.6T2BG - 100DRD518.2T2AG 100DRD520T2AG
	GC DN150/L					150DRD540.2T2BG - 150DRD552T2CG 150DRD56T6CG - 150DRD58T6BG 150DRD512T6AG - 150DRD514T6BG 150DRD523T4CG - 150DRD527T4BG 150DRD527T4AG - 150DRD530T4BG 150DRD530.1T4BG - 150DRD535T2AG 150DRD535.7T4EG - 150DRD535.7T4AG 150DRD541T4AG - 150DRD560T4GG

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ACCESSORIES

SELECTION TABLE QDC (LOWERING DEVICE KIT) BENDS, TRIPOD AND FLANGES (DSF, DMLF, DMLVF, DRS, DRD)

	Tripod	Applicable coupling models				
		DSF	DMLF	DMLVF	DRS	DRD
	PAP65SP02			65DMLVF51.5M2CG		
	PAPDN80/L			80DMLVF54.9T4AG 80DMLVF516.6T2BG		65DRD53.1T2CG 65DRD53.6T2BG 80DRD55T2BG 80DRD56T2AG
	PAPDN100NP07			80DMLVF518.2T2DG		80DRD57.5T2AG
	PAPDN125NP07			100DMLVF55.2T6BG	65DRS57.5T2BG 65DRS56.5T2CG	100DRD52.7T6AG - 100DRD52.8T6AG 100DRD54.6T4CG - 100DRD54.6T4BG 100DRD57.1T4BG - 100DRD57.5T4FG 100DRD510T4FG - 100DRD510T4AG 100DRD512T2DG - 100DRD514.9T2CG 100DRD516.6T2BG - 100DRD518.2T2AG 100DRD520T2AG
	PAPDN150 (*) PAPDN150SP07 (**)				(*) 65DRS59T2DG - 65DRS511T2CG 65DRS513.8T2BG - 65DRS513.8T2AG 65DRS514.9T2GG - 65DRS520T2BG 65DRS522.4T2AG - 65DRS525.1T2AG	(**) 150DRD540.2T2BG - 150DRD552T2CG 150DRD512T6AG - 150DRD514T6BG 150DRD523T4CG - 150DRD527T4BG 150DRD527T4AG - 150DRD530T4BG 150DRD530.1T4BG - 150DRD535T2AG 150DRD535.7T4EG - 150DRD535.7T4AG 150DRD541T4AG
	PAPDN200					150DRD56T6CG 150DRD58T6BG
	PAPDN200					150DRD560T4GG - 150DRD575T4CG 150DRD580T4BG - 150DRD580T4AG 200DRD56T8AG - 200DRD56.2T8CG 200DRD58T8AG - 200DRD59.3T8CG 200DRD59.3T8BG - 200DRD59.8T6CG 200DRD514T6BG - 200DRD514T6AG 200DRD515.8T6CG - 200DRD518.9T6BG 200DRD523T6AG - 200DRD540T4CG
	PAPDN250					250DRD512.4T8DG - 250DRD517.1T8CG 250DRD519T8AG - 250DRD515T4AG 250DRD523T6DG - 250DRD529T6CG 250DRD539.2T6BG - 250DRD539.2T6AG 250DRD565T4DG - 250DRD575T4CG 250DRD575T4BG - 250DRD585T4AG
	PAPDN300					300DRD521.8T8BG - 300DRD526.7T8CG 300DRD533.4T6DG - 300DRD539.2T6CG 300DRD555.8T6BG - 300DRD565T6AG
	PAPDN400					350DRD540T8CG 350DRD545T8AG
	Counterflange					
	GF1.1/2 T	40DSF51.5M2CG 40DSF51.9M2AG 40DSF56T2AG			40DRS51.2M2CG - 40DRS51.5M2BG 40DRS51.9M2AG - 40DRS51.1T2CG 40DRS51.1T2BG - 40DRS51.4T2AG 40DRS51.6T2CG - 40DRS51.6T2BG 40DRS52.4T2AG - 40DRS53.1T2BG 40DRS53.1T2AG - 40DRS54.2T2CG 40DRS55T2BG - 40DRS55T2AG	
	GF2		50DMLF51.4M2BG	50DMLVF51.5M2CG 50DMLVF51.5M2BG 50DMLVF51.9M2AG		
	GF2.1/2		65DMLF51.5M2AG 65DMLF51.9M2BG	65DMLVF51.5M2CG		

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PERFORMANCE SPECIFICATIONS

The specifications given refer to the curves provided in our catalogues and Data Books (see www.ebaraurope.com). All performance curves are calculated in accordance with ISO 9906 Annex A.

Tolerances in accordance with ISO 9906 Annex A.
 The curves refer to an effective asynchronous motor speed at 50 Hz.
 The measurements were taken at a water temperature of 20°C and a kinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt).
 In order to avoid the risk of overheating, the pumps should not be used at a flow rate below 10% of the maximum flow rate.
 During pump selection, one should apply a safety margin of at least 1 m.

- Symbols: Q = Flow rate [m³/h]
 H = Head [m]
 P₁ = Power uptake from electrical line
 P₂ = Power delivered at motor shaft (power uptake of pump)

DNV-GL

MANAGEMENT SYSTEM CERTIFICATE

CERTIFICATE No. / Certificato No.: C.001 / 1700 2008-02-001-001-001
 Largo e Complesso del Sole, Venezia, 01 agosto 2009

Sito / Site address: Via Pacinotti, 32
 36040 Brendola (VI) - Italy

Validazione / Validation: 29 ottobre 2012 - 29 ottobre 2015

Si certifica che il sistema di gestione di / This is to certify that the management system of

EBARA PUMPS EUROPE S.p.A.

Via Pacinotti, 32 - 36040 Brendola (VI) - Italy

È conforme ai requisiti della norma per il Sistema di Gestione Qualità /
 Has been found to conform to the Quality Management System standard.

UNI EN ISO 9001:2008 (ISO 9001:2008)

Questa certificazione è valida per il seguente campo applicativo:
Progettazione, produzione, vendita e commercializzazione di pompe e sistemi di pompaggio
 (Settore EA: 18 - 17 - 14)

This certificate is valid for the following scope:
Design, manufacture, sales and trade of pumps and pumping systems
 (EA Sector: 18 - 17 - 14)

Largo e Complesso del Sole, Venezia, 01 agosto 2009

Sistema di Gestione Qualità
 UNI EN ISO 9001:2008
 (Settore EA: 18 - 17 - 14)

Vice Manager /
 Management Representative

La validità del presente Certificato è subordinata al rispetto delle condizioni contrattuali del Certificato di Conformazione /
 The validity of this certificate is subject to the fulfilment of the conditions of the Certificate of Conformation

DNV-GL

Certificato No. / Certificato No.: C.001 / 1700 2008-02-001-001-001
 Largo e Complesso del Sole, Venezia, 01 agosto 2009

Appendix to Certificate

Site Name	Site Address	Site Scope
Stabilimento di Brendola	Via Pacinotti, 32 36040 Brendola (VI) - Italy	Riferimento ai campi applicativi Riferimento to scope
Stabilimento di Cles	Via Campo Serravalle, 30 38023 Cles (TN) - Italy	Produzione di pompe e sistemi di pompaggio Manufacture of pumps and pumping systems
Rivale di Palermo	Via Don Luigi Stocco, 181/183 - Z. I. 90040 Carini (PA) - Italy	Vendita e commercializzazione di pompe e sistemi di pompaggio Sales and trade of pumps and pumping systems
Rivale di Cagliari	Via del Fungarini, 29 09122 Cagliari (CA) - Italy	

La validità del presente Certificato è subordinata al rispetto delle condizioni contrattuali del Certificato di Conformazione /
 The validity of this certificate is subject to the fulfilment of the conditions of the Certificate of Conformation

