

SUBMERSIBLE ELECTRIC PUMPS FOR DRAINAGE AND WASTEWATER

50 Hz

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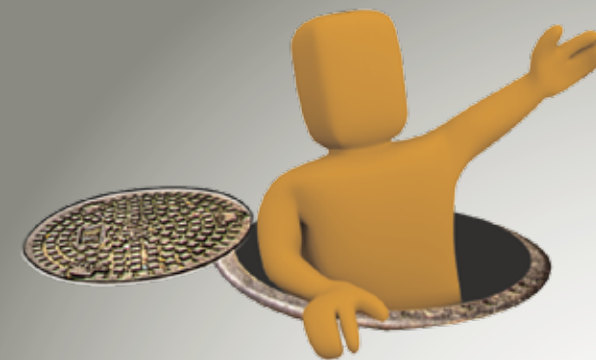
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PERLA

SUBMERSIBLE ELECTRIC PUMPS

in technopolymer



Single phase automatic submersible electric pumps in technopolymer for domestic use.

APPLICATIONS

- Draining flooded rooms (basements, cellars, garage)
- Small-scale irrigation of vegetable patches and gardens
- Recovery of rain water
- Movement of seepage water or draining of unfoul waste water

TECHNICAL DETAILS

- Modern design with ergonomic grip
- Standard mechanical seal
- Cable and float with quick coupling
- Supplied with 10 m power supply cable
- Plastic materials for greater resistance

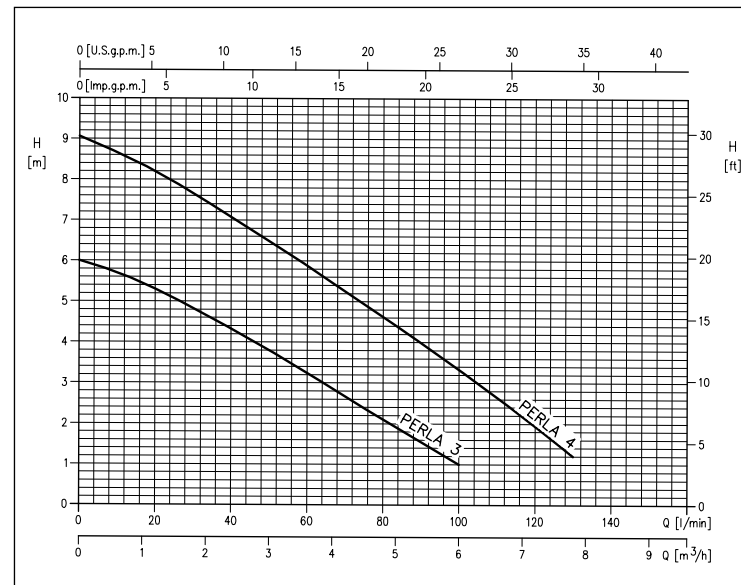
TECHNICAL DATA

- Maximum immersion: 3m
- Maximum temperature of the liquid: 40°C
- Self-ventilated 2 pole asynchronous motor
- Protection rating: IP68
- Class of insulation: F
- Single-phase voltage: 230V±10%, 50Hz
- Permanent capacitor inserted and thermo-amperometric protection with automatic rearm incorporated

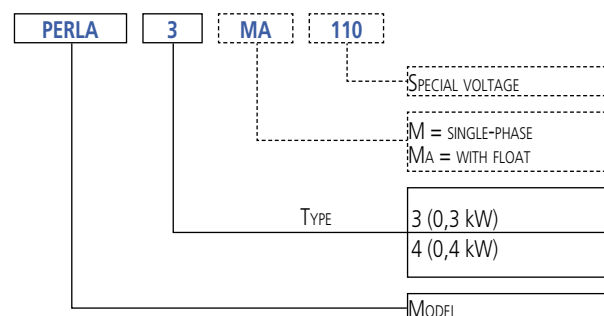
MATERIALS

- Pump body, filter base: PPE+30% fibreglass
- Cap with handle, motor cap: PPE+30% fibreglass
- Impeller: NORYL
- Motor body: in die-cast aluminium UNI 5076
- Pump shaft: in AISI 420F stainless steel
- Mechanical seal: Carbon/Ceramic/NBR
- Power supply cable: 10m type H05 RN-F (PERLA 3MA)
10m type H07 RN-F (PERLA 4MA)

PERFORMANCE CURVES (according to ISO 9906 Attachment A)



IDENTIFICATION CODE



PERLA

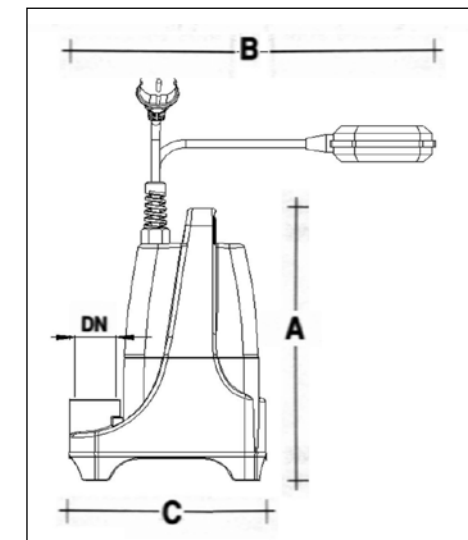
SUBMERSIBLE ELECTRIC PUMPS

in technopolymer

PERFORMANCE TABLE

Model	P.		Absorbed Curr. [A] 230V-50Hz 1~	Q=Flow rate H=Head [m]							
	[HP]	[kW]		l/min m³/h	20 1,2	40 2,4	60 3,6	80 4,8	100 6,0	120 7,2	130 7,8
PERLA 3 MA 10m	0,2	0,15	1,4	5,3	4,3	3,2	2,1	1,0			
PERLA 4 MA 10m	0,5	0,37	2,3	8,2	7,0	5,8	4,6	3,4	2,0	1,2	

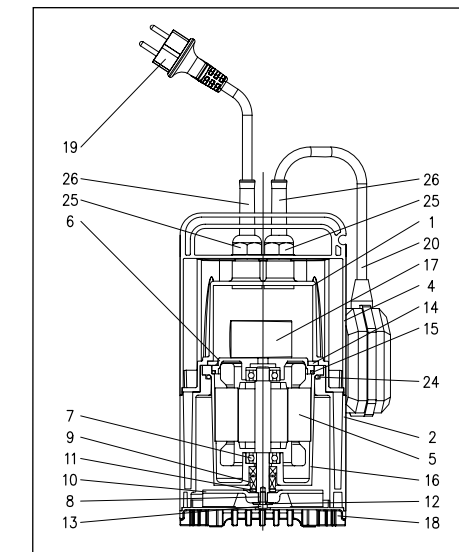
DIMENSIONS



DIMENSIONS TABLE

Model	Capacitor		Dimensions [mm]			Weight [kg]	DN
	[µF]	[Vc]	A	B	C		
PERLA 3 MA 10m	6,3	450	300	400	190	4,6	G1 ¼
PERLA 4 MA 10m	8	450	300	400	190	5,8	G1 ¼

SECTIONAL VIEW



MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
1	Motor cover	PPE + 40% F.V.	13	Screw	DIN 933 A2 10,9
2	Pump body	PPE + 30% F.V.	14	Gasket	NBR 70 SH
4	Cover	PPE + 30% F.V.	15	O-Ring	NBR 70 SH
5	Stator	LAM. P01/COPPER HD 200	16	Motor case	ALUMINIUM EN AB- 46100
6	Upp. bear. seat	PC±20% F.V. (PERLA 3-4)	17	Capacitor	-
7	Bearing	-	18	Filter	PPE + 30% F.V.
8	Shaft with rotor	AISI 420	19	Cable	H05 PERLA 3 - H07 PERLA 4
9	Mechanical seal	CARBON/CERAMIC/NBR	20	Float	H07 RN-F
10	Impeller	Noryl	24	O-Ring	NBR 70 SH
11	Mech. seal spacer	DIN 125 A2 140 HV	25	Cable gland nut	PA6 V-2
12	Impeller spacer	DIN 9021 A2 100 HV	26	Cable gland	EPDM 65 SH

OPTIMA

SUBMERSIBLE ELECTRIC PUMPS

in AISI 304



Submersible electric pumps for clean water with hydraulics in AISI 304 stainless steel.

APPLICATIONS

- Draining wells, garages, cellars or places subject to flooding
- Irrigation of gardens and vegetable patches
- Movement of seepage water or draining of unfoul waste water

TECHNICAL DETAILS

- Equipped with mechanical seal as per standard
- Reliable and corrosion proof
- Highly versatile
- They can be used in fixed or mobile installations
- Equipped with 5 m of H05 RN-F power supply cable for indoor use (10 m for outdoor use), with or without float

TECHNICAL DATA

- Maximum immersion: 5 m
- Maximum temperature of the liquid: 50°C
- Max. solids size for passage: 10 mm
- Asynchronous motor, 2 poles
- Class of insulation F
- IP68 Protection rating
- 230V ±10%, 50 Hz single phase voltage
- Discharge with nection G1¼

MATERIALS

- Pump body, suction grill, seal housing disc and motor pump body in AISI 304
- Impeller, nozzle and motor cover in technopolymer reinforced with fibreglass
- Shaft in AISI 303
- Standard mechanical seal (Carbon/Ceramic/NBR)

SPECIAL VERSIONS

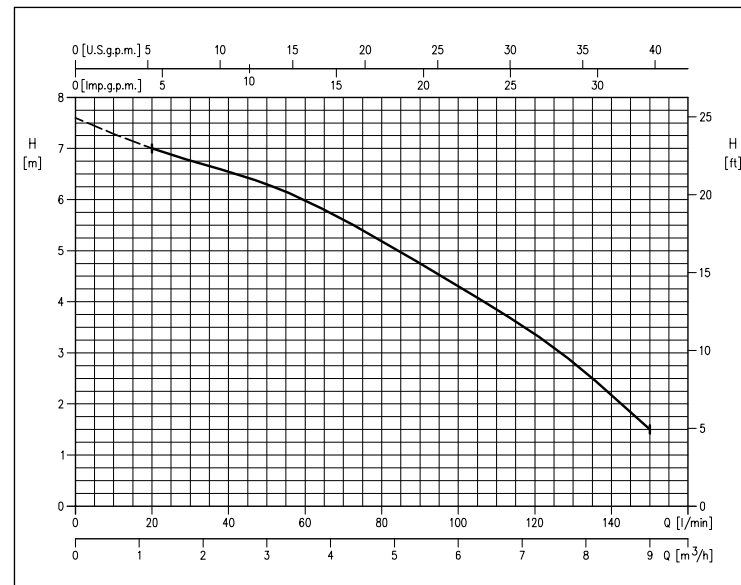
- MS version with small MS (Magnetic Switch) vertical magnetic float for clean waters
- MA version with float

ACCESSORIES (on request)

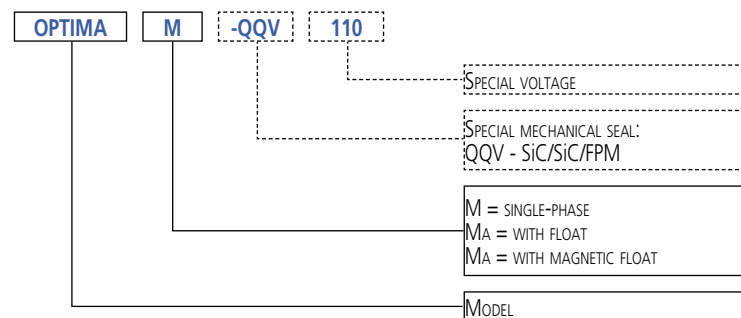
- 1¼ outlet with nection and relative clamp
- Minimum suction device up to 3 mm

For other accessories and control panels see from page 134

PERFORMANCE CURVES (according to ISO 9906 Attachment A)



IDENTIFICATION CODE



OPTIMA

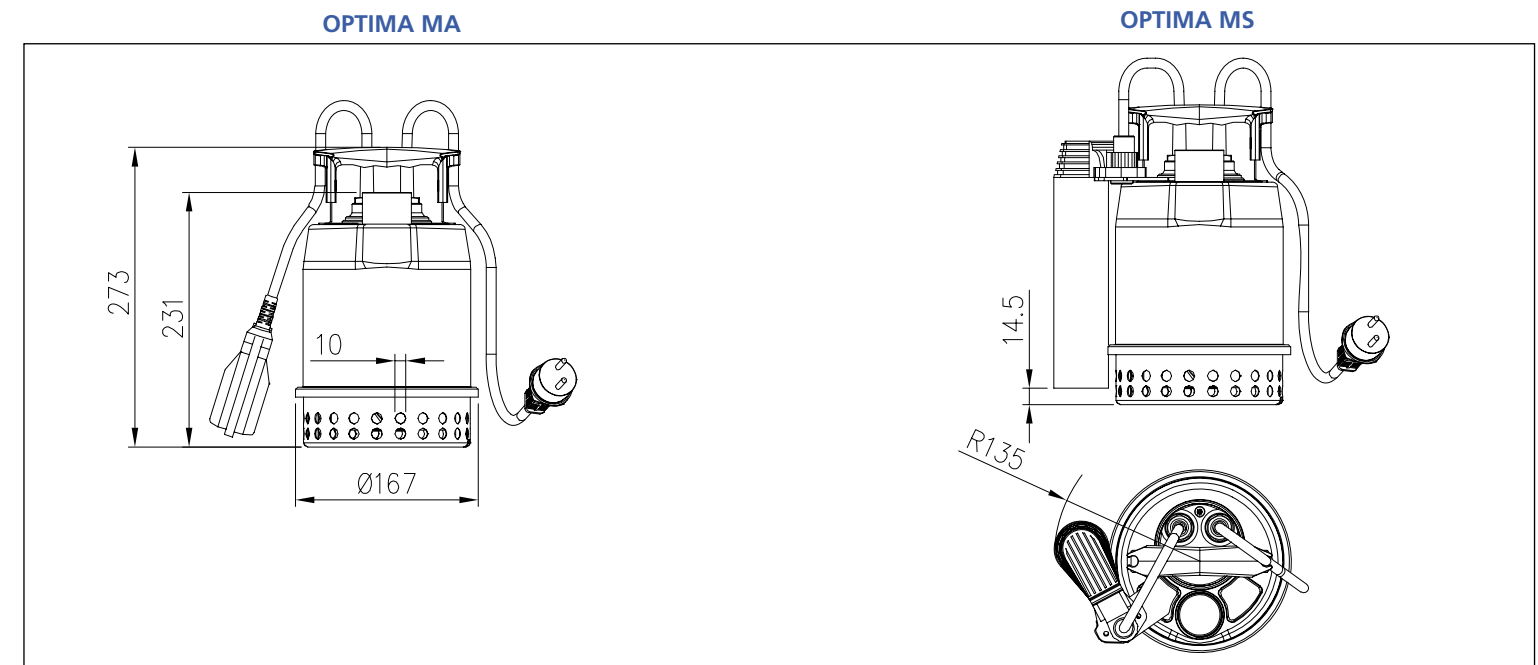
SUBMERSIBLE ELECTRIC PUMPS

in AISI 304

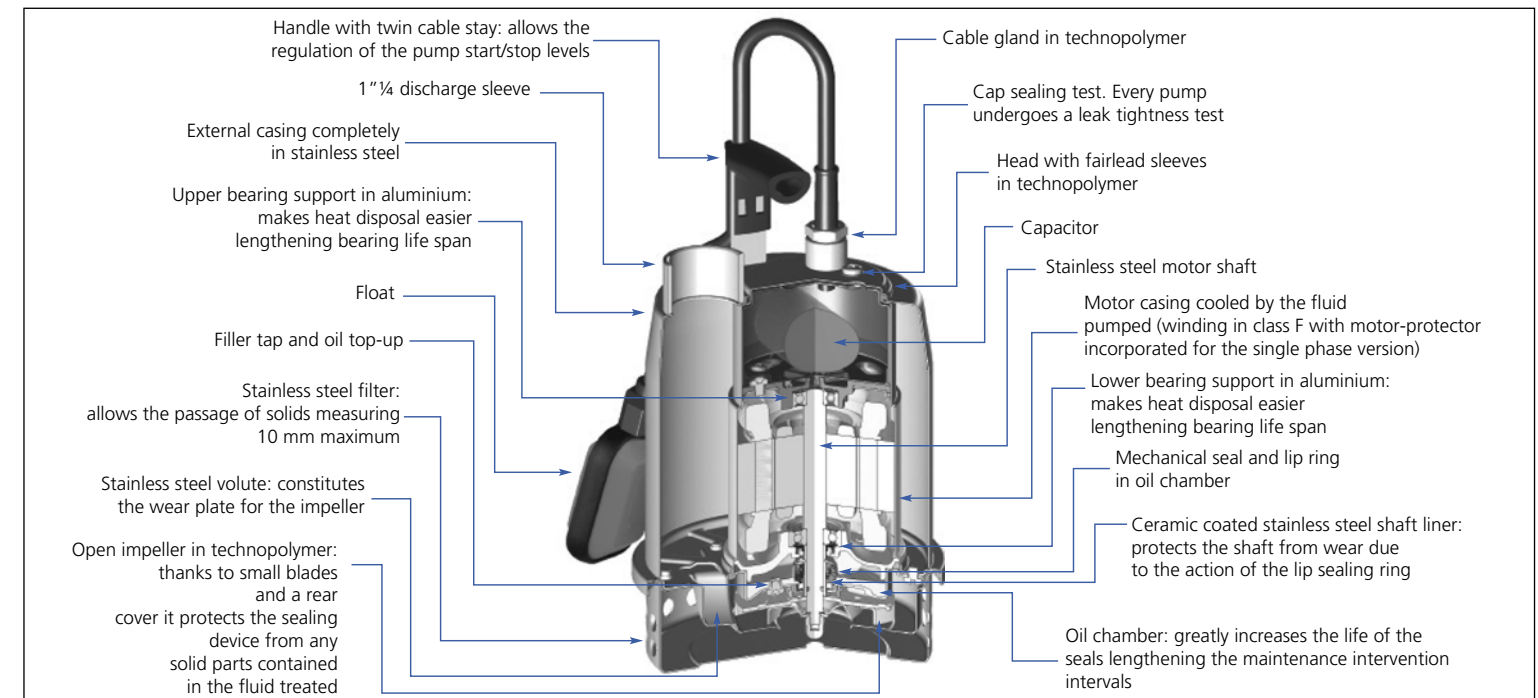
PERFORMANCE TABLE

Model	P.		Capacitor		Absorbed Curr. [A]	Q=Flow rate					Weight [kg]		
	[HP]	[kW]	µF	Vc		l/min	20	50	75	100		125	150
						m³/h	1,2	3	4,5	6	7,5	9	
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



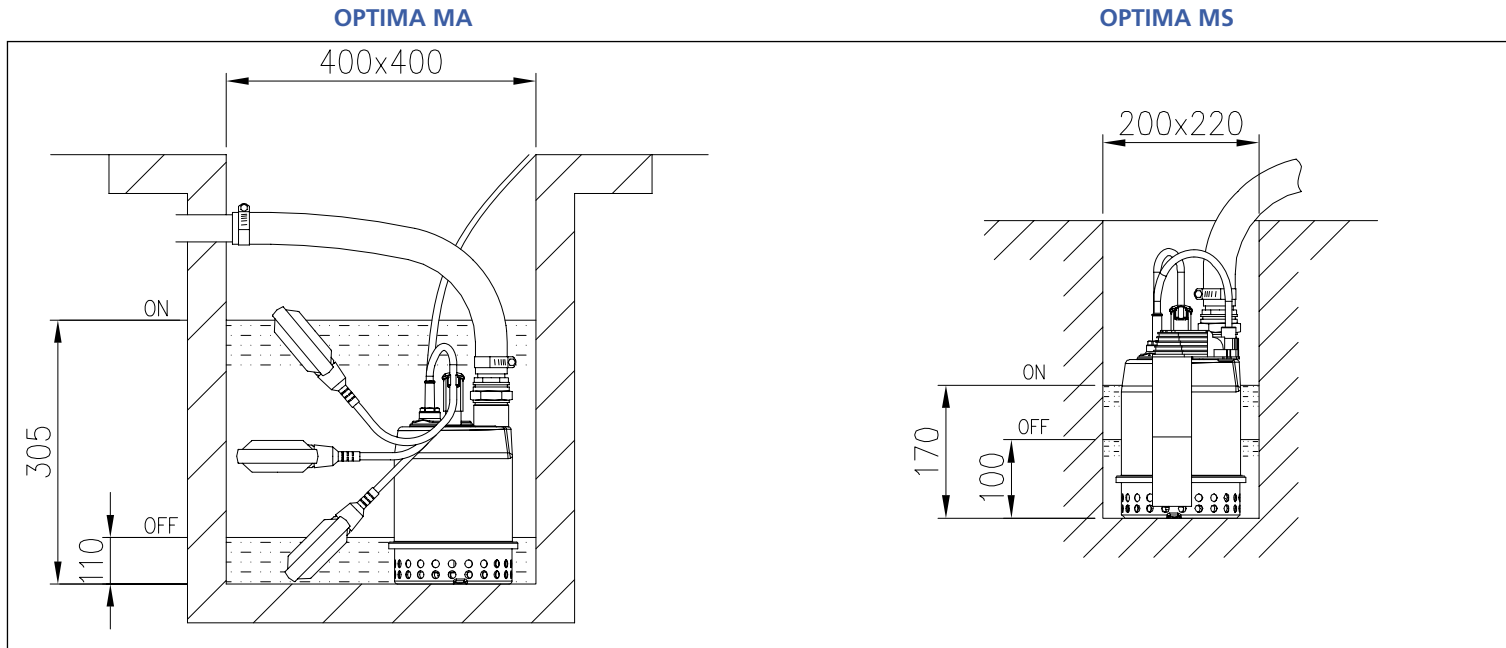
SECTIONAL VIEW



OPTIMA

SUBMERSIBLE ELECTRIC PUMPS
in AISI 304

INSTALLATION



OPTIONAL

MINIMUM SUCTION DEVICE

The minimum suction device allows to pump the liquid down to 3 mm from the ground (starting from at least 10 mm).

It is easily mounted on the OPTIMA, by simply pressing. The automatic playing of the pump with float switch doesn't allow to the minimum suction device to suck out the liquid up to 3 mm from ground level.

BEST ONE

SUBMERSIBLE ELECTRIC PUMPS
in AISI 304

Submersible electric pumps for clean water with hydraulics in AISI 304 stainless steel.

APPLICATIONS

- Draining basements, garages, cellars or places subject to flooding
- Supplying garden fountains
- Easy emptying of tanks and reservoirs

TECHNICAL DETAILS

- Standard mechanical seal
- New and revised design and shape
- Technologically and mechanically optimised
- Their versatility means they can be used in fixed or mobile installations
- Equipped with 5 m of H05 RN-F power supply cable for indoor use (10 m for outdoor use), with or without float

TECHNICAL DATA

- Maximum immersion: 5 m
- Maximum temperature of the liquid: 50°C
- Max. solids size for passage:
 - 10 mm
 - 20 mm for the VOX version (Vortex)
- Asynchronous motor, 2 poles
- Class of insulation F
- IP68 Protection rating
- 230V ±10%, 50Hz single phase voltage, 400 ±10%, 50Hz three phase voltage
- Discharge withnection: G1¼

MATERIALS

- External pump body, impeller, filter, motor cover, seal housing disc and motor case in AISI 304
- Shaft in AISI 303
- Mechanical seal in Carbon/Ceramic/NBR

SPECIAL VERSIONS

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

ACCESSORIES (on request)

- 1¼ outlet withnection and relative clamp
- Minimum suction device up to 3 mm (for BEST ONE M, MA, T only)

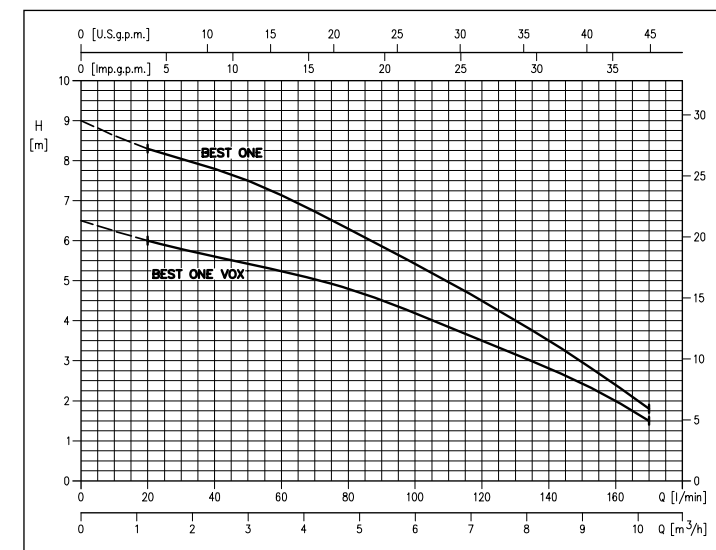
For other accessories and control panels see from page 134



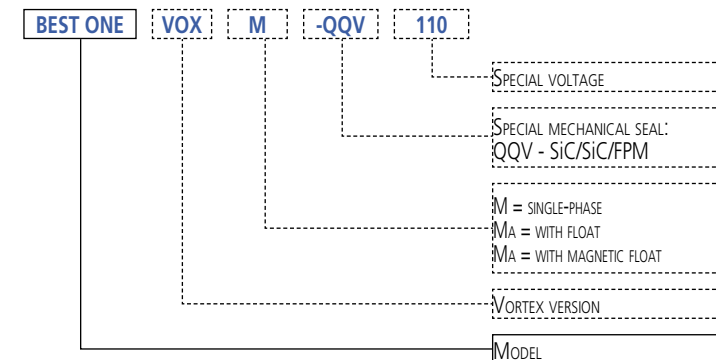
BEST ONE

BEST ONE VOX

PERFORMANCE CURVES (according to ISO 9906 Attachment A)



IDENTIFICATION CODE



BEST ONE

SUBMERSIBLE ELECTRIC PUMPS
in AISI 304

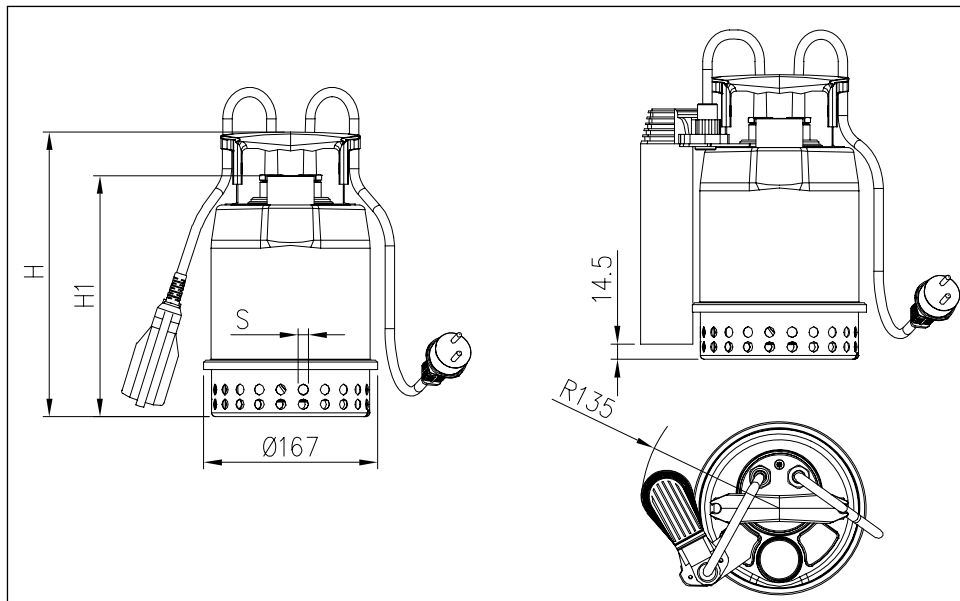
PERFORMANCE TABLE

Model		P ₁		Capacitor		Absorbed Curr. [A]		Q=Flow rate						
Single phase 230V	Three phase 400V	[HP]	[kW]	μF	Vc	Monof.	Trif.	l/min	20	40	80	120	160	170
								m ³ /h	1,2	2,4	4,8	7,2	9,6	10,2
								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

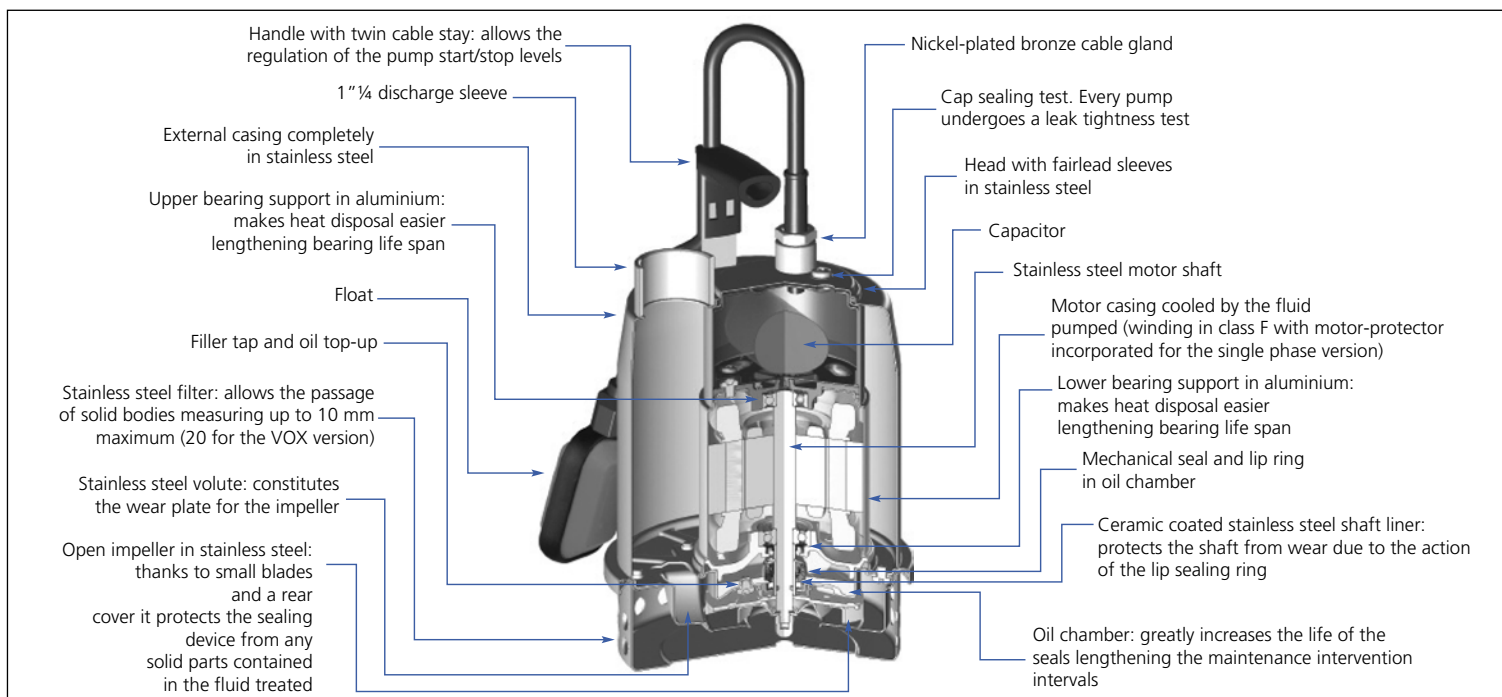
BEST ONE MS



DIMENSIONS TABLE

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



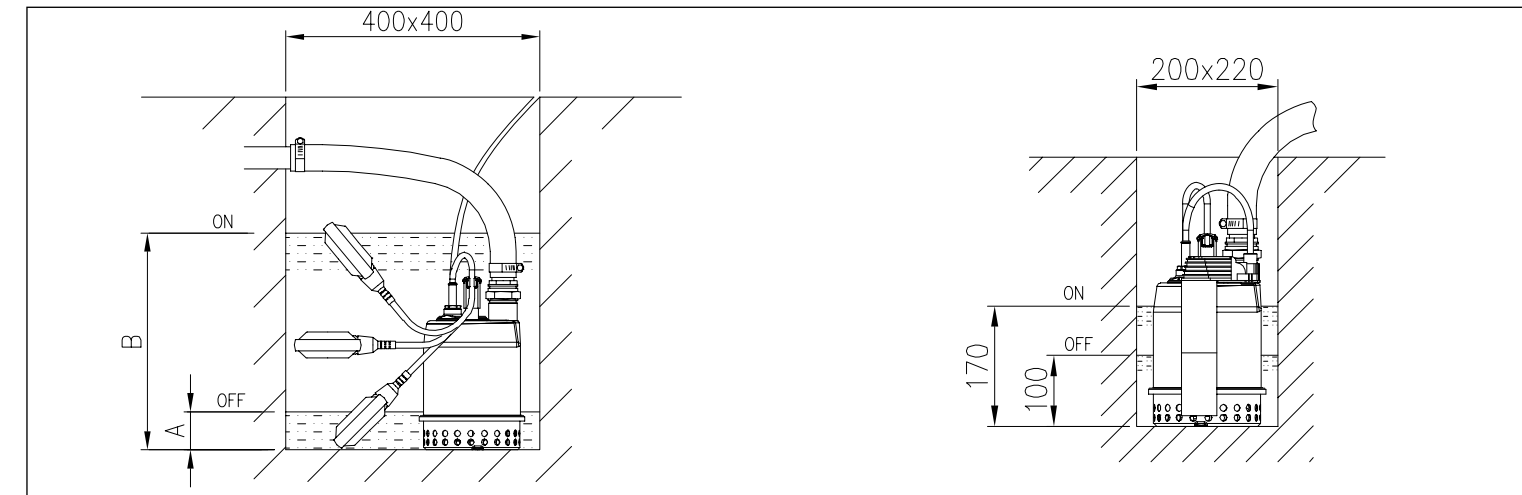
BEST ONE

SUBMERSIBLE ELECTRIC PUMPS
in AISI 304

INSTALLATION

BEST ONE MA / BEST ONE VOX MA

BEST ONE MS



INSTALLATION TABLE

Model	A	B
BEST ONE MA	110	305
BEST ONE VOX MA		330

OPTIONAL

MINIMUM SUCTION DEVICE



BEST 2-5

SUBMERSIBLE ELECTRIC PUMPS in AISI 304



Submersible electric pumps completely in AISI 304 stainless steel.

APPLICATIONS

- Moving seepage water
- Draining cellars, garages and basements
- Draining small to medium cellars

TECHNICAL DETAILS

- Versatile
- They can be used in fixed or mobile installations
- Equipped with 10 m of H07 RN-F power supply cable
- Available with or without float

TECHNICAL DATA

- Maximum immersion: 10 m
- Maximum temperature of the liquid: 35°C
- Max. solids size for passage: 10 mm
- Self-ventilated 2 pole asynchronous motor
- Class of insulation F
- IP68 Protection rating
- 230V ±10%, 50Hz single phase voltage, 400 ±10%, 50Hz three phase voltage
- Permanent capacitor inserted and thermo-amperometric protection with automatic rearm incorporated for the single phase motor
- Protection under user's responsibility for the three phase version
- G1½ Discharge withnection

MATERIALS

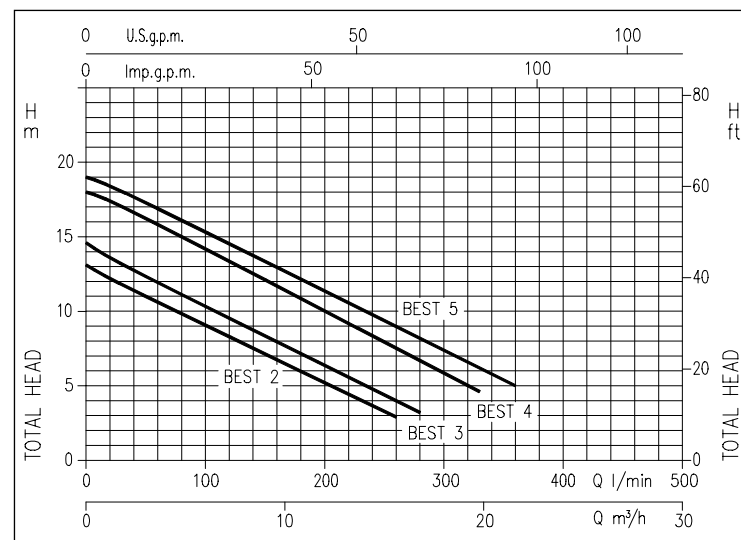
- Pump body, impeller, suction grill, motor cover, seal housing disc and motor case in AISI 304
- Shaft in AISI 303
- Twin mechanical seal with oil chamber:
 - upper in Carbon/Ceramic/NBR (motor side)
 - lower in SiC/SiC/NBR (pump side)

SPECIAL VERSIONS

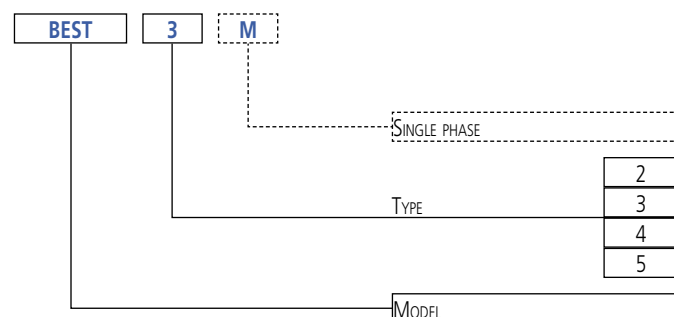
- MA version with float

For accessories and control panels see from page 134

PERFORMANCE CURVES (according to ISO 9906 Attachment A)



IDENTIFICATION CODE



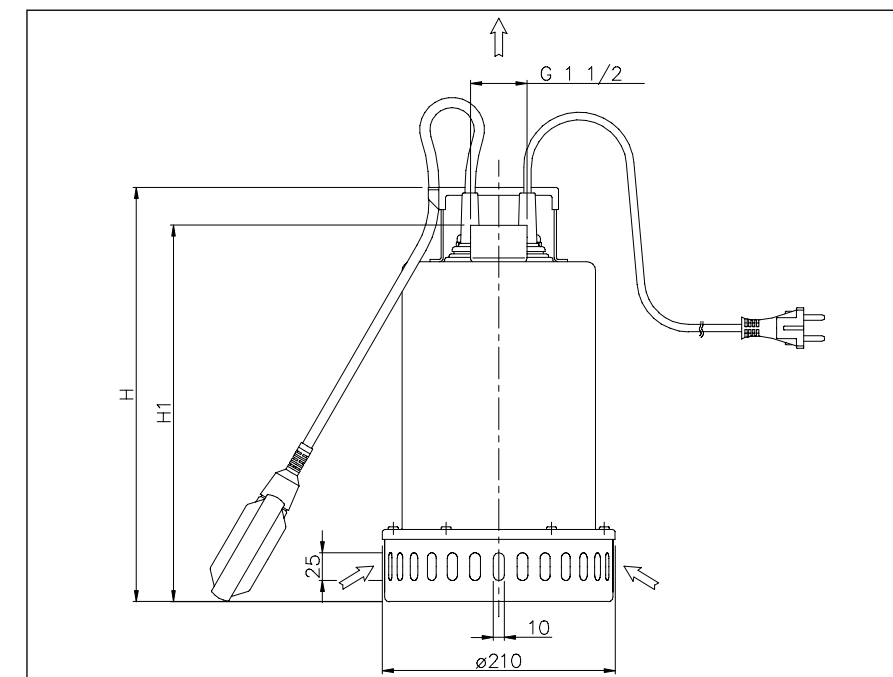
BEST 2-5

SUBMERSIBLE ELECTRIC PUMPS in AISI 304

PERFORMANCE TABLE

Model	Single phase 230V	Three phase 400V	P _e		Capacitor		Absorbed Curr. [A]		Q=Flow rate													
			[HP]	[kW]	μF	Vc	1~	3~	l/min	20	40	80	120	160	170	200	260	280	300	330	360	
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	-	

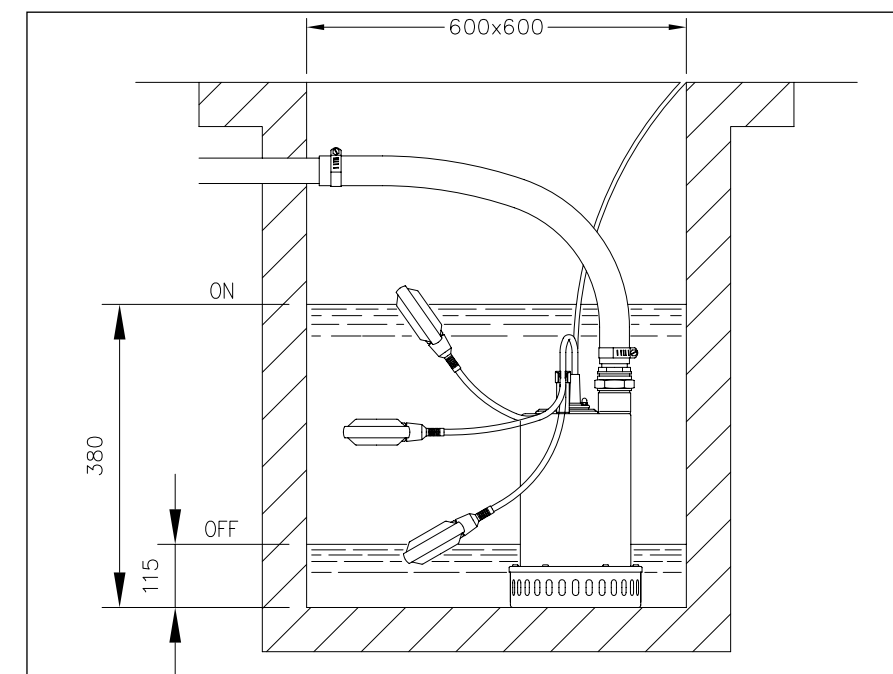
DIMENSIONS



DIMENSIONS TABLE

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

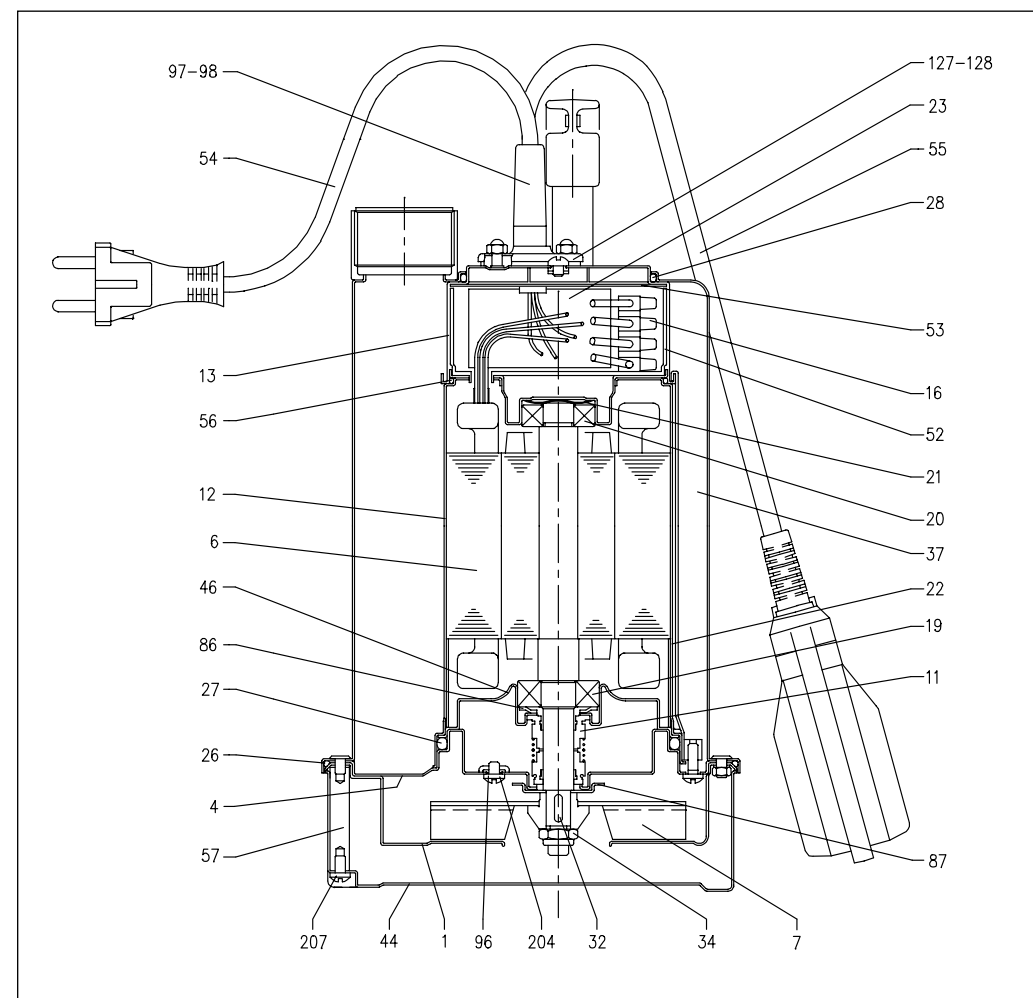


BEST 2-5

SUBMERSIBLE ELECTRIC PUMPS

in AISI 304

SECTIONAL VIEW



MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
1	Volute	AISI 304	37	External pump body	AISI 304
4	Motor support	AISI 304	44	Filter	AISI 304
6	Shaft with rotor	AISI 303	46	Bearing support	AISI 304
7	Impeller	AISI 304	52	P/cap. box	PA66 reinf. with fibreglass
11	Mechanical seal	NBR	53	Box lid	PA66
12	Motor case	-	54	Cable	-
13	Motor cover	AISI 304	55	Float	-
16	Box	-	56	O-Ring	NBR
19	Pump side bearing	-	57	Nut	AISI 303
20	Fan side bearing	-	86	Washer	AISI 304
21	Adjusting ring	STEEL C70	87	Wear ring	AISI 304
22	Tie-rod	AISI 304	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
28	O-Ring	NBR	128	Cable gland	AISI 304
32	Key	AISI 304	204	Screw	STEEL A2 UNI 7323
34	Impeller nut	AISI 304	207	Screw	STEEL A2 UNI 7323

RIGHT

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER

in AISI 304



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

APPLICATIONS

- Moving foul waste liquids withtaining solid substances and/or suspended filamentary substances
- Emptying seepage water
- Moving foul waste waters (sanitary services)
- Emptying cesspits and draining into sewers

TECHNICAL DETAILS

- Equipped with 5 m of H07 RN-F power supply cable (on request 10 m of H07 RN-F cable)
- Available with or without float

TECHNICAL DATA

- Maximum immersion: 10 m
- Maximum temperature of the liquid: 50°C
- Max. solids size for passage: 35 mm
- Self-ventilated 2 pole asynchronous motor
- Class of insulation F
- IPX8 Protection rating
- 230V ± 10%, 50Hz single phase voltage
- 400V ± 10%, 50Hz three phase voltage
- Permanent capacitor inserted and thermo-amperometric protection with automatic rearm incorporated for the single phase motor
- Protection under user's responsibility for the three phase version
- Discharge withnection: G1½

MATERIALS

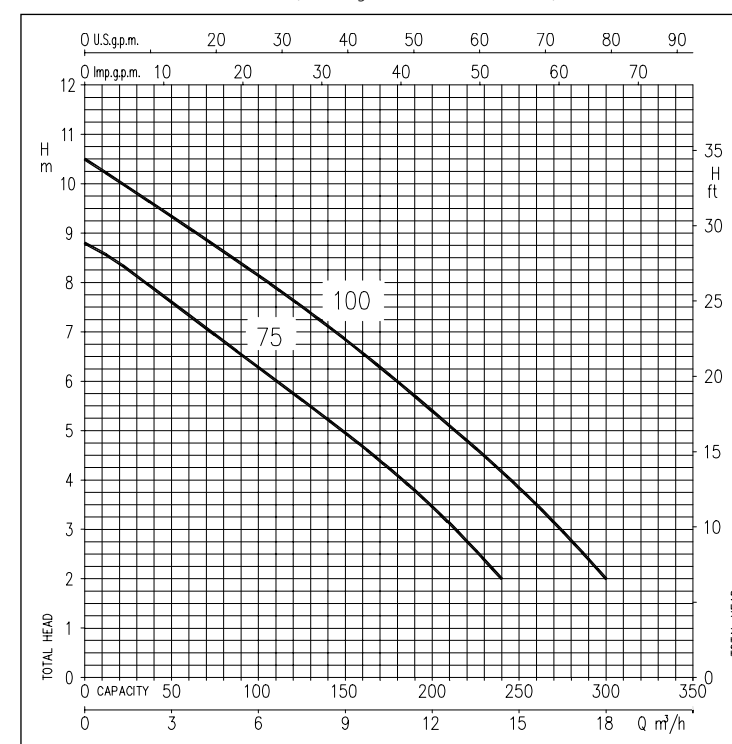
- body, impeller, motor cover, seal housing disc and motor case in AISI 304
- Shaft in AISI 303
- Twin mechanical seal with oil chamber:
 - upper in Carbon/Ceramic/NBR (motor side)
 - lower in SiC/SiC/NBR (pump side)

SPECIAL VERSIONS

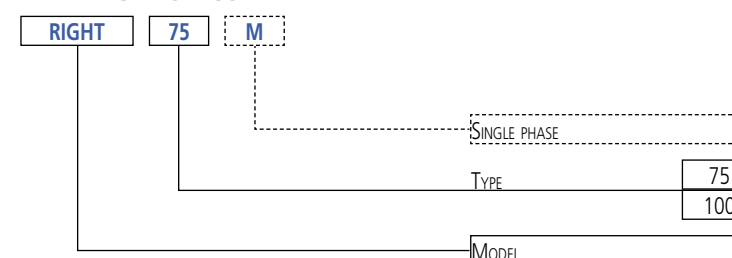
- MA version with float
- Version with 10 m of cable

For accessories and control panels see from page 134

PERFORMANCE CURVES (according to ISO 9906 Attachment A)



IDENTIFICATION CODE



RIGHT

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER
in AISI 304

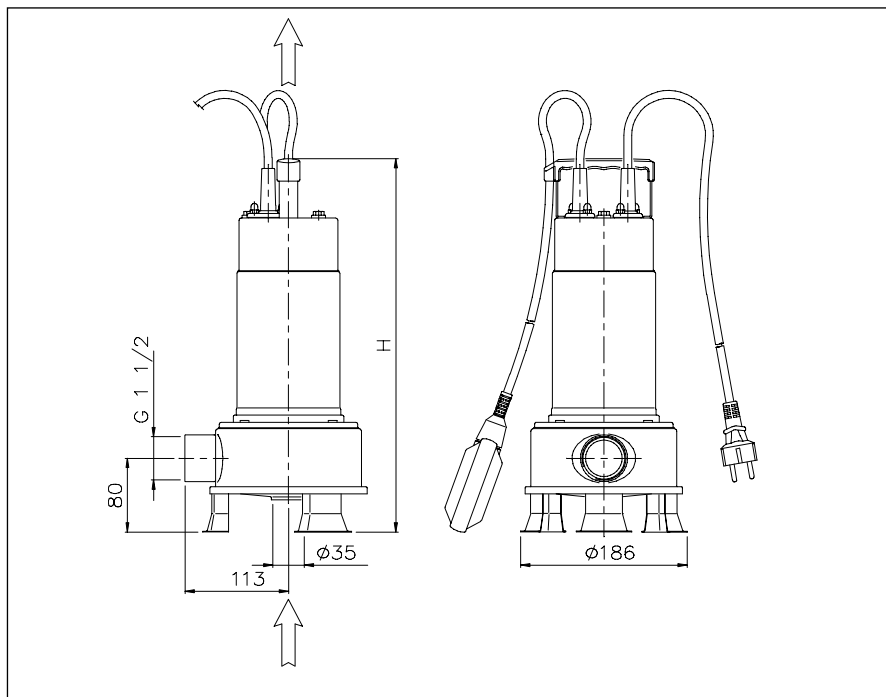
RIGHT

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER
in AISI 304

PERFORMANCE TABLE

Model		P _e		Capacitor		Absorbed Curr. [A]		Q=Flow rate							
Single phase 230V	Three phase 230/400V	[HP]	[kW]	μF	Vc	1~	3~	l/min	40	80	120	160	200	240	300
								m ³ /h	2	4,8	7,2	9,6	12	14,4	18
								H=Head [m]							
RIGHT 75 M	RIGHT 75	0,75	0,55	20	450	4,8	2,1	7,8	6,8	5,7	4,7	3,4	2,0	-	-
RIGHT 100 M	RIGHT 100	1	0,75	31,5	450	5,7	2,6	9,5	8,6	7,6	6,6	5,4	4,2	2,0	-

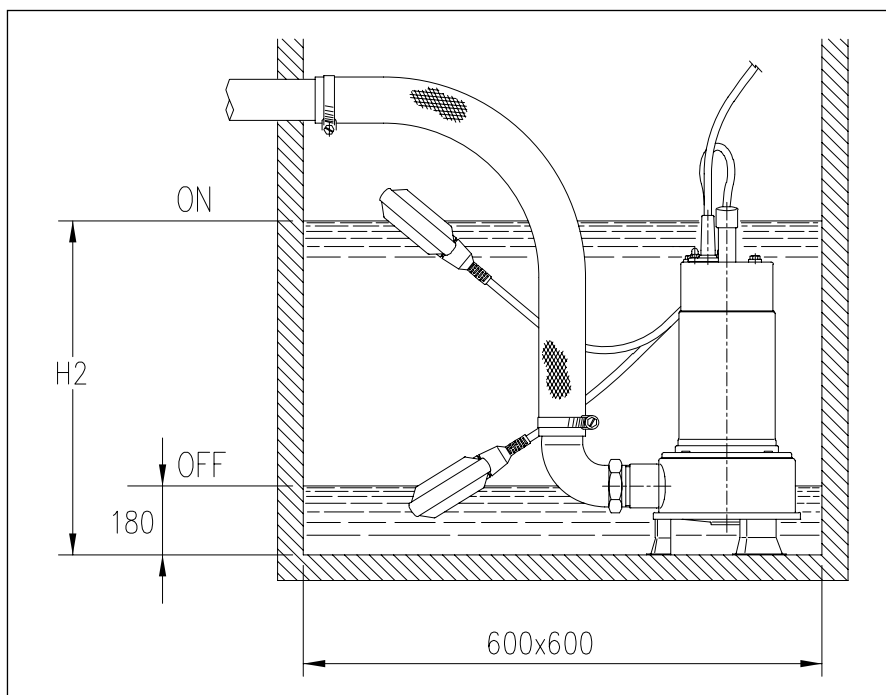
DIMENSIONS



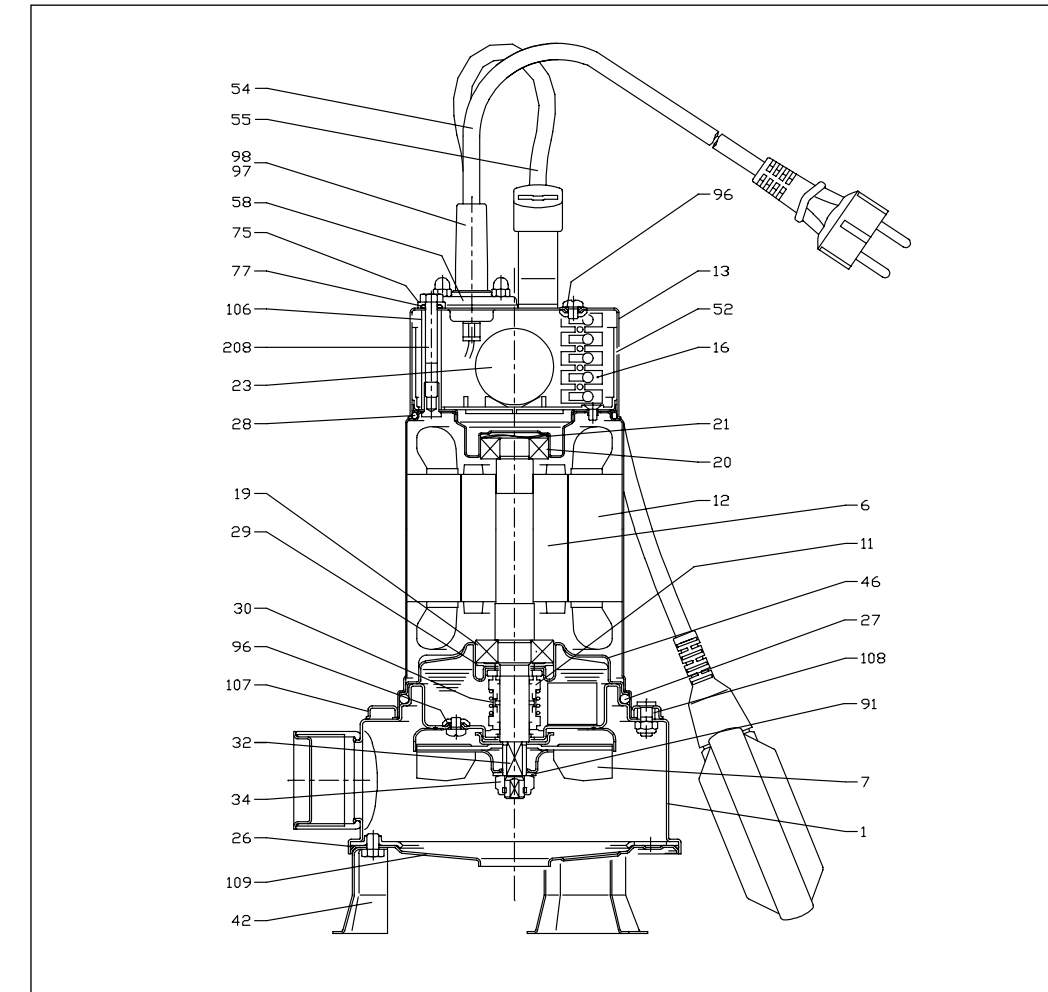
DIMENSIONS TABLE

Model	Dimensions [mm]		Weight [kg]
	H	H2	
RIGHT 75	405	410	10,0
RIGHT 100	430	430	11,5

INSTALLATION



SECTIONAL VIEW



DIMENSIONS TABLE

Ref.	Name	Material	Ref.	Name	Material
1	Pump body	AISI 304	42	Feet	AISI 304
6	Shaft with rotor	AISI 303	46	Lower bearing supp.	AISI 304
7	Impeller	AISI 304	52	Capacitor box	PAGE REINFORCED WITH FIBREGLASS
11	Mechanical seal	Ceramic/Carbon/NBR	54	Cable	-
12	Motor case	-	55	Float	-
13	Cover	AISI 304	58	Cable stay	AISI 304
16	Box	-	75	Washer	AISI 303
19	Lower bearing	-	77	O-Ring	NBR
20	Upper bearing	-	91	Washer	AISI 304
21	Adjusting ring	AISI 304	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
28	O-Ring	NBR	107	Fixing flanges	AISI 304
29	Washer	AISI 304	108	Gasket	NBR
30	Spacer for mechanical seal	BRASS	109	Suction side lid	AISI 304
32	Key	AISI 304	208	Screw	AISI 304
34	Nut	AISI 303	-	-	-

DW - DW VOX

SUBMERSIBLE ELECTRIC PUMPS FOR SEWAGE
in AISI 304



Submersible electric pumps in AISI 304 stainless steel for sewage.

APPLICATIONS

- Evacuation of civil and industrial waste waters
- Drainage of wells and excavations
- Draining sub-layer zones
- Generally moving foul waste liquids also withtaining solid substances and/or suspended filamentary substances
- Emptying seepage water
- Moving sewage (sanitary services)
- Emptying cesspits

TECHNICAL DETAILS

- Equipped with 10 m of H07 RN-F power supply cable
- Available with or without float
- Envisioned with single channel impeller or vortex type (VOX) and flanged (F)

TECHNICAL DATA

- Maximum immersion: 10 m
- Maximum temperature of the liquid: 40°C
- Max. solids size for passage: 50 mm
- Self-ventilated 2 pole asynchronous motor
- Class of insulation F
- IPX8 Protection rating
- 230V ±10%, 50Hz single phase voltage, 400 ±10%, 50Hz three phase voltage
- Permanent capacitor inserted and thermo-amperometric protection with automatic rearm incorporated for the single phase motor
- Protection under user's responsibility for the three phase version
- Threaded version: ø 50 discharge, G2 discharge
- Flanged version: discharge ø 50 PN 10

MATERIALS

- Pump body, impeller, motor cover, seal housing disc and motor case in AISI 304
- Shaft in AISI 303
- Twin mechanical seal with interposed oil chamber:
 - upper in Carbon/Ceramic/NBR (motor side)
 - lower in SiC/SiC/NBR (pump side)
- Spacer in cast iron (only for DW-DW VOX 300)

SPECIAL VERSIONS

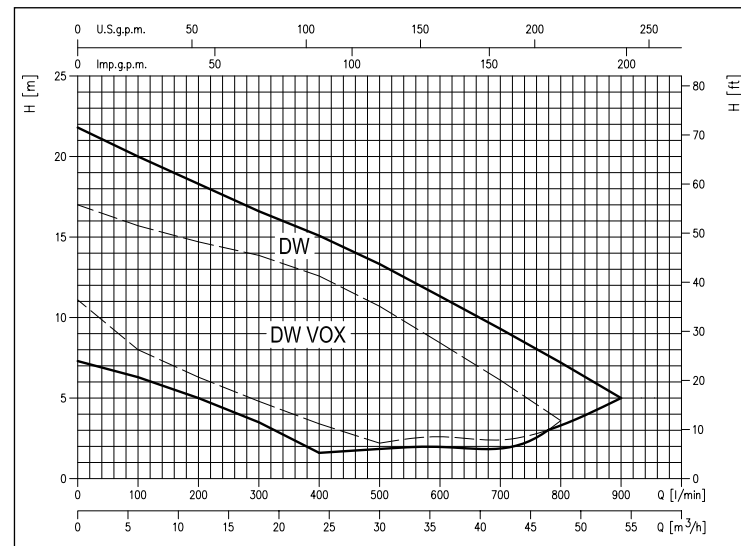
- VOX version (VORTEX impeller)

ACCESSORIES (on request)

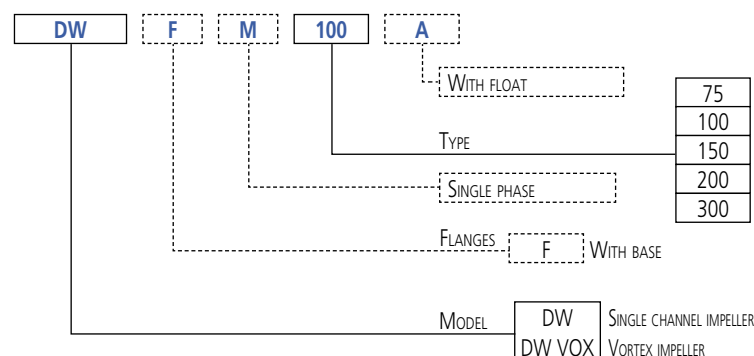
- Cast iron DW lowering device kit - threaded 2"
- Steel DW lowering device kit - threaded 2"
- Steel DWF lowering device kit - flanged DN50

For other accessories and control panels see from page 134

PERFORMANCE RANGE (according to ISO 9906 Attachment A)



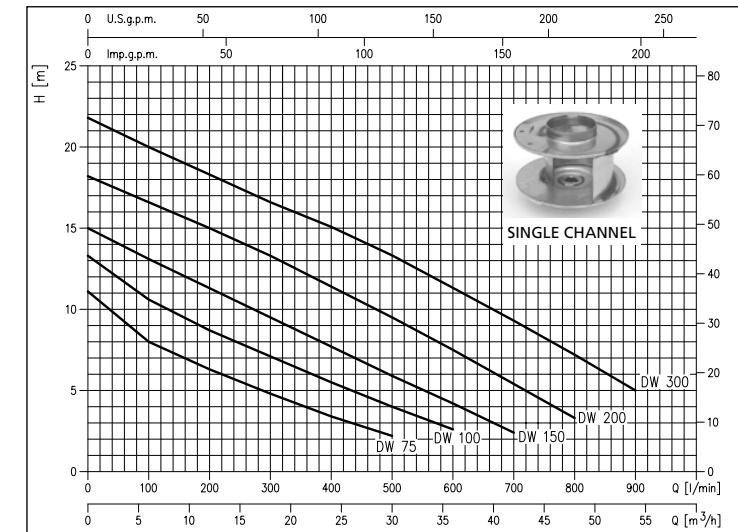
IDENTIFICATION CODE



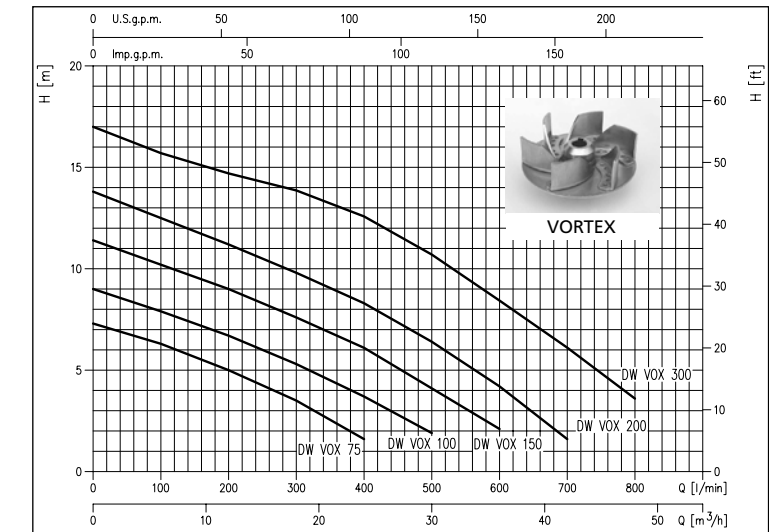
DW - DW VOX

SUBMERSIBLE ELECTRIC PUMPS FOR SEWAGE
in AISI 304

PERFORMANCE CURVES DW (according to ISO 9906 Attachment A)



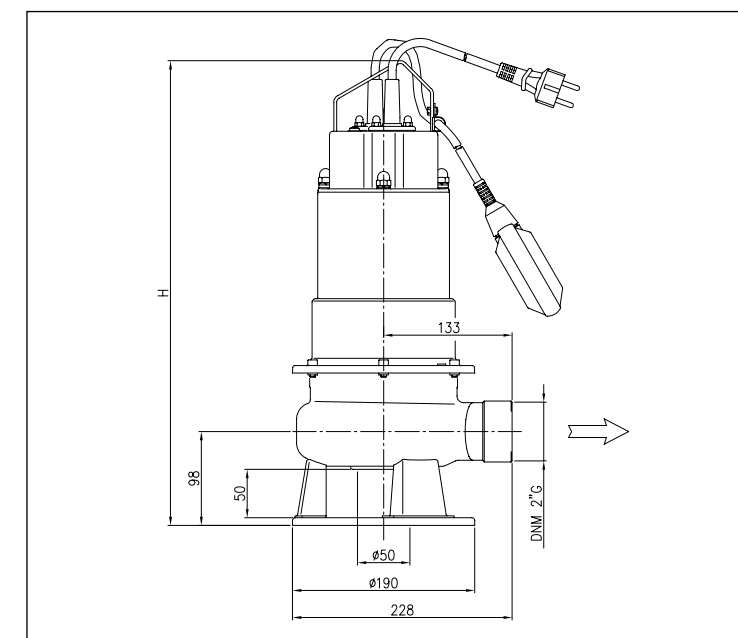
PERFORMANCE CURVES DW VOX (according to ISO 9906 Attachment A)



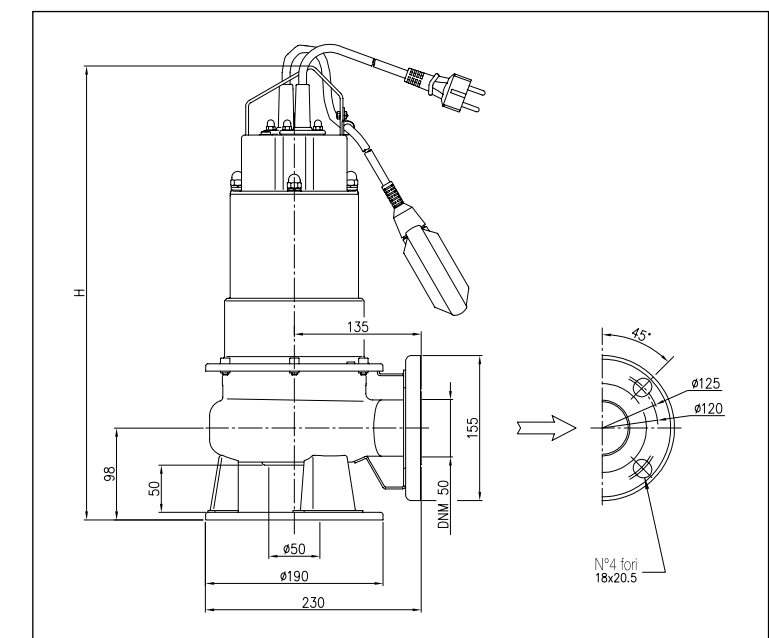
PERFORMANCE TABLE

Model		P.		Capacitor		Absorbed Curr. [A]		Q=Flow rate											
Single phase 230V	Three phase 400V	[HP]	[kW]	µF	Vc	1~	3~	l/min m³/h	H=Head [m]										
									100	200	300	400	500	600	700	800	900		
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



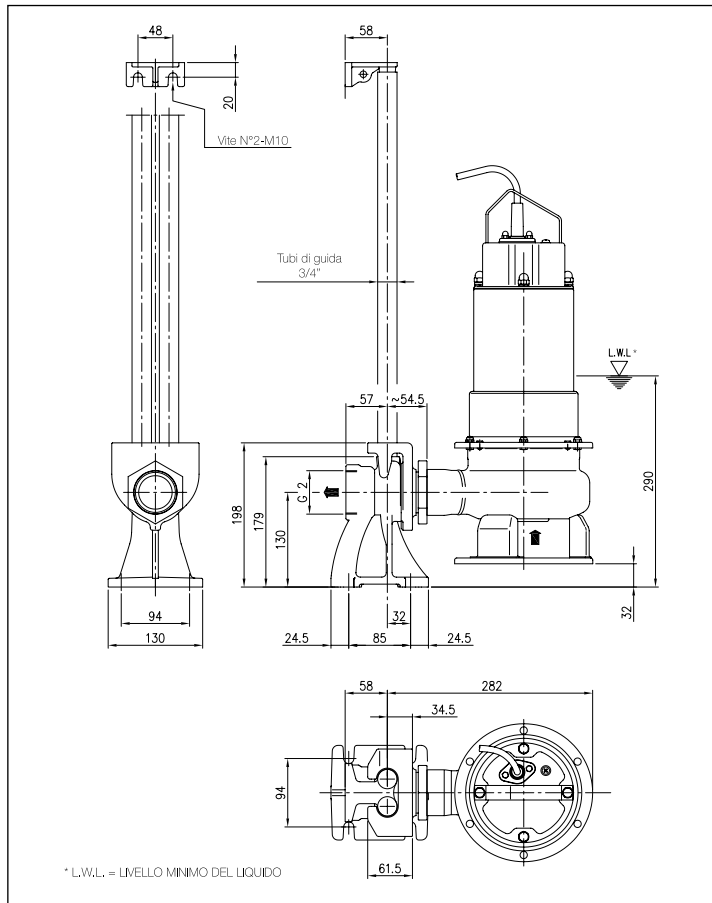
DIMENSIONS DWF - DWF VOX



DW - DW VOX

SUBMERSIBLE ELECTRIC PUMPS FOR SEWAGE
in AISI 304

DW - DW VOX COUPLING KIT DIMENSIONS

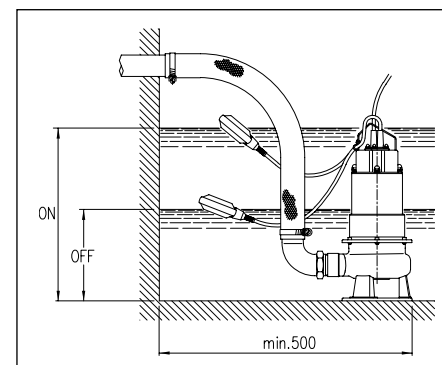


DIMENSIONS TABLE

Model		Dimensions [mm] H		Weight [kg]	
		1~	3~	1~	3~
DW 75	DW VOX 75	486	486	16	15,4
DW 100	DW VOX 100	516	486	18	16,8
DW 150	DW VOX 150	516	516	19,4	18,6
DW 200	DW VOX 200	-	516	-	20
DW 300	DW VOX 300	-	546	-	25,8

Model		Dimensions [mm] H		Weight [kg]	
		1~	3~	1~	3~
DWF 75	DW VOXF 75	486	486	16,8 (16,4)	16,2 (16)
DWF 100	DW VOXF 100	516	486	18,8 (18,4)	17,6 (17,2)
DWF 150	DW VOXF 150	516	516	20,2 (19,8)	19,4 (18,9)
DWF 200	DW VOXF 200	-	516	-	20,8 (20,4)
DWF 300	DW VOXF 300	-	546	-	26,6 (26,2)

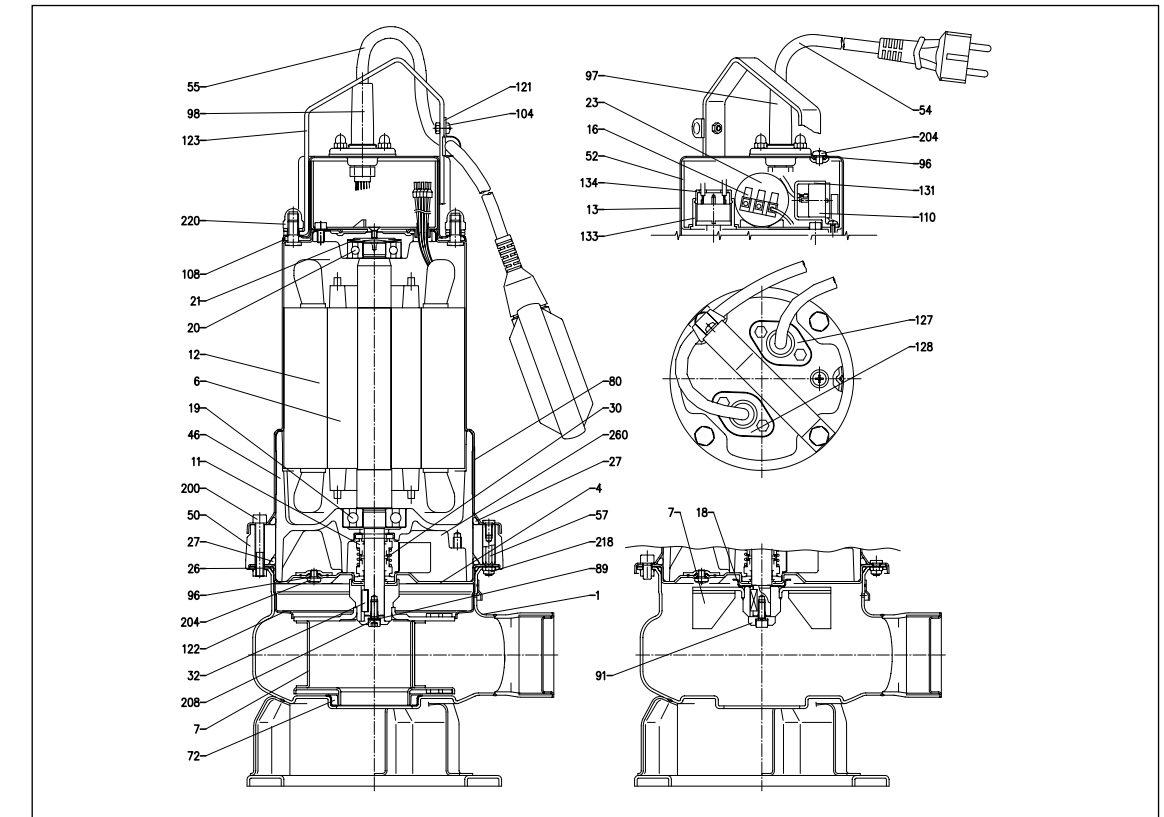
INSTALLATION



DW - DW VOX

SUBMERSIBLE ELECTRIC PUMPS FOR SEWAGE
in AISI 304

SECTIONAL VIEW



MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
1	Pump body	AISI 304	57	Spacer [3]	AISI 304
4	Seal housing disc	AISI 304	72	Wear ring [5]	NBR
6	Rotor shaft	AISI 303	89	Washer	AISI 304
7	Impeller	AISI 304	91	Washer [1]	AISI 304
11	Pump side mechanical seal	SIC/SIC/NBR	96	O-Ring	NBR
11	Motor side mechanical seal	CARBON/CERAMIC/NBR	97	Power supply cable	NBR
12	Pump body	-	98	Cable gland for float [4]	NBR
13	Motor cover	AISI 304	104	Float cable stay [4]	NBR
16	Terminal box	-	108	Motor cover gasket	NBR
18	Seal protection [1]	AISI 304	110	Motorprotector [2]	-
19	Pump side bearing	-	121	Supp. for float [4]	AISI 304
20	Motor side bearing	-	122	Impeller prot. ring [6]	AISI 304
21	Adjusting ring	STEEL C70	123	Handle	AISI 304
23	Capacitor [2]	-	127	Cable withnector	AISI 304
26	O-Ring	NBR	128	Withnector [4]	AISI 304
27	O-Ring	NBR	131	Motorprotector support [7]	PA66 REINFORCED WITH FIBREGLASS
27	O-Ring [3]	NBR	133	Motorprotector probe support [7]	ALUMINIUM
30	Mechanical seal spacer	BRASS	134	Motorprotector probe support lid [7]	PA6
32	Key	AISI 304	200	Screw	STEEL A2 UNI 7323
46	Bearing support	G20	204	Screw	STEEL A2 UNI 7323
50	Spacer [3]	G20	208	Screw	STEEL A2 UNI 7323
52	Cap. box	PA66 REINFORCED WITH FIBREGLASS	218	Nut	STEEL A2 UNI 7323
54	Power supply cable	-	220	Nut	STEEL A2 UNI 7323
55	Float [4]	-	260	Lubr. liquid	OIL

[1] Except DW-DW VOX 300
[2] For single phase only

[3] Only for DW-DW VOX 300
[4] For single phase without float only

[5] For DW only
[6] Except DW VOX 150,200 and 30

[7] For DW150 single phase only



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

TECHNICAL FEATURES

MOTOR PROTECTION
In-built thermal overload or miniature thermal protectors

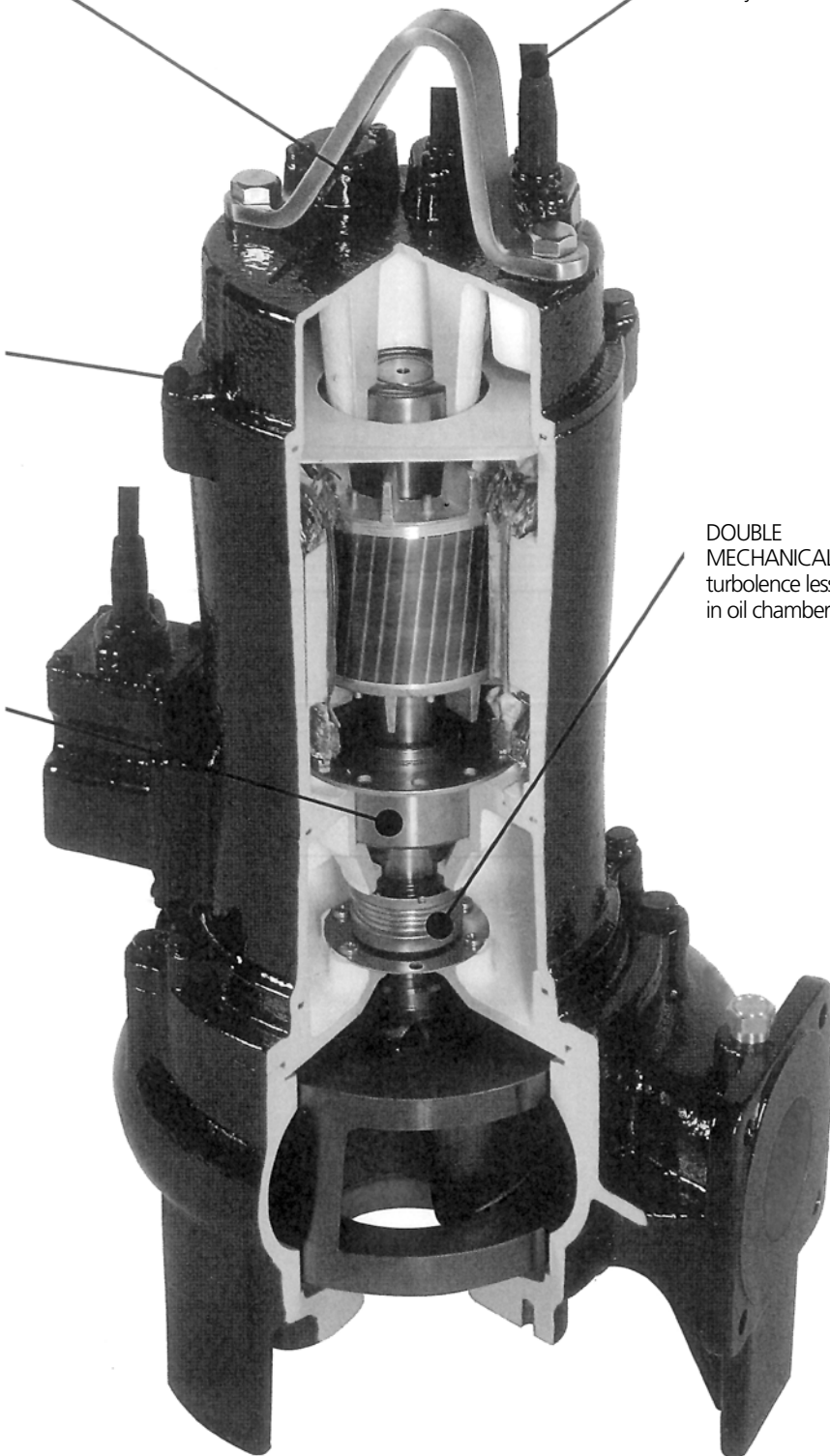
CABLE ENTRY
Unique vulcanised, three way sealing cable entry prevents water entry

ALL FASTENERS
made of
STAINLESS STEEL

DOUBLE MECHANICAL SEAL
turbulence less
in oil chamber





BALL BEARINGS are
permanently lubricated
high temperature type

RUN DRY CONDITION
because all EBARA
D'Series pumps
incorporate built in
overload protection and
oil lubricated double
mechanical seals, the
pumps will not be
damaged by accidental
run dry conditions



D SERIES (DS - DSF, DVS, DRS, DL - DL W/C, DML - DMLF, DMLV - DMLVF, DRD)

SELECTION TABLE

Model	DS/DSF	DVS	DRS	DL
No. of poles	2	2	2	4
Liquid handled	Clean water and rainwater	Sewage with solids	Sewage with solids and fibres	Sewage with solids and fibres
Synchronous Speed	2850	2850	2850	1450
Impeller	 Semi-open	 Non-clogged semi-vortex	 Open with grinder device at inlet	 Open double channel
Max solid diameter	From 5 to 10 mm	From 21 to 41 mm	From 6 to 7 mm	From 35 to 90 mm

SELECTION TABLE

Model	DLC e DLB	DL W/C(with cutter)	DML/DMLF	DMLV/DMLVF	DRD
No. of Poles	4	4	4 (DML) and 2 (DMLF)	2, 4, 6	2, 4, 6, 8
Liquid handled	Sewage with solids and fibres	Sewage with solids and fibres	Sewage with solids	Sewage with solids	Sewage with solids
Synchronous Speed	1450	1450	1450(DML) e 2850 (DMLF)	950, 1450, 2850	2850, 1450, 950, 750
Impeller					
	Vitex	Open Single-channel	Single-channel	Vortex	Double-channel/ three-channel
Max solid diameter	Da 35 a 90 mm	-	76 mm	Da 30 a 150 mm	Da 30 a 140 mm

SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAN WATER AND RAINWATER

in cast iron



Submersible pumps with semi-open impeller for clean water and rainwater.

APPLICATIONS

- Purification tank drainage
- Rain and spring water drainage
- Water supply

TECHNICAL DETAILS

- Efficient semi-open impeller
- Strainer prevents blockages
- Shaft seal upper and lower part (DS)

TECHNICAL DATA

- Maximum temperature of the liquid: 40°C
- Max solids size for passage: 5 mm (50DS)
6 mm (65DS) (40DSF 1.1, 1.8 kW)
7 mm (80DS) (40DSF 5.7 kW)
8 mm (100DS)
10 mm (65DSF)
- Max fibers length: 50mm (All DS models)
- 2 poles motor
- Insulation class F (DS)
- Insulation class H (DSF)
- Degree protection :IP68
- 380-415±10%, 50Hz threephase voltage (DS)
230±10%, 50Hz singlephase voltage (DSF)
400/690±10%, 50Hz threephase voltage (DSF)
- Flanges: DN50, DN65, DN80, DN100 (DS)
DN40, DN65 (DSF)
- Power up to 15,9kW

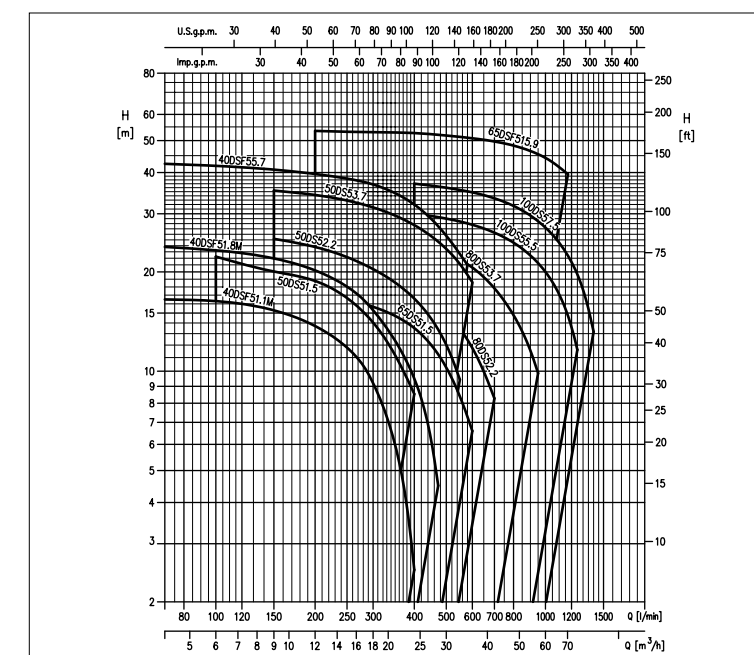
MATERIALS

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

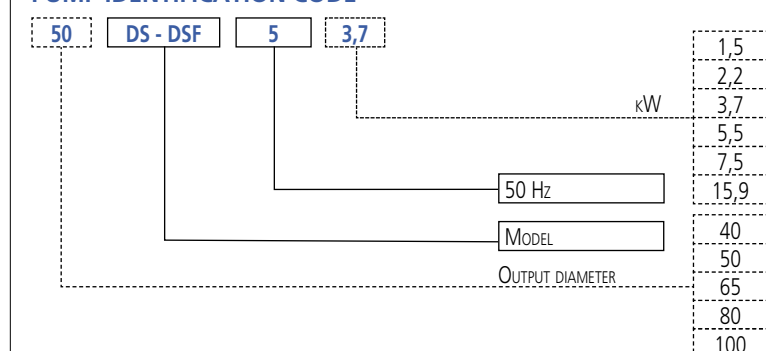
ACCESSORIES (ON REQUEST)

- see from page 134

PERFORMANCE CHART



PUMP IDENTIFICATION CODE





DS - DSF

SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAN WATER AND RAINWATER

in cast iron



DS - DSF

SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAN WATER AND RAINWATER

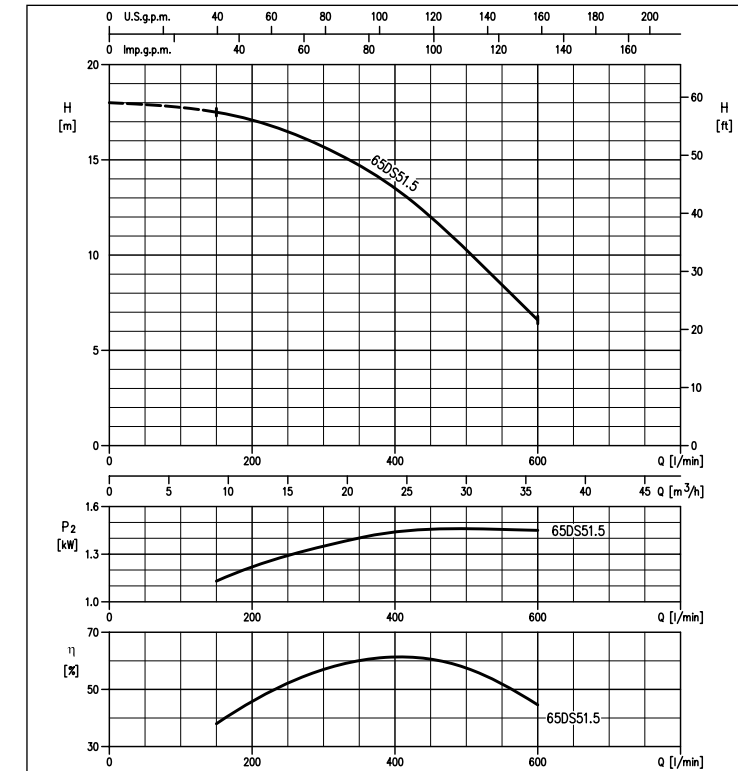
in cast iron



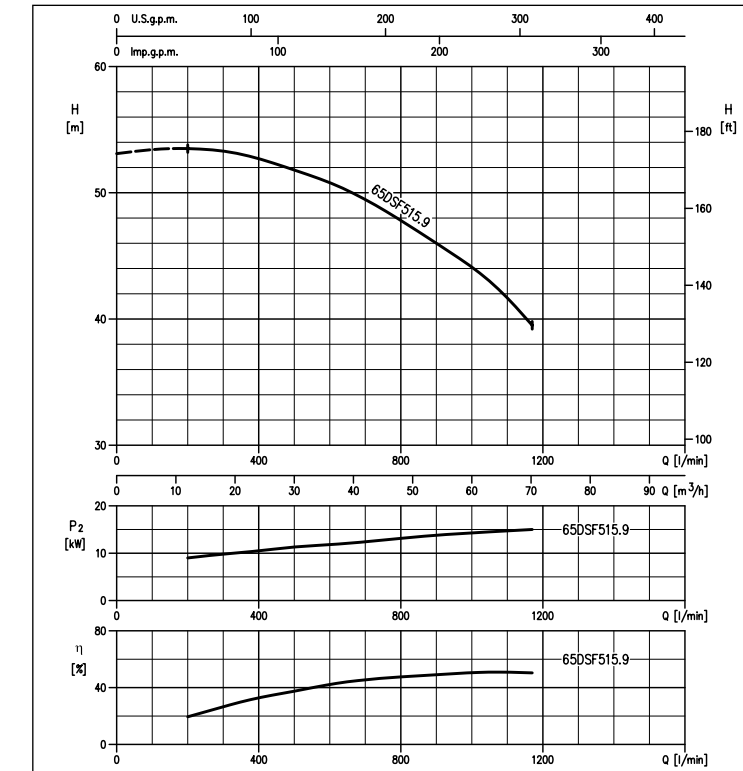
PERFORMANCE TABLE

Model	P ₂		Q=Flow rate																					
	[HP]	[kW]	l/min	70	100	150	200	250	300	400	450	473	500	550	580	600	700	800	950	1000	1170	1200	1250	1400
			m ³ /h	4	6	9	12	15	18	24	27	28	30	33	35	36	42	48	57	60	70	72	75	84
40DSF51.1M	1,5	1,1	16,5	16,1	15,3	14,1	12	9,2	2,5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40DSF51.8M	2,5	1,8	23,8	23,2	22	20,3	18,3	15,3	9,5	6	4,5	-	-	-	-	-	-	-	-	-	-	-	-	-
40DSF55.7	7,5	5,7	42,5	42	41,5	40	38,9	36,8	32	29	27,5	25,8	23	21	-	-	-	-	-	-	-	-	-	-
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	14,4	13,3	12	9,4	-	-	-	-	-	-	-	-	-	-	-
50DS53.7	5	3,7	-	-	35,3	34,2	32,9	31,4	27,7	25,7	24,6	23,5	21,1	19,5	18,6	-	-	-	-	-	-	-	-	-
65DS51.5	2	1,5	-	-	17,5	17,1	16,5	15,7	13,5	12	11,2	10,3	8,5	7,3	6,6	-	-	-	-	-	-	-	-	-
65DSF515.9	21,5	15,9	-	-	-	54	53,5	53,5	52,5	52	52	52	51,5	51	51	49,5	48	45	44	39,5	-	-	-	-
80DS52.2	3	2,2	-	-	-	20,8	20,2	19,4	17,6	16,4	15,8	15	13,4	12,5	11,8	8,3	-	-	-	-	-	-	-	-
80DS53.7	5	3,7	-	-	-	-	26,3	25,8	24,6	23,7	23,3	22,8	21,8	21,2	20,6	17,8	14,8	9,9	-	-	-	-	-	-
100DS55.5	7,5	5,5	-	-	-	-	-	30,7	30	29,5	29,3	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	36,6	36,3	36	35,5	35,1	34,8	33,4	31,7	28,5	27,3	22,5	21,4	19,7	13,2	-

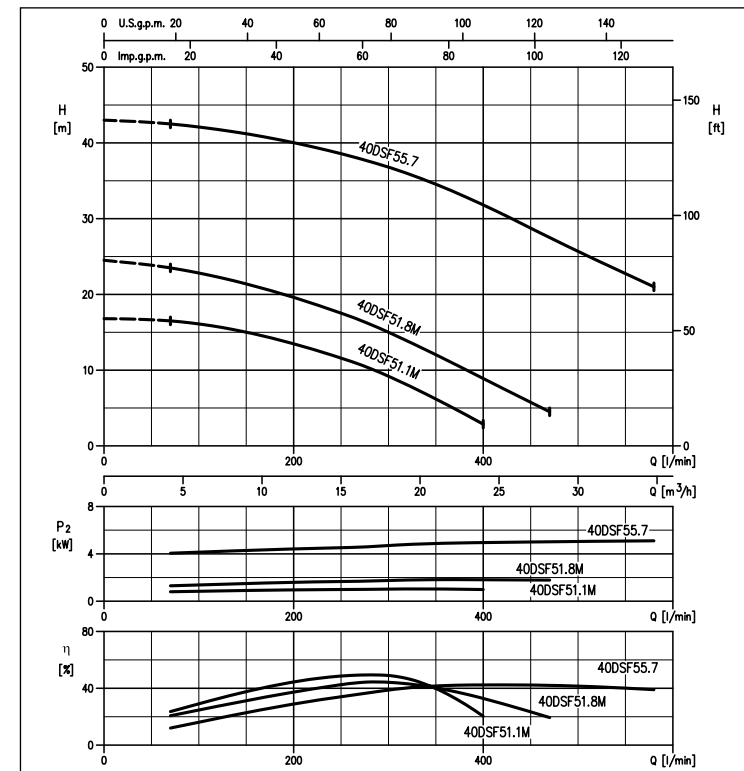
65DS51.5 (1.5 kW) range PERFORMANCE CURVES



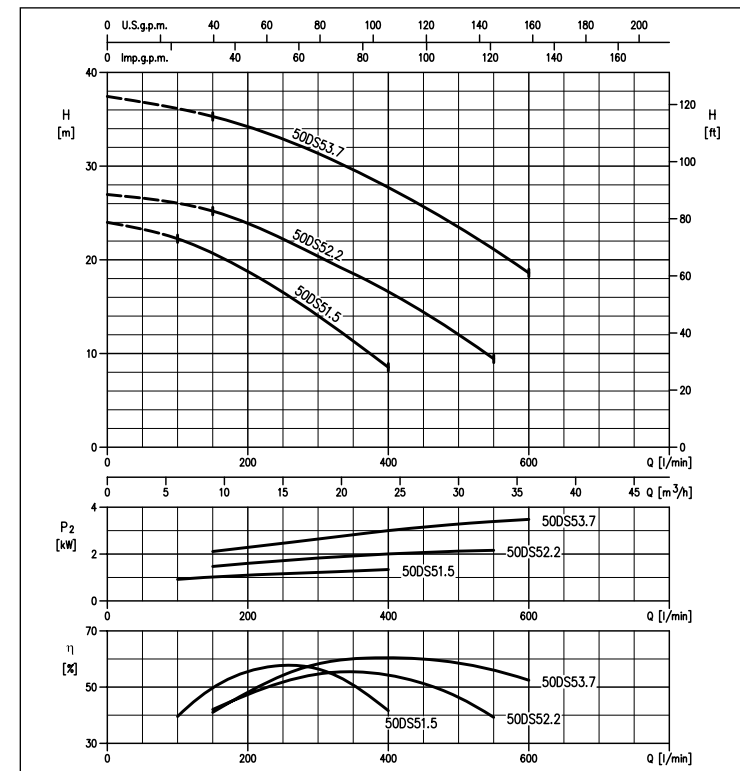
65DSF515.9 (15.9 kW) range PERFORMANCE CURVES



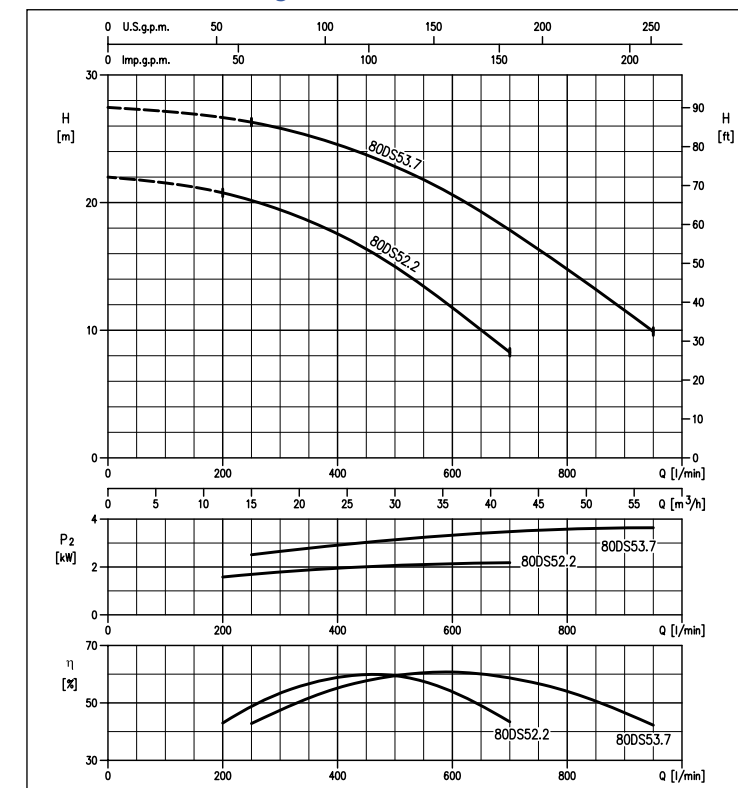
40DSF51.1M (1.1 kW) range PERFORMANCE CURVES 40DSF51.8M (1.8 kW) range 40DSF55.7 (5.7kW) range



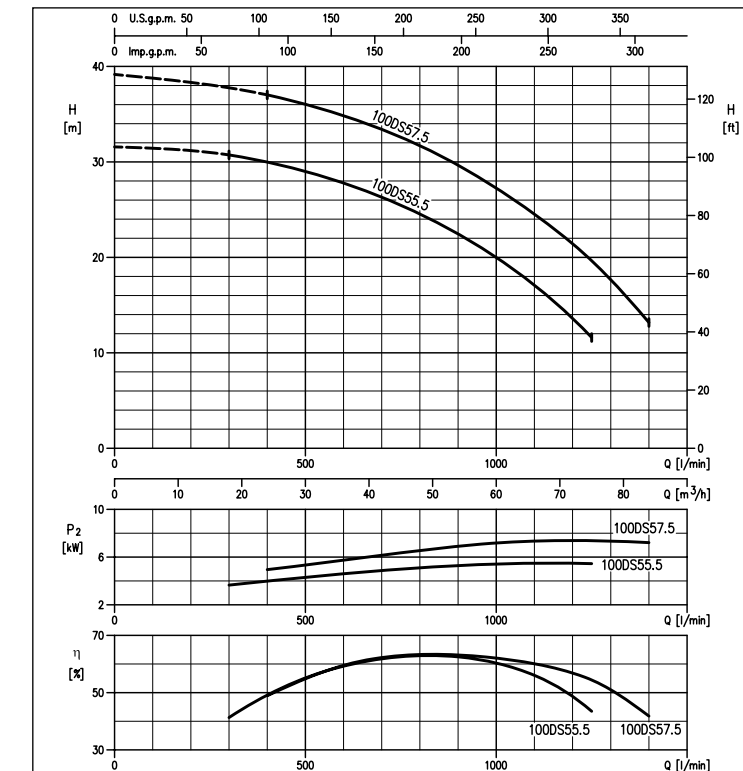
50DS51.5 (1.5 kW) range PERFORMANCE CURVES 50DS52.2 (2.2 kW) range 50DS53.7 (3.7 kW) range



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



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



DS - DSF

SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAN WATER AND RAINWATER

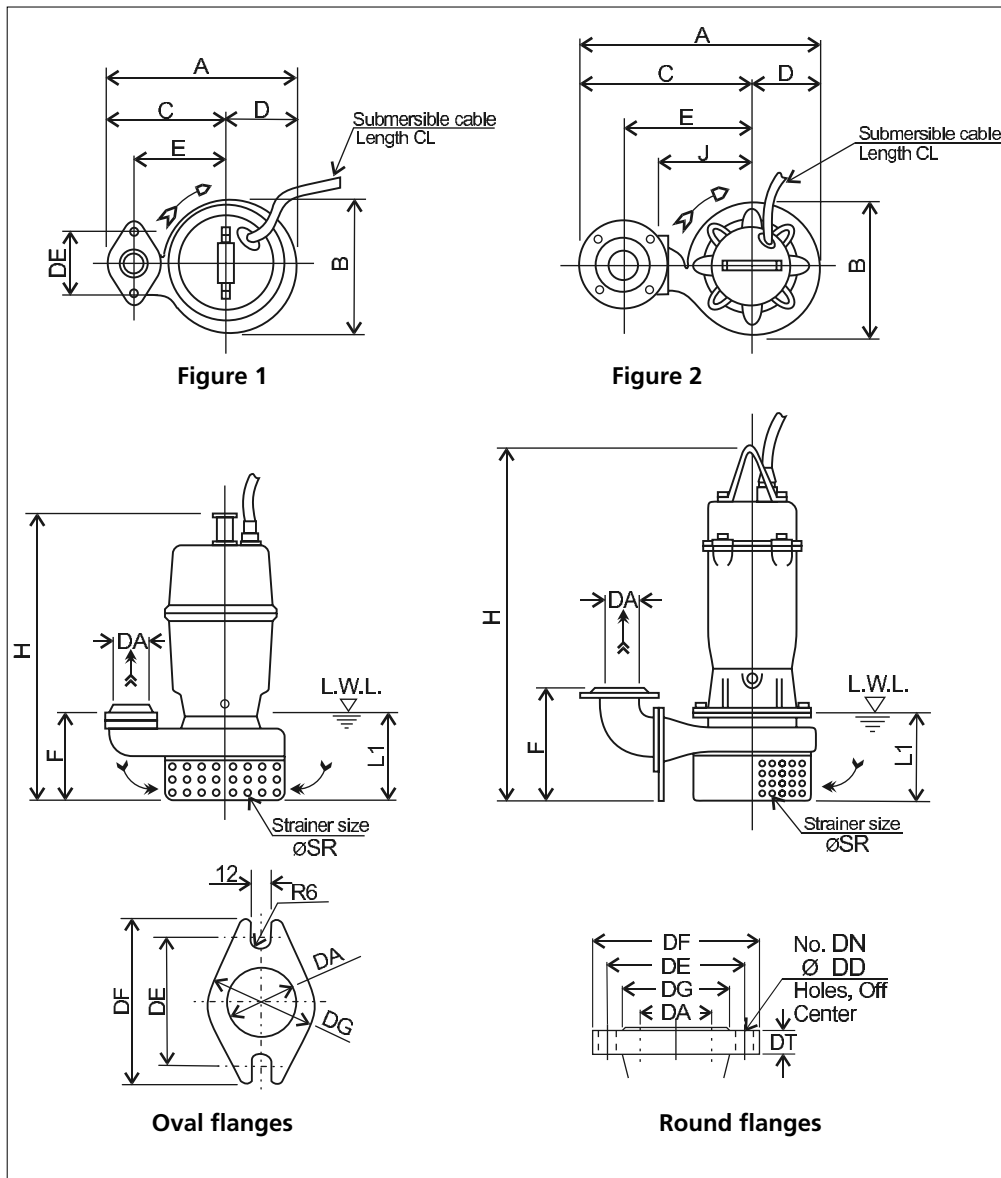
in cast iron

DS - DSF

SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAN WATER AND RAINWATER

in cast iron

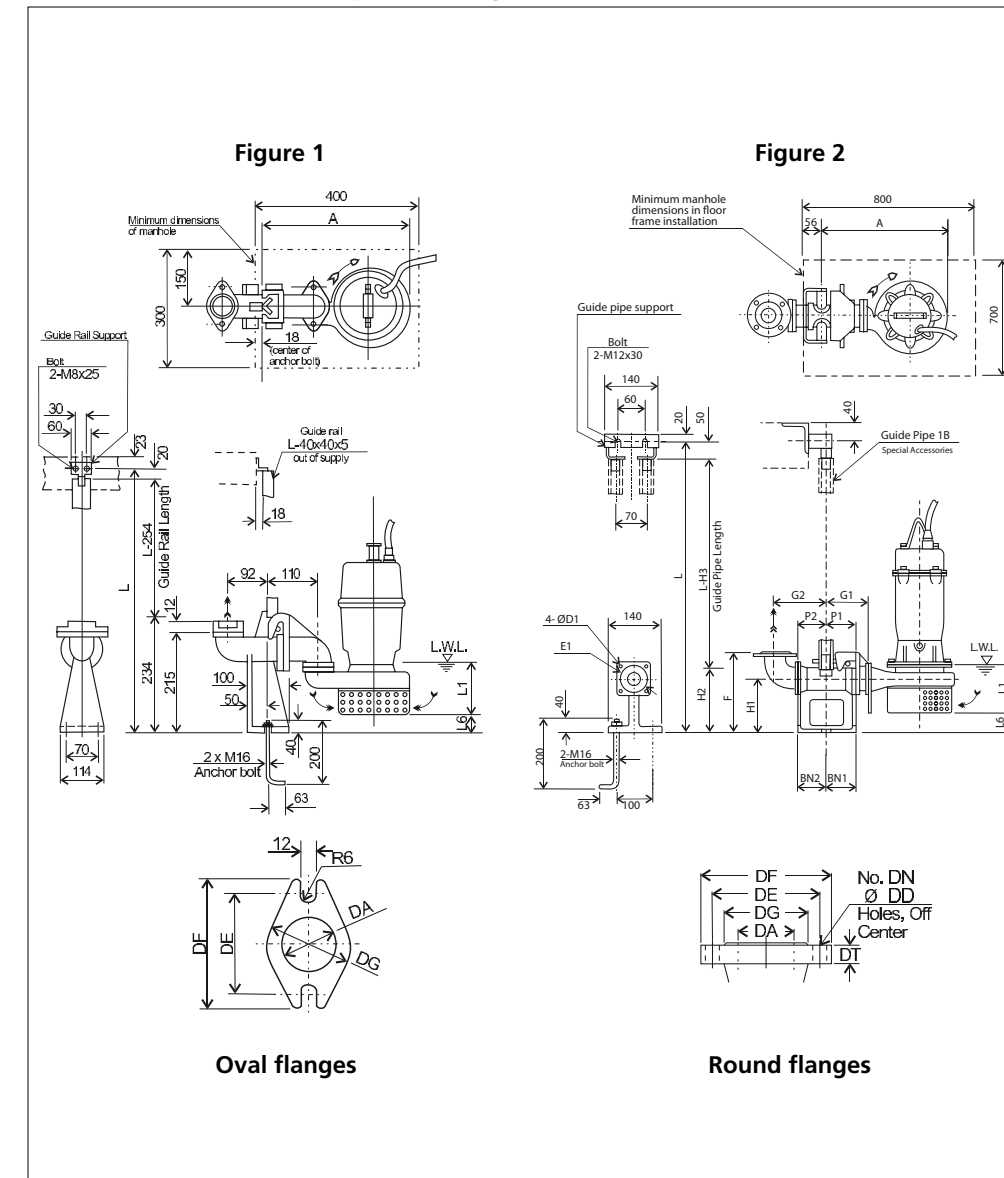
DIMENSIONS DS



Discharge flanges dimensions [mm] - EN 1092-2

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	21		
	100	180	220	156	21		

DIMENSIONS DS with QDC (quick discharge connector) (1.5÷3.7 kW)



Discharge flanges dimensions [mm] - EN 1092-2

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	21		
	100	180	220	156	21		

DIMENSIONS TABLE DS

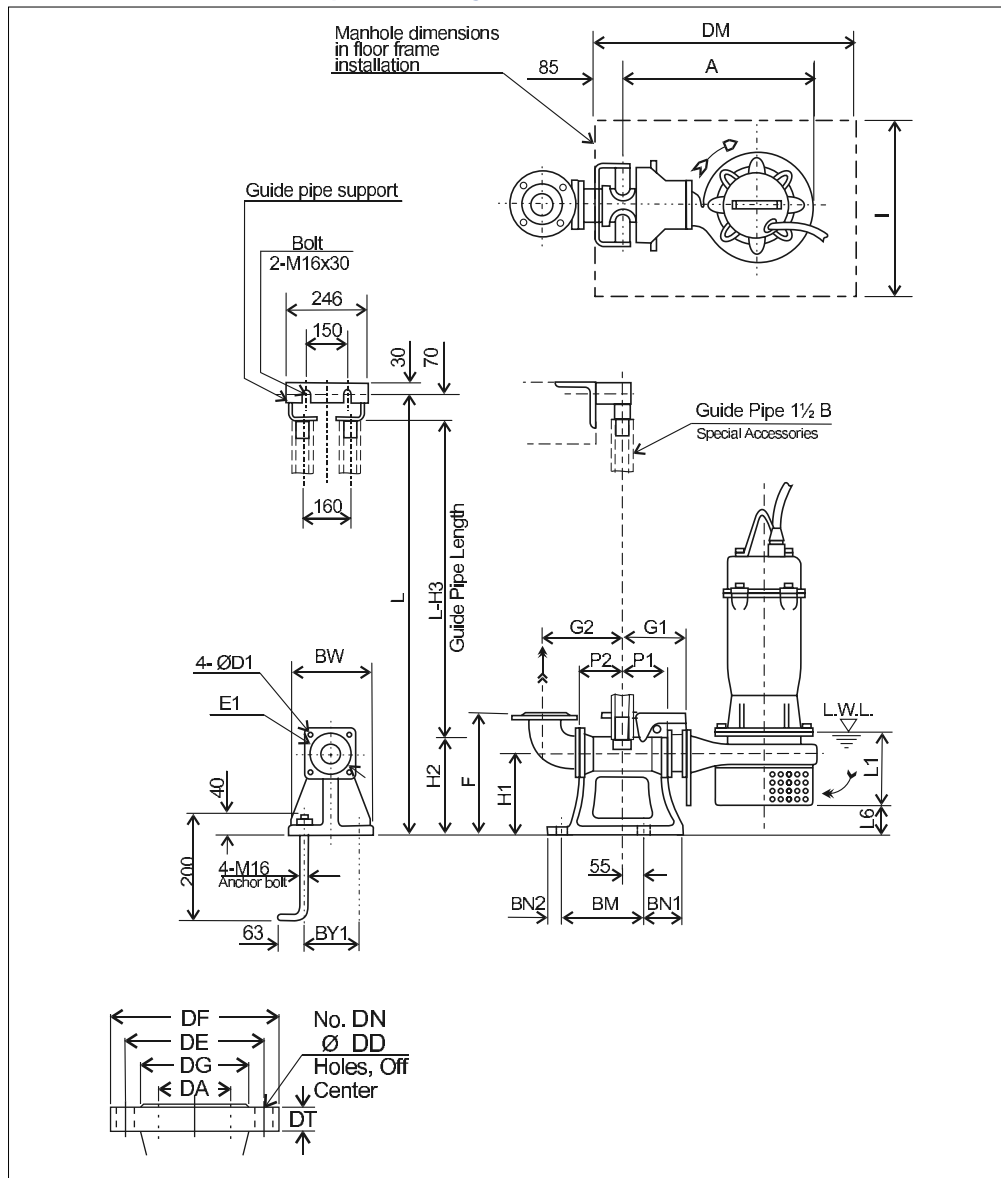
DA	Model	Fig.	Flanges Type	[kW]	DA	A	B	C	D	E	F	H	DE	J	L1(*)	ØSR	CL [m]	Weight [kg]
50	50DS51.5	1	Oval	1.5	G2	266	200	168	98	130	115	450	96	-	120	10	6	25
	2.2			50	433	245	313	120	235	198	619	-	180	160	10		55	
	3.7			50	433	245	313	120	235	198	619	-	180	160	10		61	
65	65DS51.5	2	Round	1.5	65	407	210	303	104	215	197	503	-	150	120	10	6	35
	2.2			80	503	268	368	135	275	215	625	-	200	160	10		59	
	3.7			80	503	268	368	135	275	215	625	-	200	160	10		64	

DS - DSF

SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAN WATER AND RAINWATER

in cast iron

DIMENSIONS DS with QDC (quick discharge connector) (5.5÷7.5 kW)



Discharge flanges dimensions [mm] - EN 1092-2							
Type	DA	DE	DF	DG	DT	DN	DD
Round	100	180	220	156	21	8	19

DIMENSIONS TABLE DS with QDC (quick discharge connector) (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 (quick discharge connector) Model	Weight [kg]
100	100DS55.5	5.5	590	105	105	185	210	365	240	265	335	200	108	100	40	220	180	230	800	700	19	175	LL100	46
	100DS7.5	7.5																						

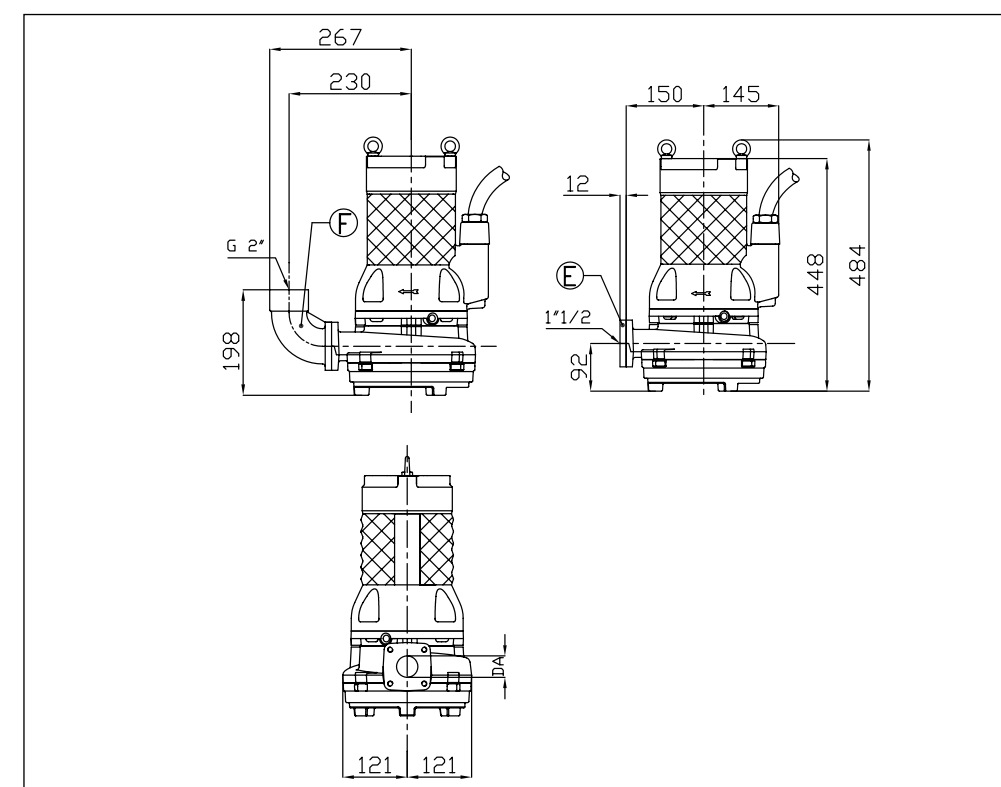
(*) - L.W.L. (Low Water Level)

DS - DSF

SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAN WATER AND RAINWATER

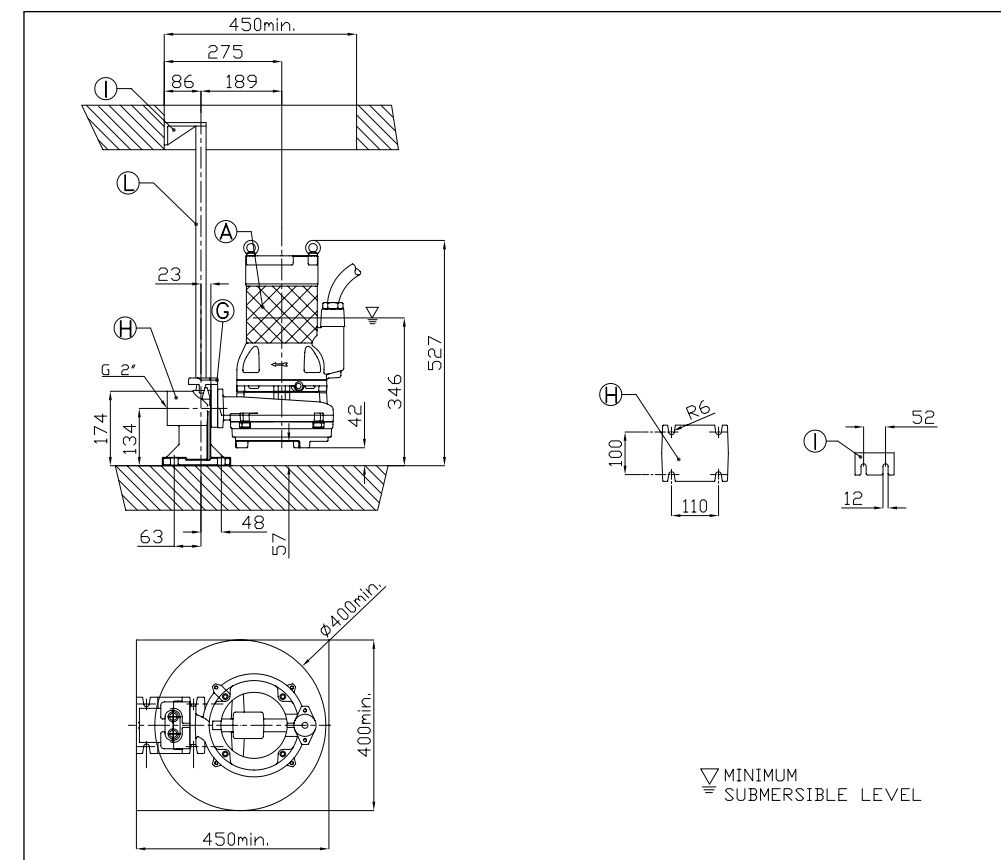
in cast iron

DIMENSIONS 40DSF (1.1÷1.8 kW)



DIMENSIONS TABLE 40DSF (1.1÷1.8 kW)

DA	Model	[kW]	Weight [kg]
40	40DSF51.1M (125)	1.1	38
	40DSF51.8M (150)	1.8	38



DS - DSF

SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAN WATER AND RAINWATER

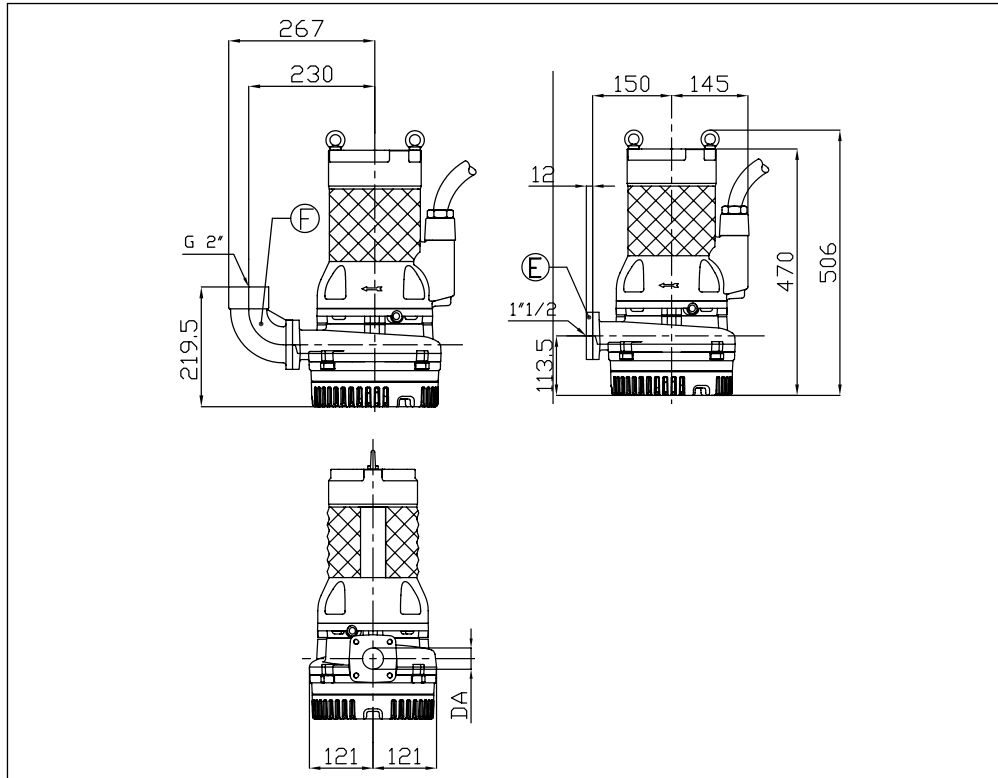
in cast iron

DS - DSF

SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAN WATER AND RAINWATER

in cast iron

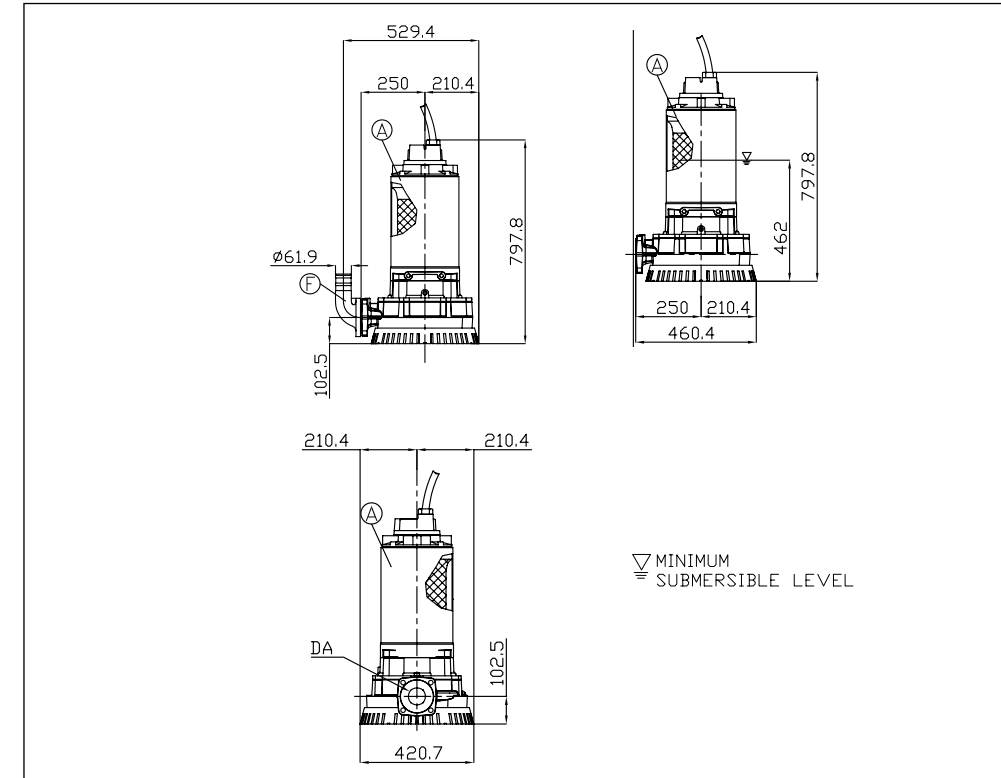
DIMENSIONS 40DSF (5.7 kW)



DIMENSIONS TABLE 40DSF (5.7 kW)

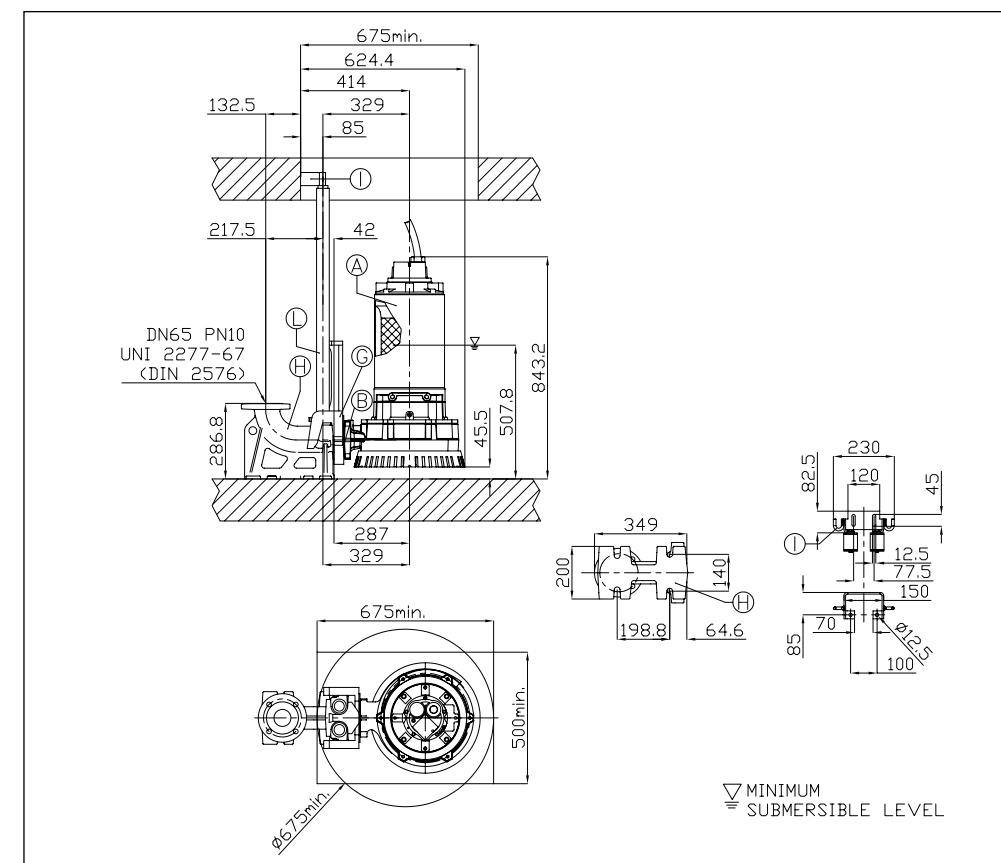
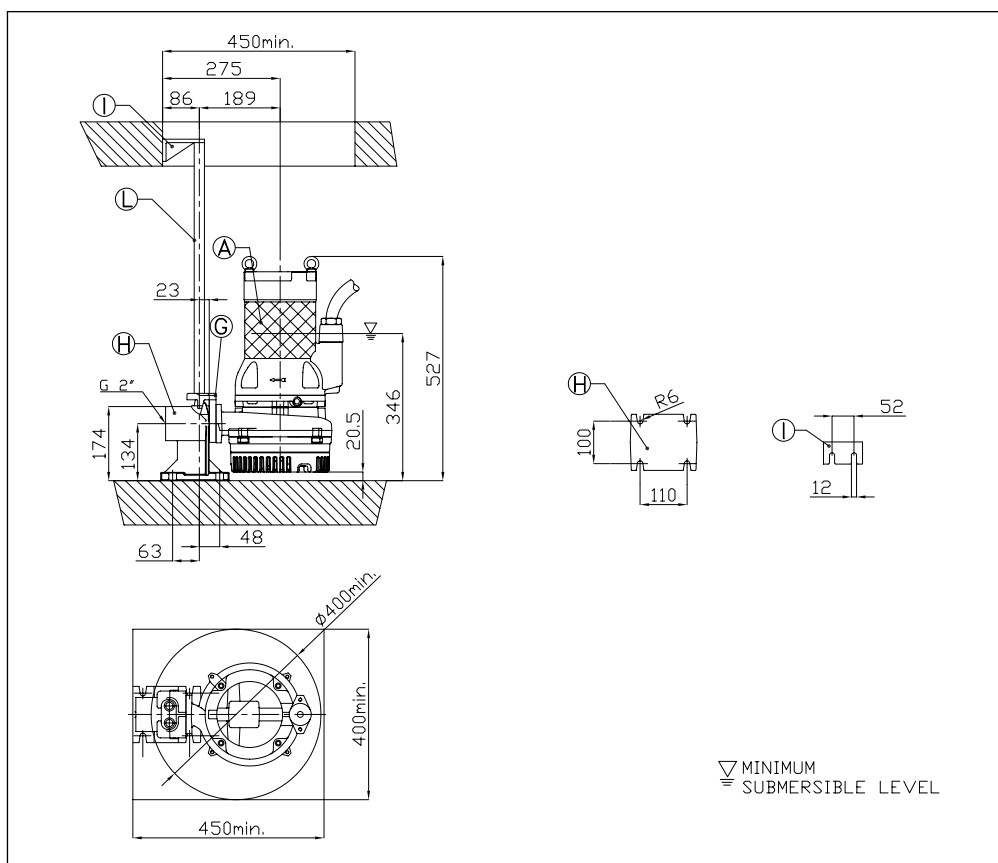
DA	Model	[kW]	Weight [kg]
40	40DSF5.7 (192)	5.7	68

DIMENSIONS 65DSF (15.9 kW)



DIMENSIONS TABLE 65DSF (15.9 kW)

DA	Model	[kW]	Weight [kg]
DN65	65DSF15.9 (230)	15.9	200

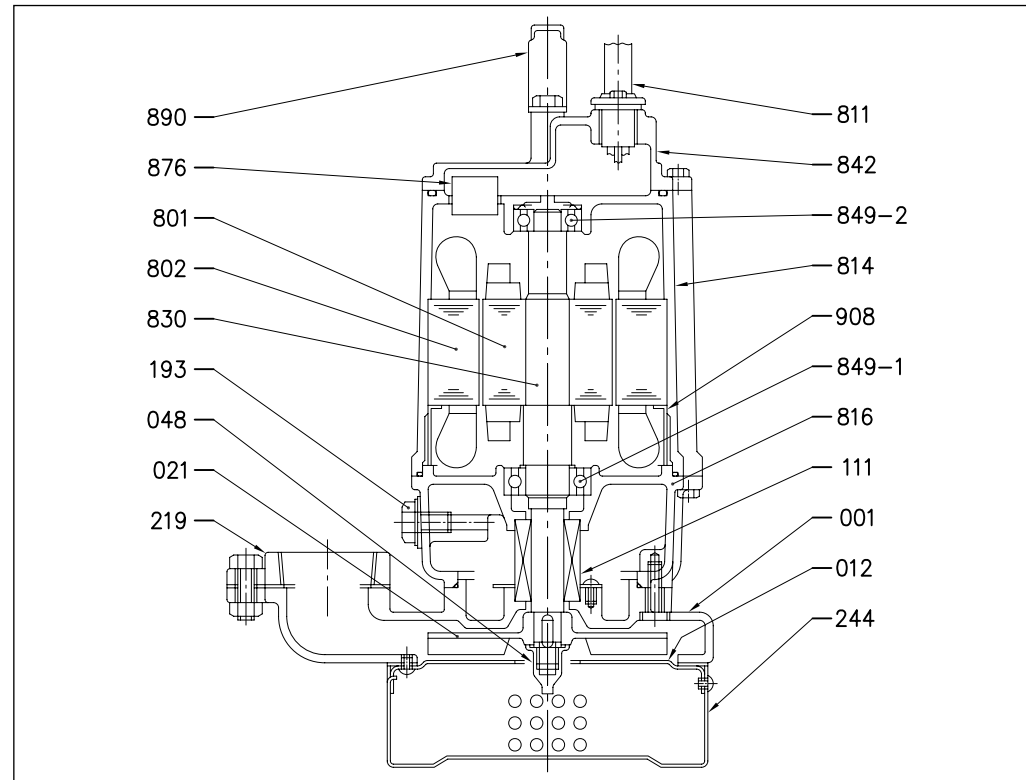


DS - DSF

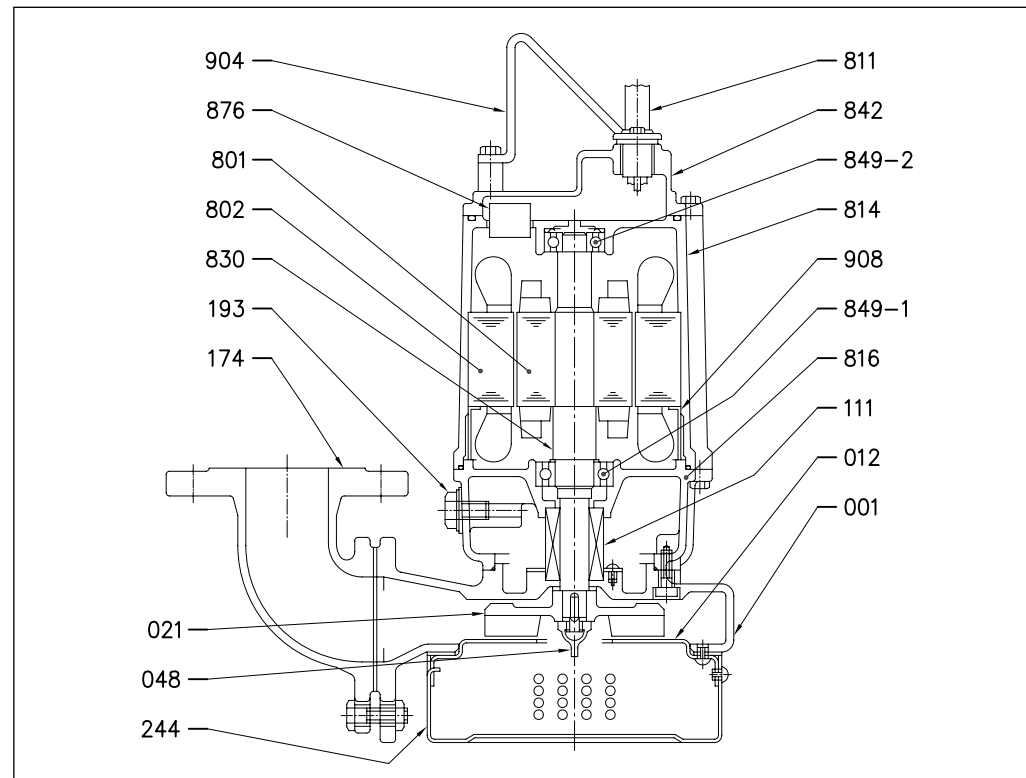
SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAN WATER AND RAINWATER

in cast iron

SECTIONAL VIEW 50 DS (1.5kW)



SECTIONAL VIEW 65 DS (1.5kW)

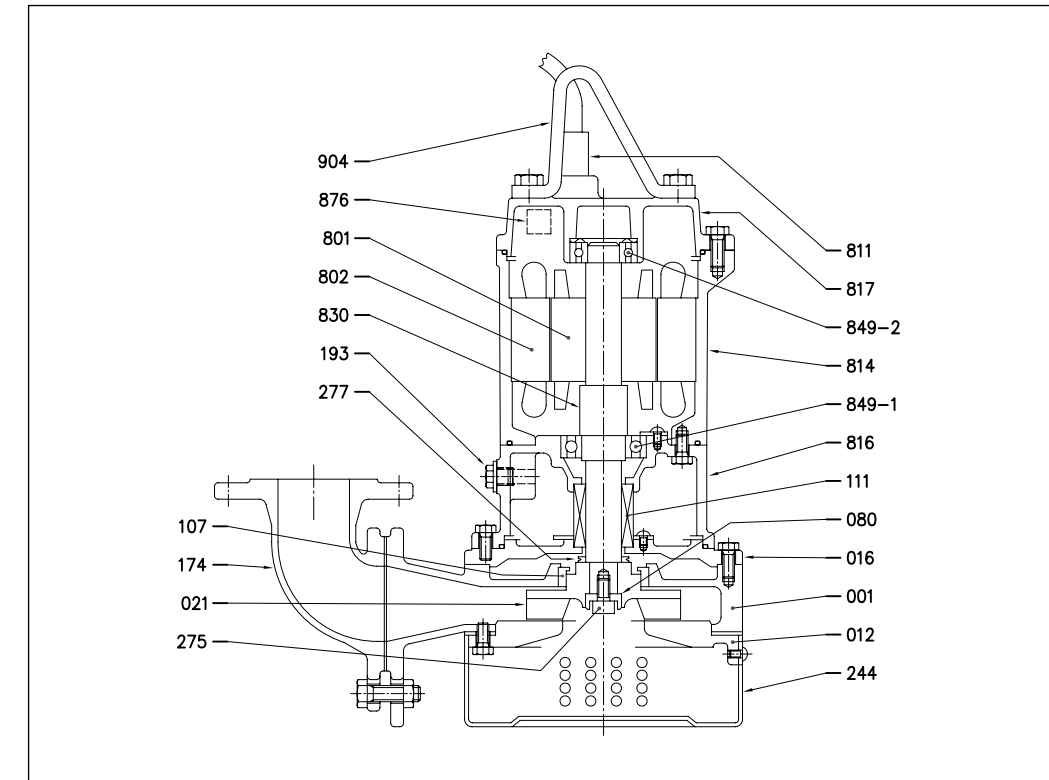


DS - DSF

SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAN WATER AND RAINWATER

in cast iron

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



MATERIALS TABLE DS

Ref.	Name	Material	Ref.	Name	Material
001	Pump body	CAST IRON EN-GHJL-200-EN 1561	811	Cable	-
012	Suction side lid	EN 1.4301 (AISI 304)	814	Motor case	CAST IRON EN-GHJL-200-EN 1561
021	Impeller	CAST IRON EN-GHJL-200-EN 1561	816	Motor support	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	Discharge bend	CAST IRON EN-GHJL-200-EN 1561	849-1	Ball bearing	-
193	Oil plug	NBR/EN 1.4301 (AISI 304)	849-2	Ball bearing	-
244	Filter	EN 1.4301 (AISI 304)	876	Protector	-
801	Rotor	-	904	Lifting hanger	STEEL INOX
802	Stator	-	908	Spacer	STEEL

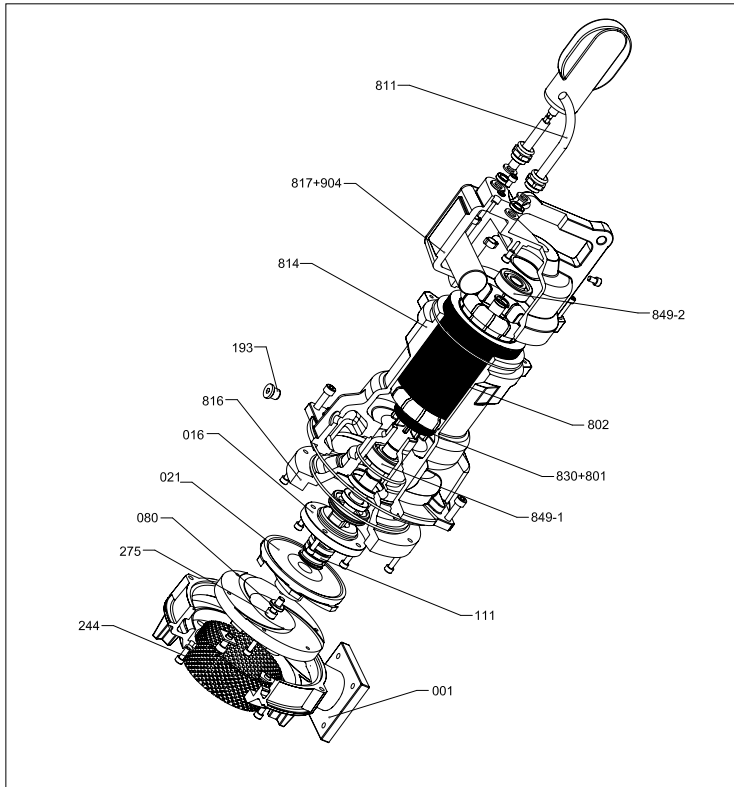
DS - DSF

**SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER
FOR CLEAN WATER AND RAINWATER**
in cast iron

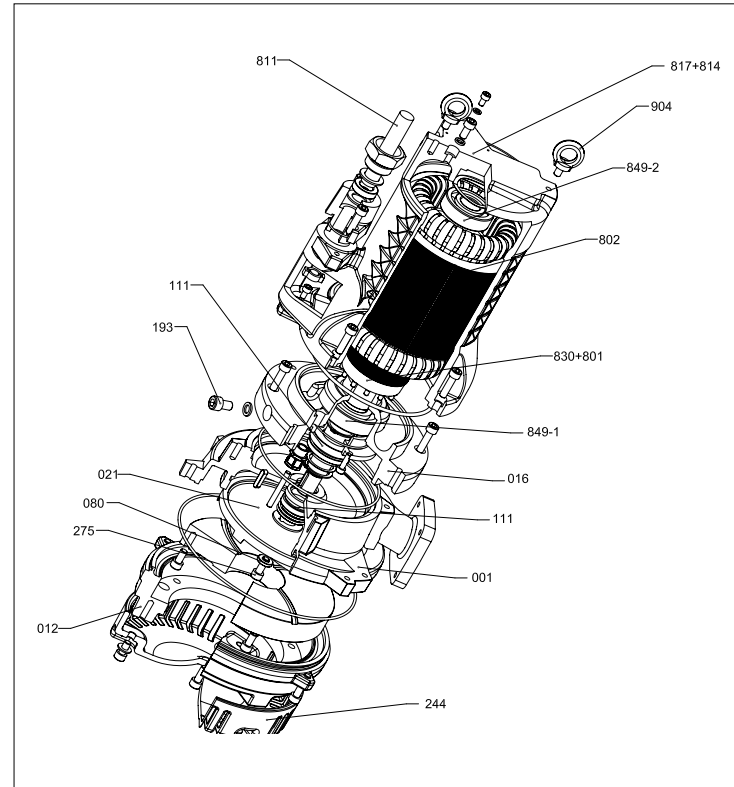
DS - DSF

**SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER
FOR CLEAN WATER AND RAINWATER**
in cast iron

SECTIONAL VIEW 40 DSF (1.1÷1.8 kW)



SECTIONAL VIEW 40 DSF (5.7 kW)



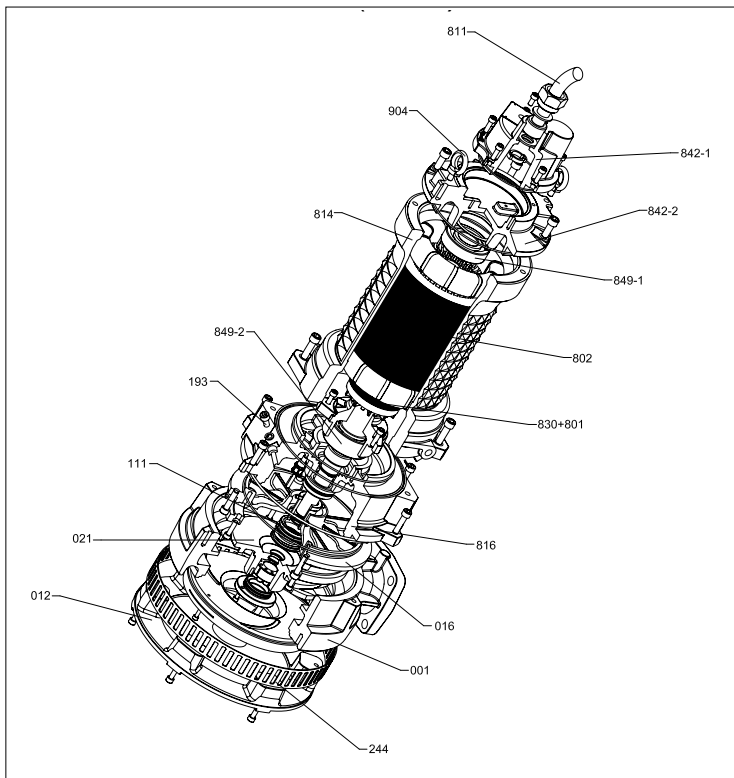
MATERIALS TABLE DSF

Ref.	Name	Material	Ref.	Name	Material
001	Pump body	CAST IRON EN-GJL-250	811	Cable	-
012	Suction side lid	CAST IRON EN-GJL-250	814	Motor case	CAST IRON EN-GJL-250
016	Mechanical seal cover	CAST IRON EN-GJL-250	816	Power side bracket	CAST IRON EN-GJL-250
021	Impeller	AISI 420B	817	Opposite side bracket	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 plug	NBR/STAINLESS STEEL	842-2	Motor cover	CAST IRON EN-GJL-250
244	Filter	AISI 316L	849-1	Ball bearing	-
275	Impeller nut	CLASSE A2 AISI 304	849-2	Ball bearing	-
801	Rotor	-	904	Lifting hanger [1]	CAST IRON EN-GJL-250
802	Stator	-	904	Lifting hanger [2]	STEEL

[1] - For model 40 DSF (1.1÷1.8 kW)

[2] - For model 40 DSF (5.7 kW) and 40 DSF (15.9 kW)

SECTIONAL VIEW 40 DSF (15.9 kW)





DS - DSF

SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAN WATER AND RAINWATER

in cast iron



DS - DSF

SUBMERSIBLE PUMPS WITH SEMI-OPEN IMPELLER FOR CLEAN WATER AND RAINWATER

in cast iron

DS (1.5÷3.7 kW) MOTOR DATA

[P2]	[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		
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
		Current	[A]	2.92	2.62	2.61	4.07	4.06	3.82	7.07	6.32	6.45
	75%	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
		Speed	[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	[%]	93.88	92.08	89.21	89.71	87.87	83.88	90.24	88.18	86.00
	Speed	[min ⁻¹]	2821	2847	2854	2851	2864	2900	2847	2886	2890	
	Locked Rotor Torque	[%]	243	295	303	161	186	184	175	216	233	
	Start Current	[A]	20.5	21.1	22.5	28.7	30.0	31.5	51.2	51.0	53.0	
No. starts per hour		10										
Model		ZDSEU										

DSF (1.1÷15.9 kW) MOTOR DATA

[P2]	[kW]	1.1		1.8		5.7		15.9	
Resistance at 20°C	[Ω]	1,97/4,34		1,9/4,3		2,800		0,560	
GD ²	[kg·m ²]	0,000520		0,000520		0,003		0,016	
Voltage	[V]	230		230		400		400	
Load	0%	Current	[A]	2.31	2.5	4.9	12.6	4.9	12.6
		Power	[W]	415	420	760	1800	760	1800
	75%	Current	[A]	5.4	7.6	8.7	22.4	8.7	22.4
		Efficiency	[%]	67	80	84	87.38	84	87.38
		Power factor	[%]	0.96	0.98	0.85	0.86	0.85	0.86
	100%	Speed	[min ⁻¹]	2868	2795	2875	2925	2875	2925
		Current	[A]	7.5	10	12.5	30	12.5	30
		Efficiency	[%]	68	80.5	84	88.36	84	88.36
	Power factor	[%]	0.98	0.99	0.89	0.9	0.89	0.9	
	Speed	[min ⁻¹]	2750	2710	2840	2900	2840	2900	
	Locked Rotor Torque	[%]	20	30	260	330	260	330	
	Start Current	[A]	21	35	73.8	171	73.8	171	
Phase		1				3			
No. starts per hour		15							
Model		M271MM 2282-3028-3534-6437		M271ML 3026-3536-5432-5372-6436		M210T/L 3480		M213T/L 8622	

DS (5.5÷7.5 kW) MOTOR DATA

[P2]	[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		
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%	Speed	[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	
	Speed	[min ⁻¹]	2922	2905	2923	2917	2900	2918	
	Locked Rotor Torque	[%]	168	155	168	159	154	159	
	Start Current	[A]	77.0	70.0	70.0	105.0	93.5	94.0	
No. starts per hour		10							
Model		ZDSEU							

SUBMERSIBLE SEWAGE PUMPS WITH SEMI-VORTEX IMPELLER

in cast iron



Submersible sewage pumps with semi-vortex impeller in cast iron

APPLICATIONS

- Ideal for waste water applications containing soft or fibrous solids
- Industrial waste water drainage
- Septic effluent
- Miscellaneous drainage

TECHNICAL DETAILS

- Semi-Vortex Impeller offers non-clog operation and allows pumping of foreign matter up to 70% of discharge size
- Easy maintenance

TECHNICAL DATA

- Maximum temperature of the liquid: 40°C
- Max solids size for passage: 21 mm (50DVS)
33 mm (65DVS and 80DVS 1,5kW)
41 mm (65DVS and 80DVS 2,2-3,7 kW)
- Max fibers length: 100mm (50DVS)
200 (65DVS and 80DVS 1,5kW)
245 (65DVS and 80DVS ,2-3,7 kW)
- 2 poles motor
- Insulation class F
- Degree protection IP68
- 380-415±10%, 50Hz threephase voltage
- Flanges: G1½ (50DVS 1,5kW)
DN50, DN65, DN80
- Power up to 3,7 kW

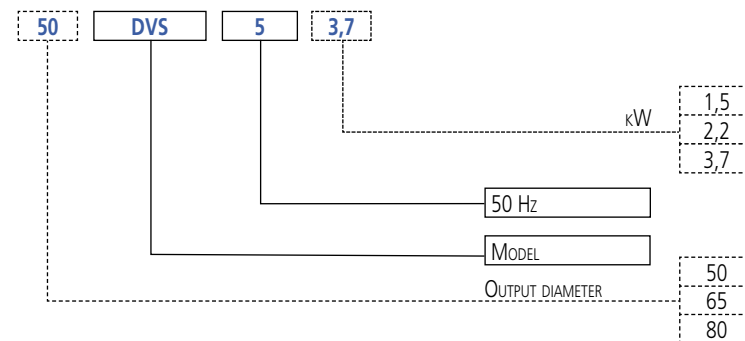
MATERIALS

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

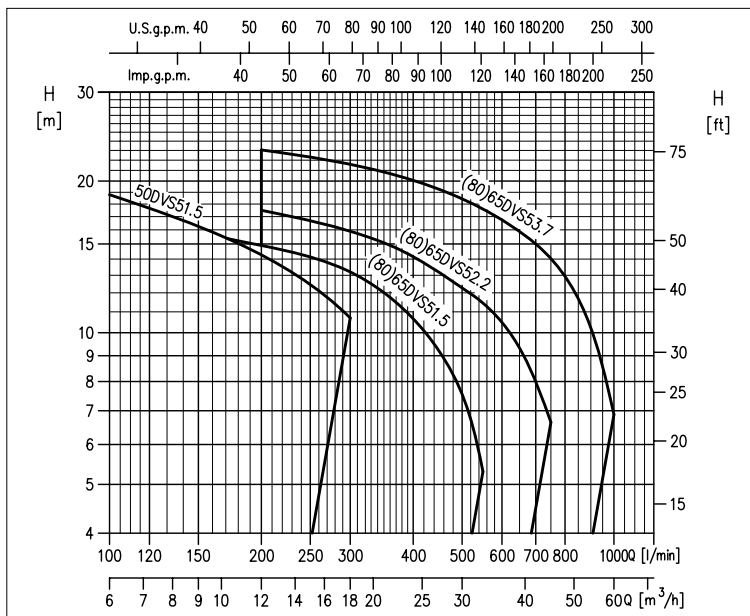
ACCESSORIES (ON REQUEST)

- See from page 134

PUMP IDENTIFICATION CODE



PERFORMANCE CHART



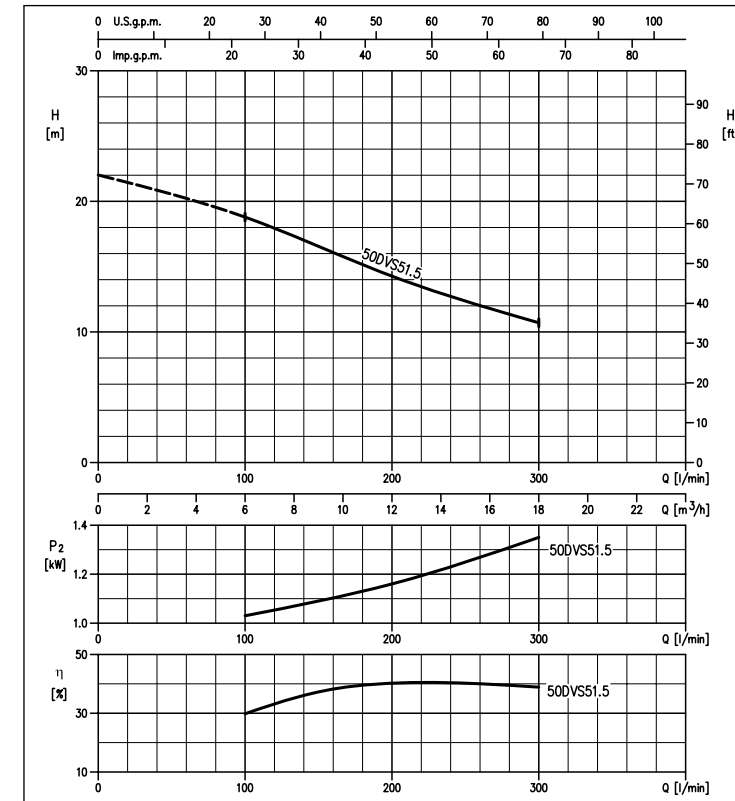
PERFORMANCE TABLE

Model	P ₂		Q=Flow rate												
	[HP]	[kW]	l/min m ³ /h	100 6	150 9	200 12	300 18	400 24	500 30	550 33	600 36	700 42	750 45	900 54	1000 60
			H=Head [m]												
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

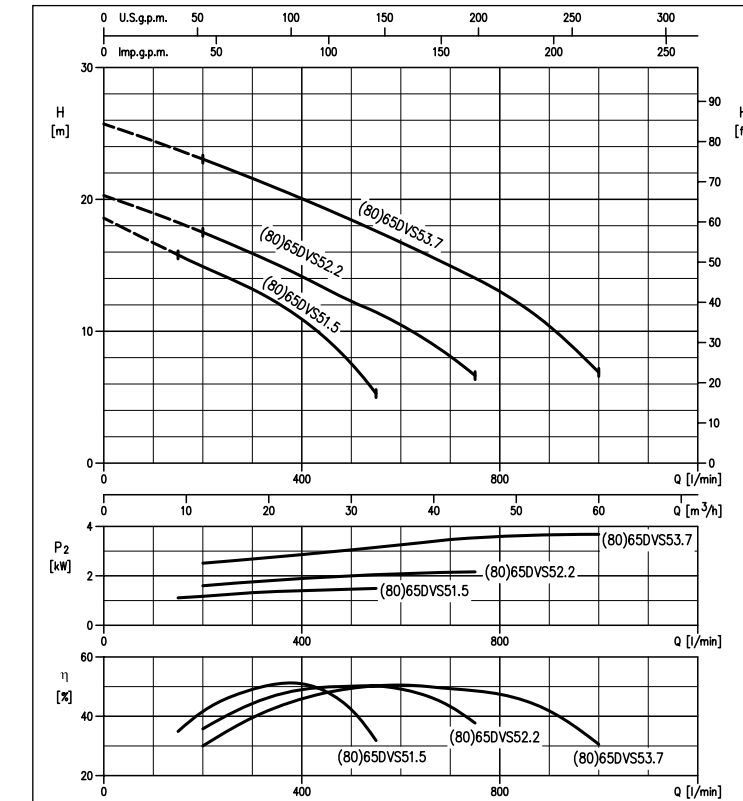
SUBMERSIBLE SEWAGE PUMPS WITH SEMI-VORTEX IMPELLER

in cast iron

50DVS51.5 (1.5 kW) range PERFORMANCE CURVES

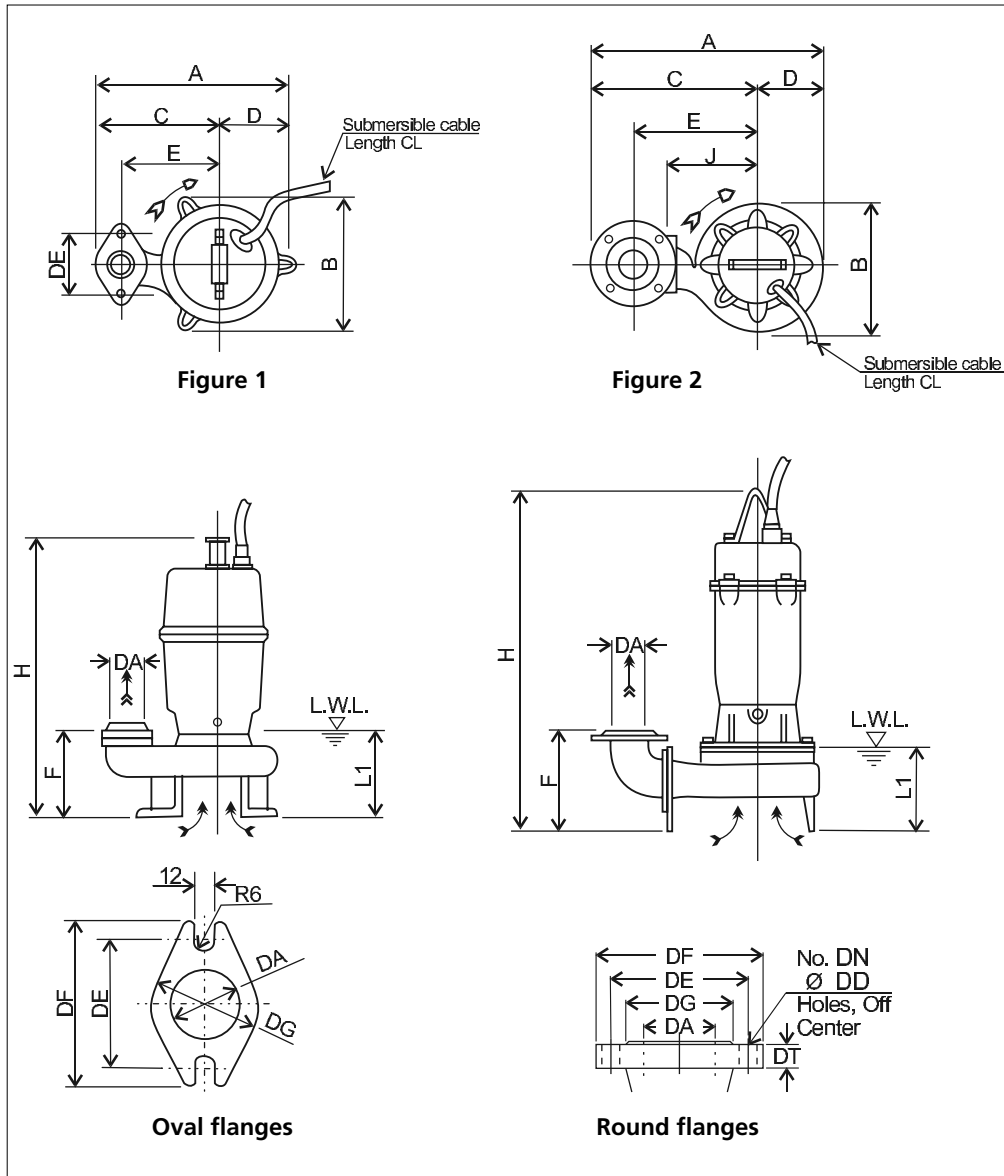


(80)65DVS51.5 (1.5 kW) range PERFORMANCE CURVES



SUBMERSIBLE SEWAGE PUMPS WITH SEMI-VORTEX IMPELLER in cast iron

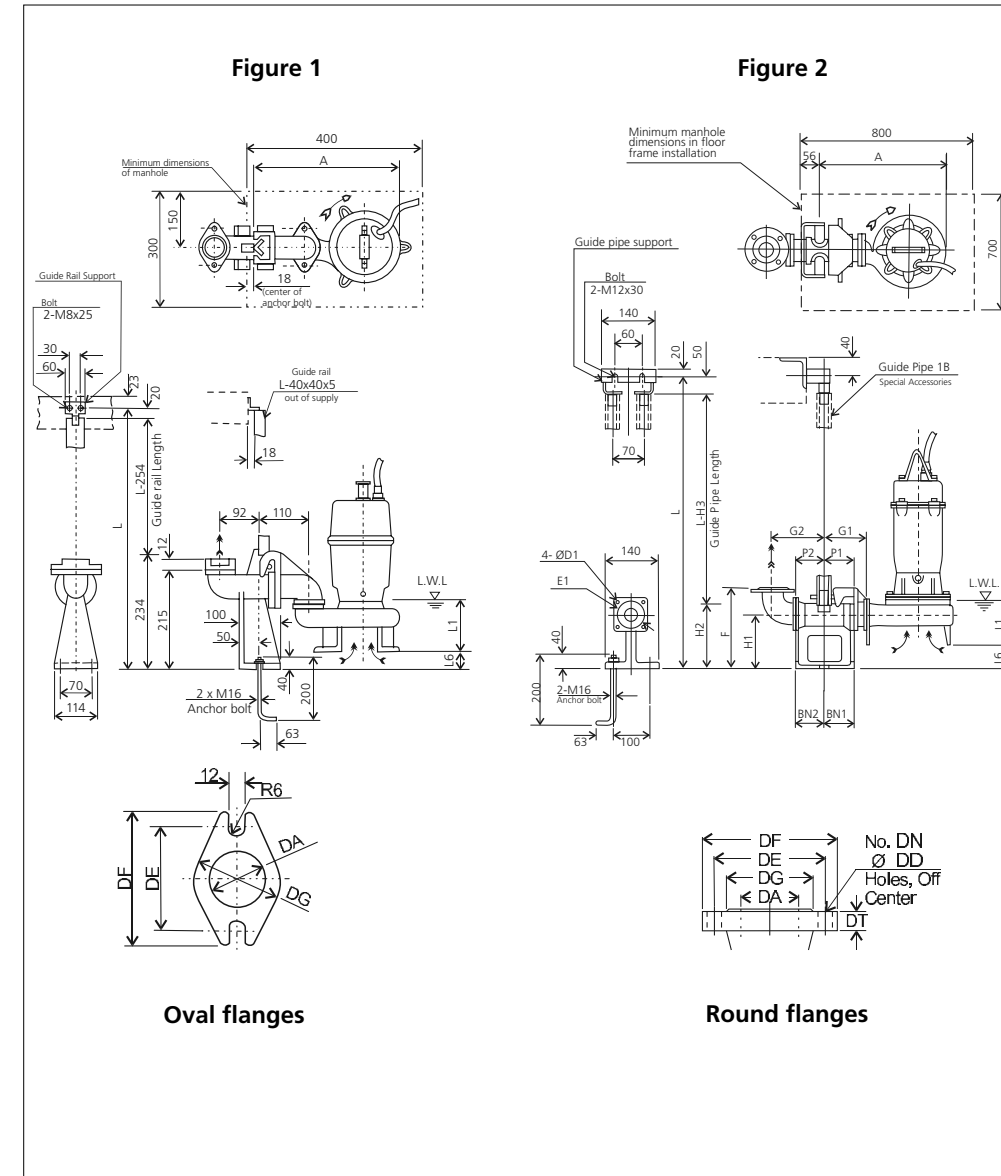
DIMENSIONS DVS



Discharge flanges dimensions [mm] - EN 1092-2							
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	

SUBMERSIBLE SEWAGE PUMPS WITH SEMI-VORTEX IMPELLER in cast iron

DIMENSIONS DVS with QDC (quick discharge connector)



Dimensions table flanges [mm] - EN 1092-2							
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	

DIMENSIONS TABLE DVS

DA	Model	Fig.	Flanges Type	[kW]	DA	A	B	C	D	E	F	H	DE	J	L1 (*)	CL [m]	Weight [kg]
50	50DVS51.5	1	Oval	1.5	G2	249	171	163	86	125	82	439	96	-	105	6	27
65	65DVS51.5	2	Round	1.5	65	396	195	298	98	210	178	519	-	145	125	6	34
	2.2			427		227	313	114	225	201	643	10		50			
	3.7													59			
80	80DVS51.5	2	Round	1.5	80	411	195		98	220	183	519	-	145	125	6	35
	2.2			442		227	328	114	235	206	643	10		51			
	3.7													60			

(*) - L.W.L (Low Water Level)

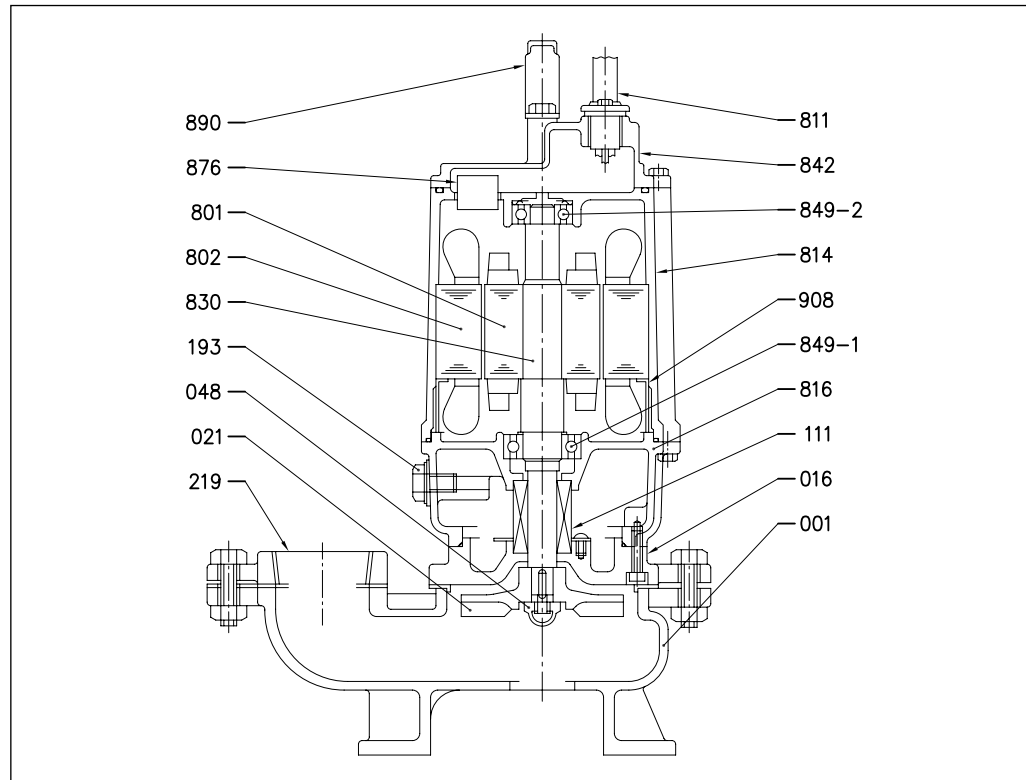
DIMENSIONS TABLE DS with QDC (quick discharge connector)

DA	Model	Fig.	Flanges Type	[kW]	A	P1	P2	G1	G2	F	H1	H2	H3	L1 (*)	L6	BN1	BN2	D1	E1	QDC (quick discharge connector) 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	125									72							
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	125									72							

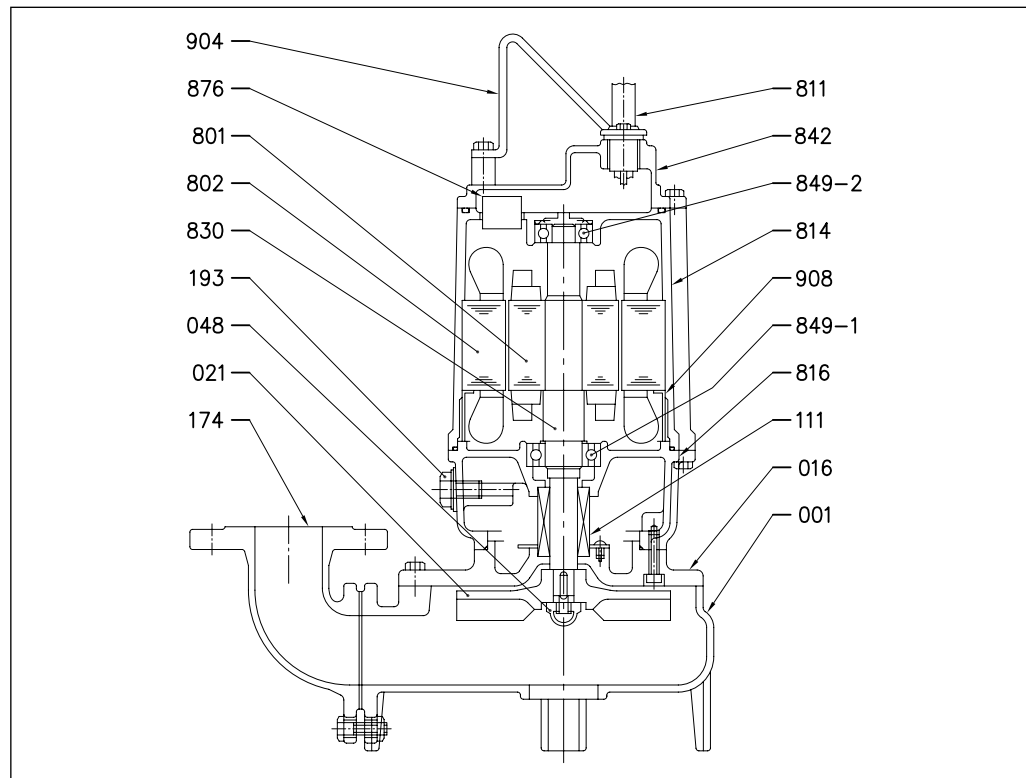
(*) - L.W.L (Low Water Level)

SUBMERSIBLE SEWAGE PUMPS WITH SEMI-VORTEX IMPELLER in cast iron

SECTIONAL VIEW 50 DVS (1.5kW)

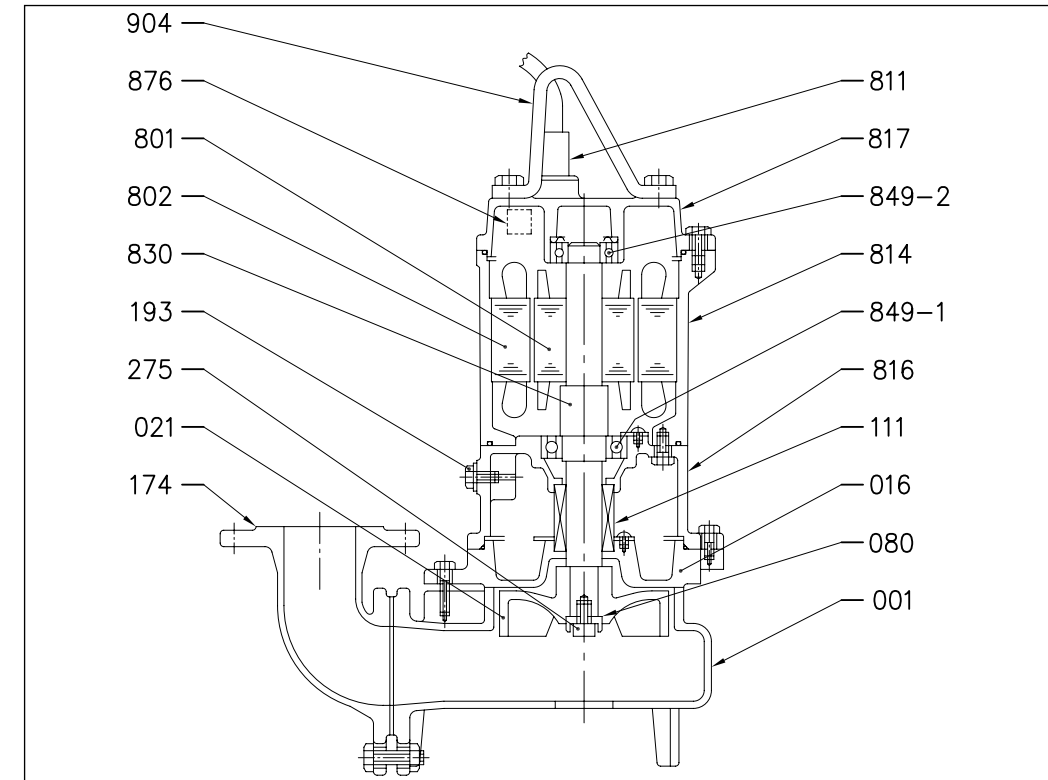


SECTIONAL VIEW 65(80) DVS (1.5kW)



SUBMERSIBLE SEWAGE PUMPS WITH SEMI-VORTEX IMPELLER in cast iron

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



MATERIALS TABLE DVS

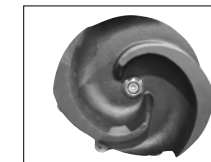
Ref.	Name	Material	Ref.	Name	Material
001	Pump body	CAST IRON EN-GHJL-200-EN 1561	811	Cable	-
016	Mechanical seal cover	CAST IRON EN-GHJL-200-EN 1561	814	Motor case	CAST IRON EN-GHJL-200-EN 1561
021	Impeller	CAST IRON EN-GHJL-200-EN 1561	816	Motor support	CAST IRON EN-GHJL-200-EN 1561
048	Impeller nut	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	Discharge bend	CAST IRON EN-GHJL-200-EN 1561	849-2	Ball bearing	-
193	Oil plug	NBR/EN 1.4301 (AISI304)	876	Protector	-
219	Flanges	CAST IRON EN-GHJL-200-EN 1561	890	Lifting hanger	STAINLESS STEEL
801	Rotor	-	908	Spacer	STEEL
802	Stator	-			

SUBMERSIBLE SEWAGE PUMPS WITH SEMI-VORTEX IMPELLER in cast iron

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C) in cast iron

DVS (1.5÷3.7 kW) MOTOR DATA

[P2]	[kW]	1.5			2.2			3.7				
Resistance at 20°C	[Ω]	11.973			4.942			2.647				
GD²	[kg·m²]	0.0057			0.0082			0.011				
Voltage	[V]	380	400	415	380	400	415	380	400	415		
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%	Speed	[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	[%]	9.88	92.08	89.21	89.71	87.87	83.88	90.24	88.18	86.00
	Speed	[min ⁻¹]	2821	2847	2854	2851	2864	2900	2847	2886	2890	
	Locked Rotor Torque	[%]	243	295	303	161	186	184	175	216	233	
	Start Current	[A]	20.5	21.1	22.5	28.7	30.0	31.5	51.2	51.0	53.0	
Poles		2										
Phase		3										
Frequency	[Hz]	50										
No. starts per hour		10										
Voltage Tolerance	[%]	±10%										
Frequency Tolerance	[%]	±1%										
Insulation Class		F										
Model		ZDSEU										



IMPELLER DL

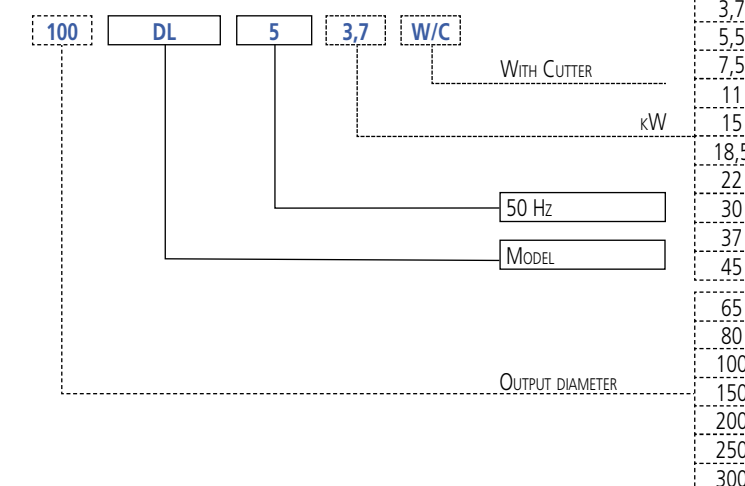


IMPELLER DL W/C



IMPELLER DLC and DLB

PUMP IDENTIFICATION CODE



Submersible sewage pumps (DL) with cutter (DL W/C) in cast iron

APPLICATIONS

- Ideal for waste water applications containing soft or fibrous solids
- Industrial waste water drainage

TECHNICAL DETAILS

- Non-Clog single-channel, double-channel Vitex open impeller prevents clogging by fibrous matter
- Range of models from 65 to 300 mm discharge size and power up to 45 kW (DL)

TECHNICAL DATA

- Maximum temperature of the liquid: 40°C
- Max solids size for passage: 35 mm (65DL, 65DL W/C)
50 mm (80DL, all DLC, 80 DL W/C)
60 mm (100DL, 100DLB, 100DL W/C, 100DLB W/C)
70 mm (150DL up to 22kW)
76 mm (200DL up to 22kW)
76 mm (all models 30÷44 kW)
82 mm (250DL up to 22kW)
90 mm (300DL up to 22kW)
- Max fibers length: 195mm (65DL, 65DL W/C)
240mm (80DL, all DLC, 80DL W/C)
300mm (100DL, 100DLB, 100DL W/C)
500mm (200DL up to 22kW)
500mm (all models 30÷44 kW)
550mm (250DL up to 22 kW)
600mm (300DL up to 22kW)
- 4 poles motor
- Insulation class F
- Degree protection IP68
- 380-415±10%, 50Hz (1,5÷7,5kW) (DL and DL W/C) threephase voltage
400-415±10%, 50Hz (Δ connection 11÷22kW) (DL) threephase voltage
380-415±10%, 50Hz (Δ connection 30÷45kW) (DL) threephase voltage
- 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, single or double open impeller (DL) single open impeller with cutter (DL W/C), vitex impeller (DLC and DLB), elbow in cast iron
- Shaft in AISI 403
- Mechanical seal: SiC/SiC/NBR (pump side)
Carbon/Ceramic/NBR (motor side)

ACCESSORIES (ON REQUEST)

- see from page 134



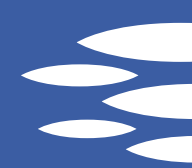
DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron

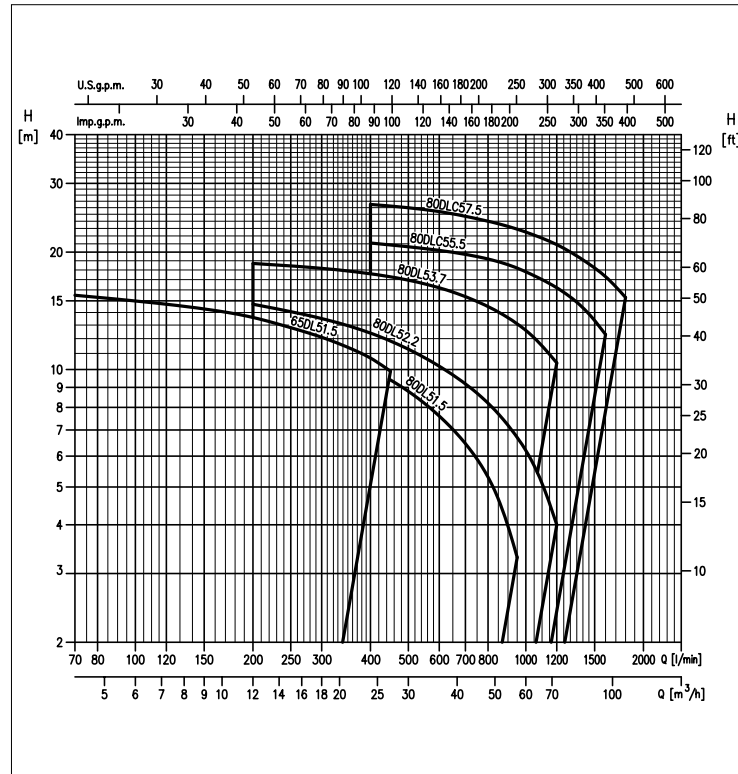


DL - DL W/C

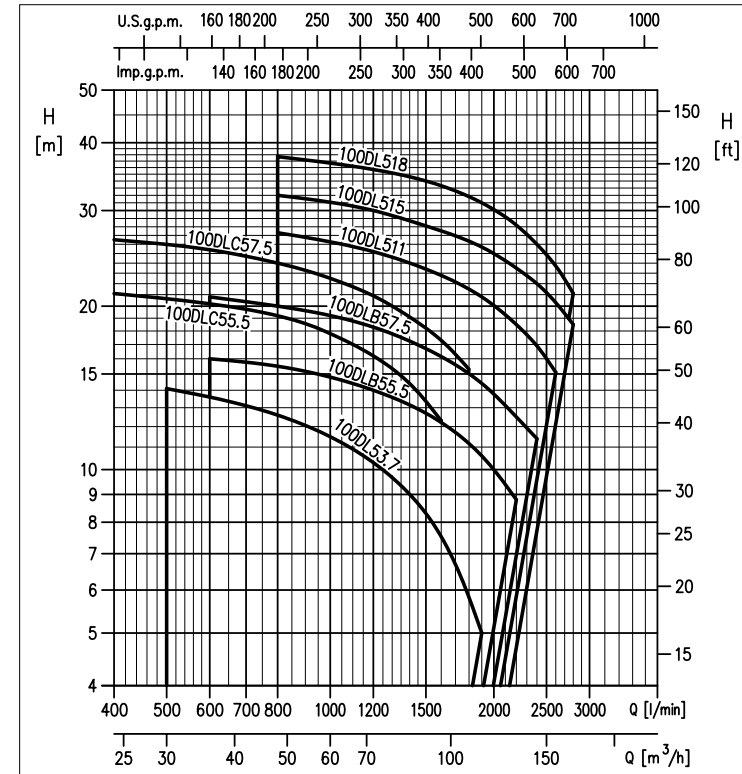
SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron



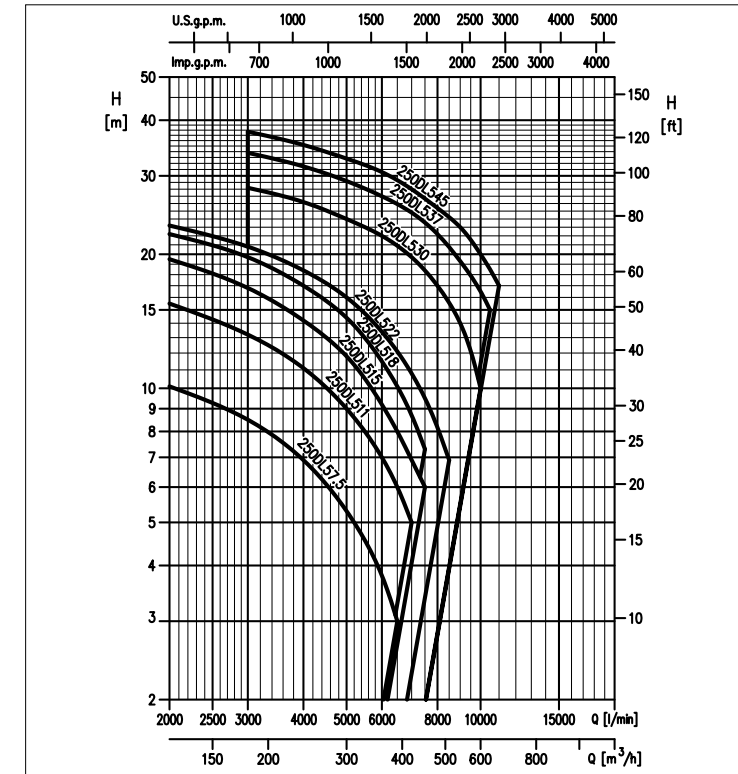
PERFORMANCE CHART
65-80DL



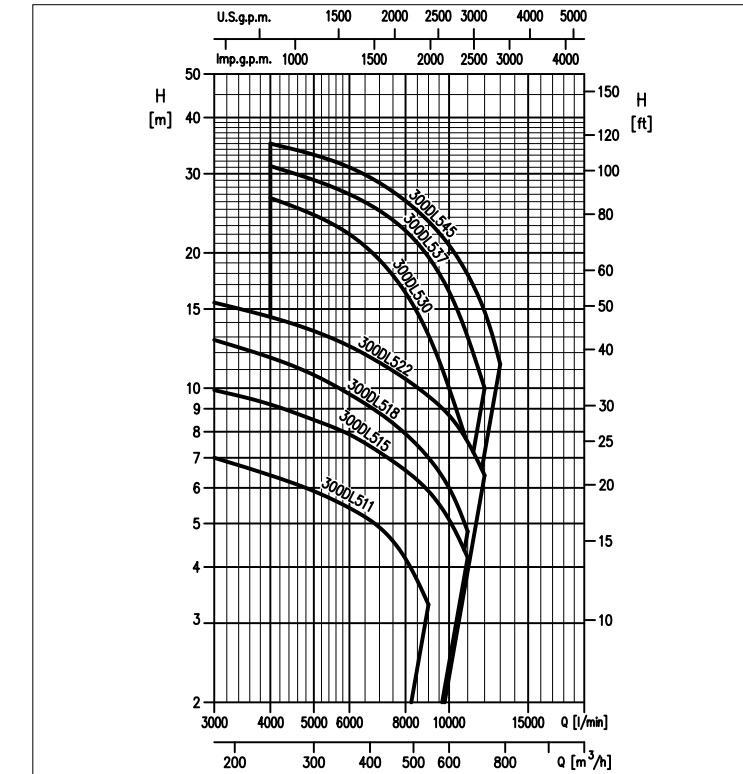
100DL



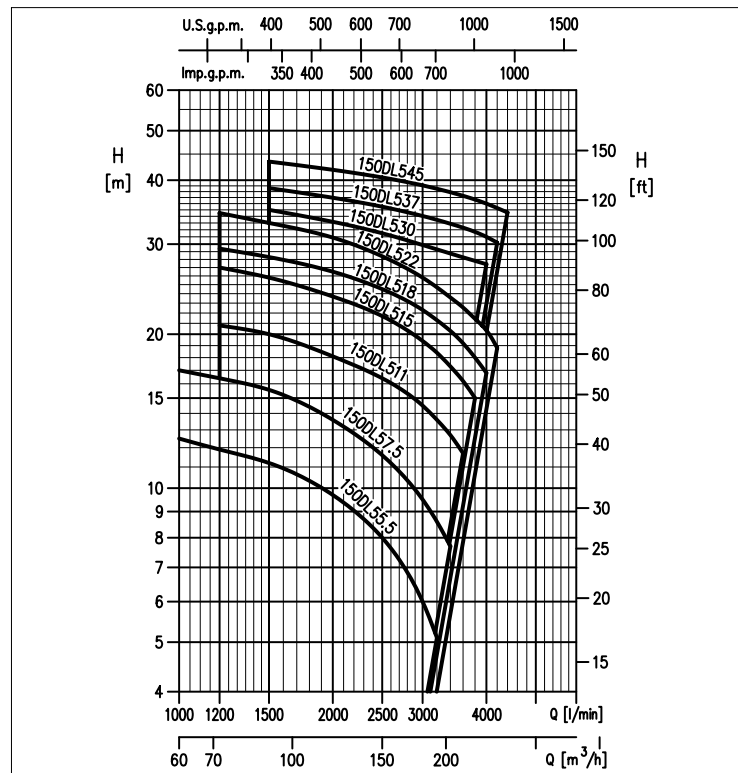
250DL



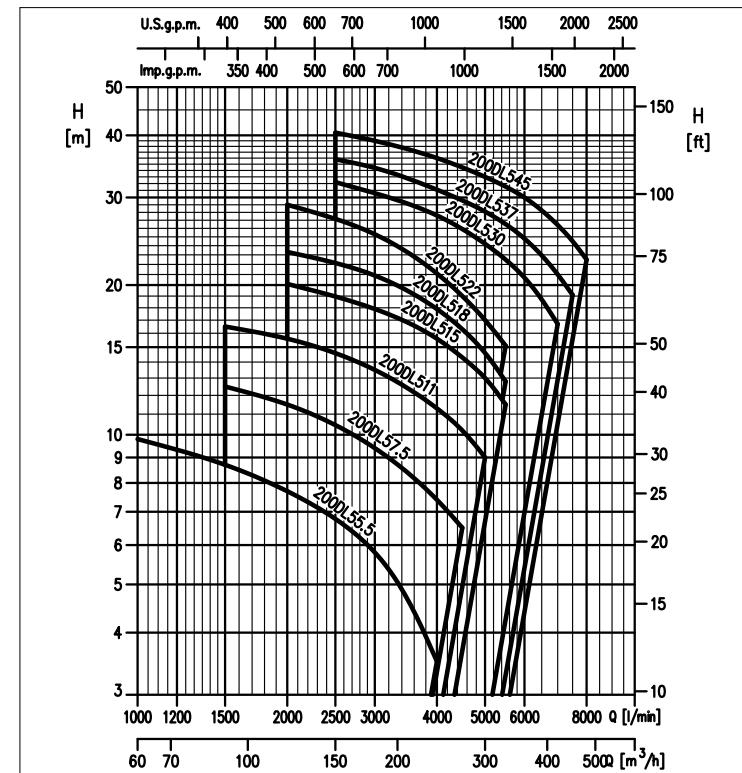
300DL



150DL



200DL





DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (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	P ₂		Q=Flow rate														
	[HP]	[kW]	l/min	1000	1200	1500	2000	2500	3000	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 SEWAGE PUMPS (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

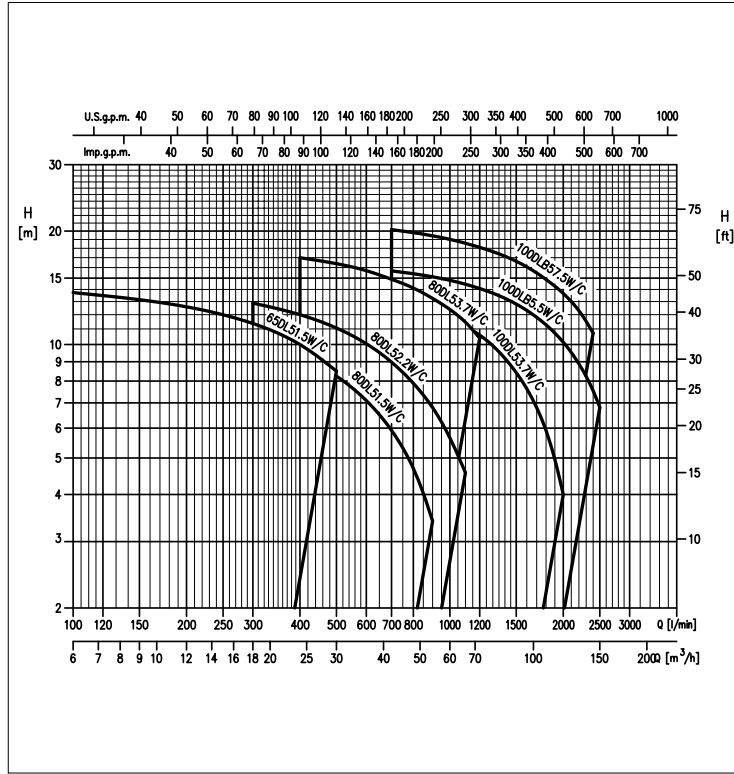
Model	P ₂		Q=Flow rate													
	[HP]	[kW]	l/min	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000	13000		
			m ³ /h	180	240	300	360	420	480	540	600	660	720	780		
			H=Head [m]													
300DL511	15	11	7,0	6,4	5,9	5,5	4,9	4,2	3,3	-	-	-	-	-		
300DL515	20	15	9,9	9,2	8,5	8,0	7,2	6,6	5,9	5,1	4,2	-	-	-		
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	-		



DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron

PERFORMANCE CHART DL W/C (With CUTTER)



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

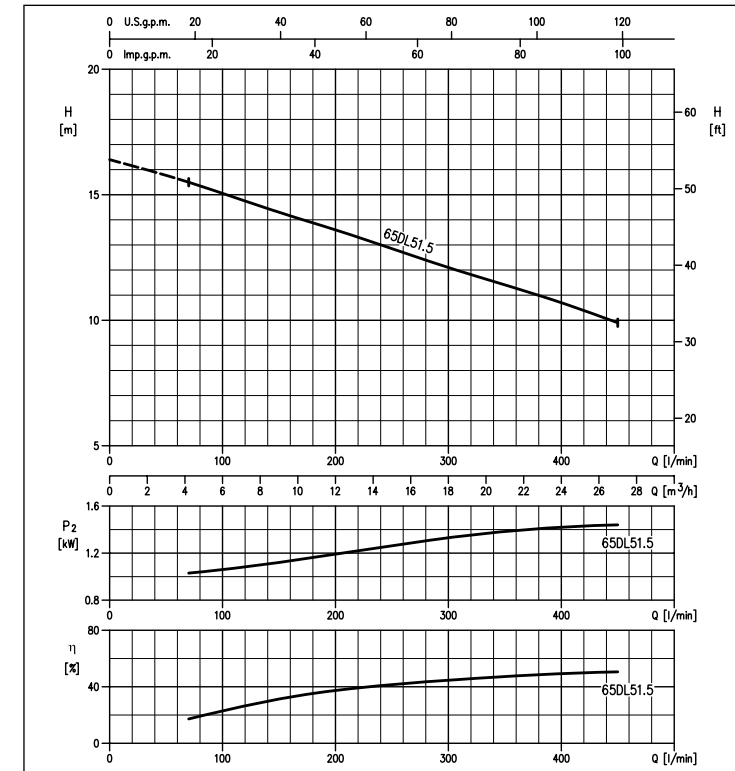
Model	P ₂		Q=Flow rate																
			l/min	100	250	300	400	500	700	900	1000	1100	1200	1400	1600	2000	2400	2500	
	[HP]	[kW]	m ³ /h	6	15	18	24	30	42	54	60	66	72	84	96	120	144	150	
			H=Head [m]																
65DL51.5W/C	2	1,5	13,7	12,0	11,4	10,0	8,5	-	-	-	-	-	-	-	-	-	-	-	-
80DL51.5W/C	2	1,5	-	10,7	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	-	-	-	-
100DLB55.5W/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	-	-
100DLB57.5W/C	10	7,5	-	-	-	-	-	20,2	19,4	19,0	18,6	18,1	17,2	16,1	13,7	10,7	-	-	-



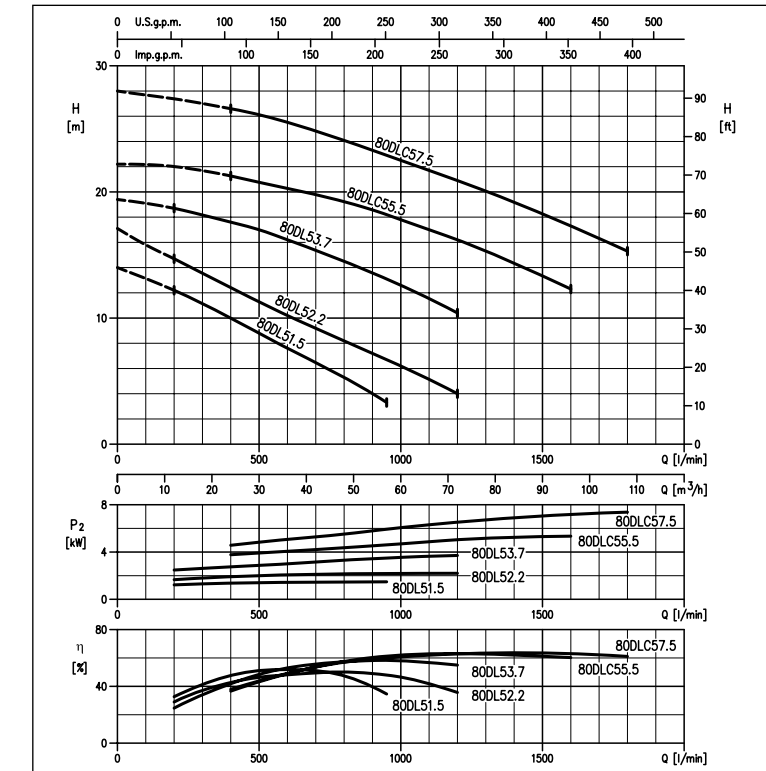
DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron

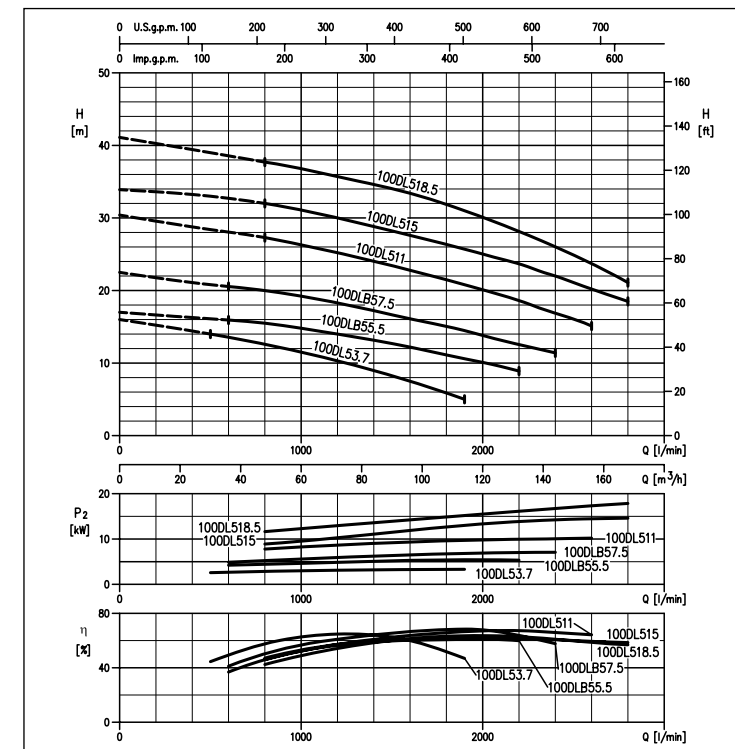
65DL51.5 (1.5 kW) range PERFORMANCE CURVES



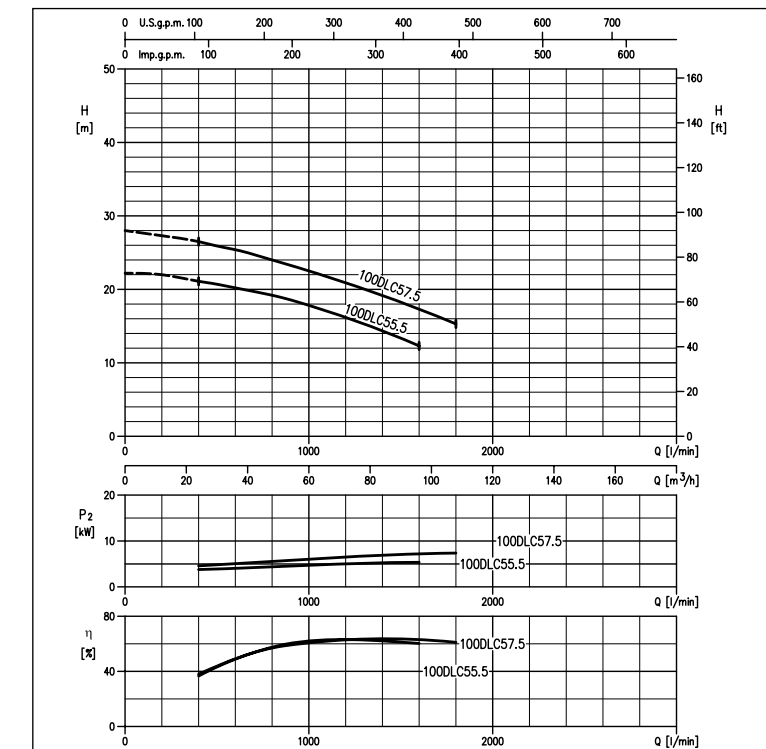
80DL51.5 (1.5 kW) range PERFORMANCE CURVES
80DL53.7 (3.7 kW) range 8080DL52.2 (2.2 kW) range
80DL52.2 (2.2 kW) range 80DL51.5 (1.5 kW) range
80DL51.5 (1.5 kW) range 80DL52.2 (2.2 kW) range
80DL53.7 (3.7 kW) range 80DL51.5 (1.5 kW) range



100DL53.7 (3.7 kW) 100DLB57.5 (7.5 kW) 100DL515 (15 kW)
100DLB55.5 (5.5 kW) 100DL511 (11 kW) 100DL518.5 (18.5 kW)



100DL51.5 (1.5 kW) range PERFORMANCE CURVES
100DL51.5 (1.5 kW) range 100DL52.2 (2.2 kW) range
100DL51.5 (1.5 kW) range 100DL52.2 (2.2 kW) range
100DL51.5 (1.5 kW) range 100DL52.2 (2.2 kW) range
100DL51.5 (1.5 kW) range 100DL52.2 (2.2 kW) range





DL - DL W/C

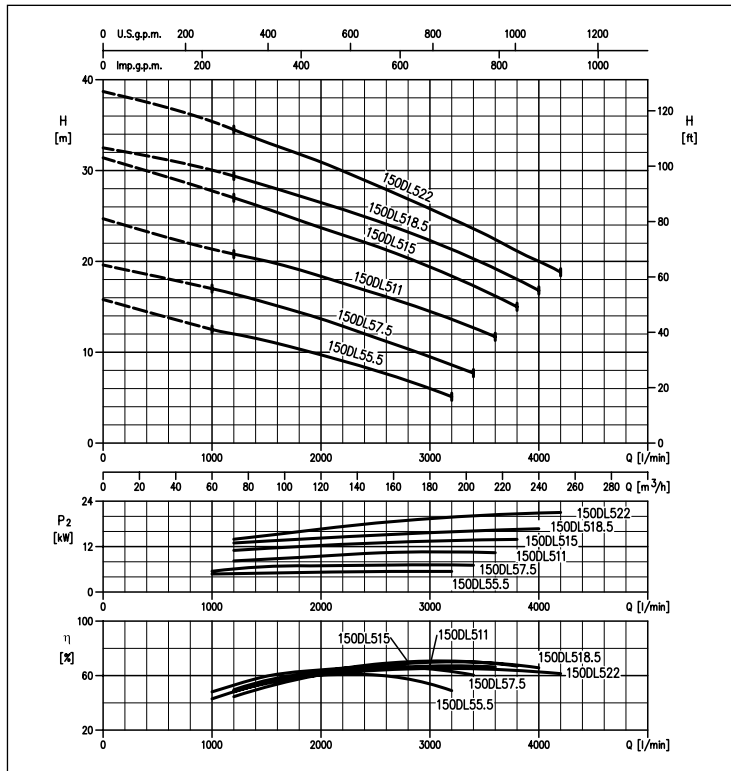
SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron



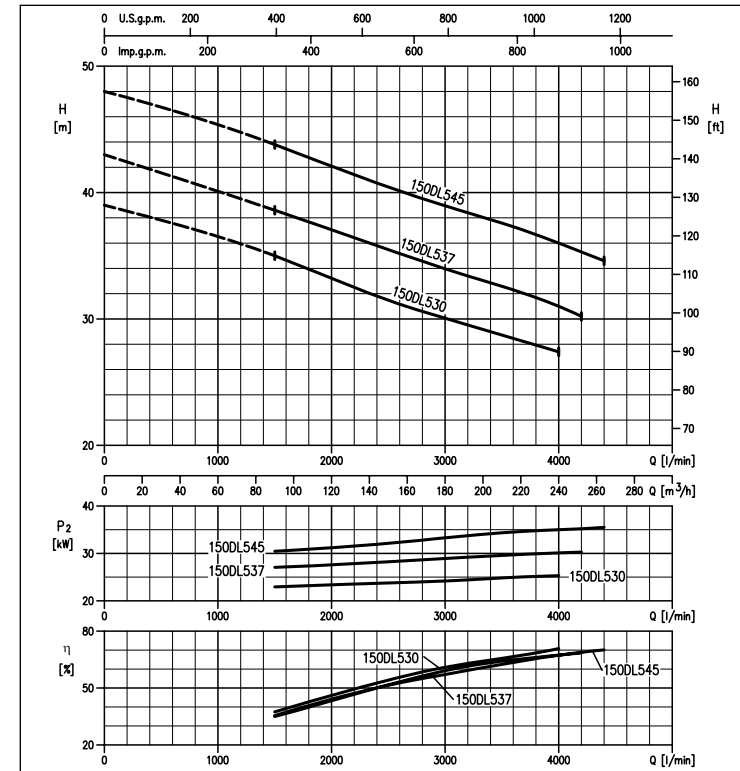
DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron

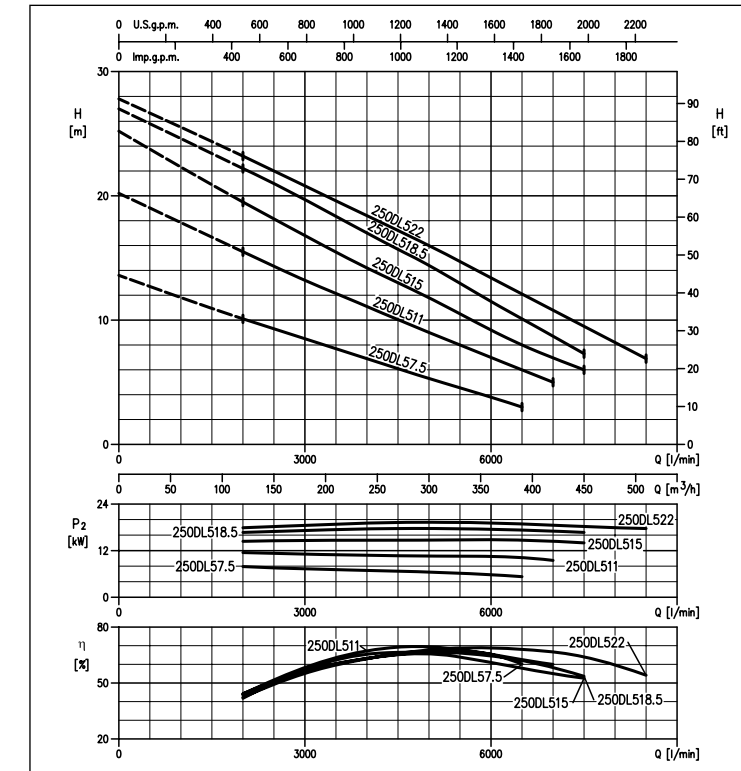
PERFORMANCE CURVES 150DL55.5 (5.5 kW)
150DL511 (11 kW)
150DL518.5 (18.5 kW)
150DL57.5 (7.5 kW)
150DL515 (15 kW)
150DL522 (22 kW)



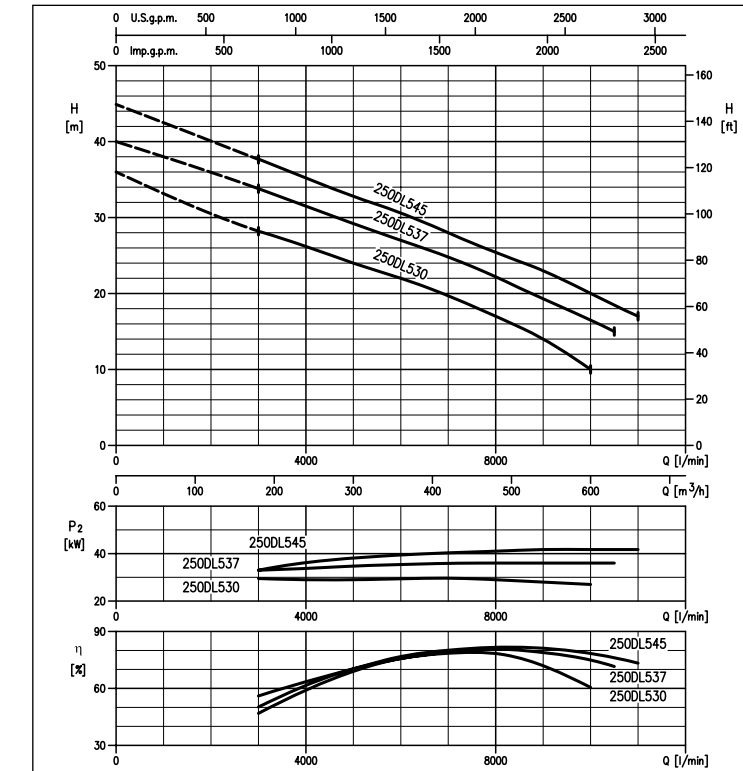
PERFORMANCE CURVES 150DL530 (30 kW)
150DL537 (37 kW)
150DL545 (45 kW)



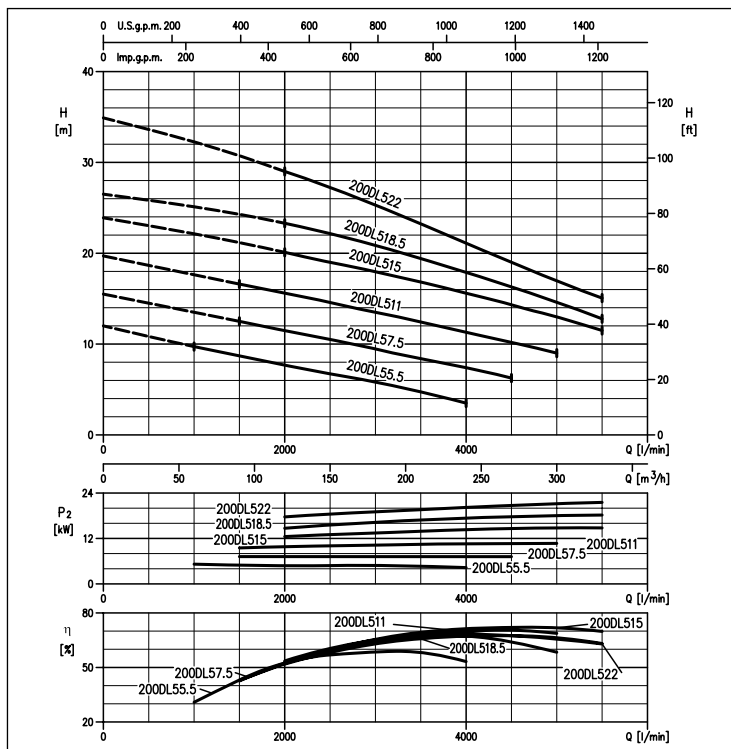
PERFORMANCE CURVES 250DL57.5 (7.5 kW)
250DL511 (11 kW)
250DL518.5 (18.5 kW)
250DL522 (22 kW)
250DL515 (15 kW)



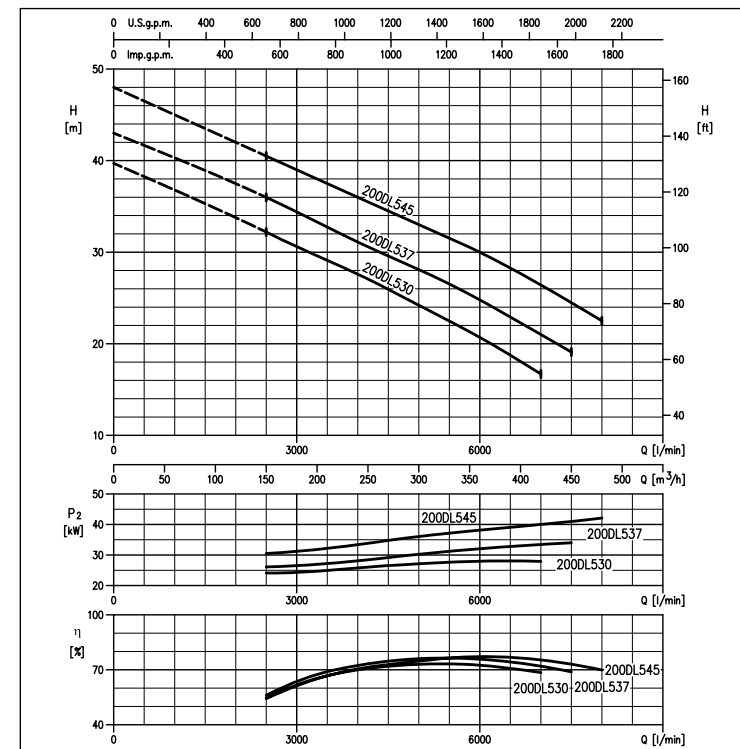
PERFORMANCE CURVES 250DL530 (30 kW)
250DL537 (37 kW)
250DL545 (45 kW)



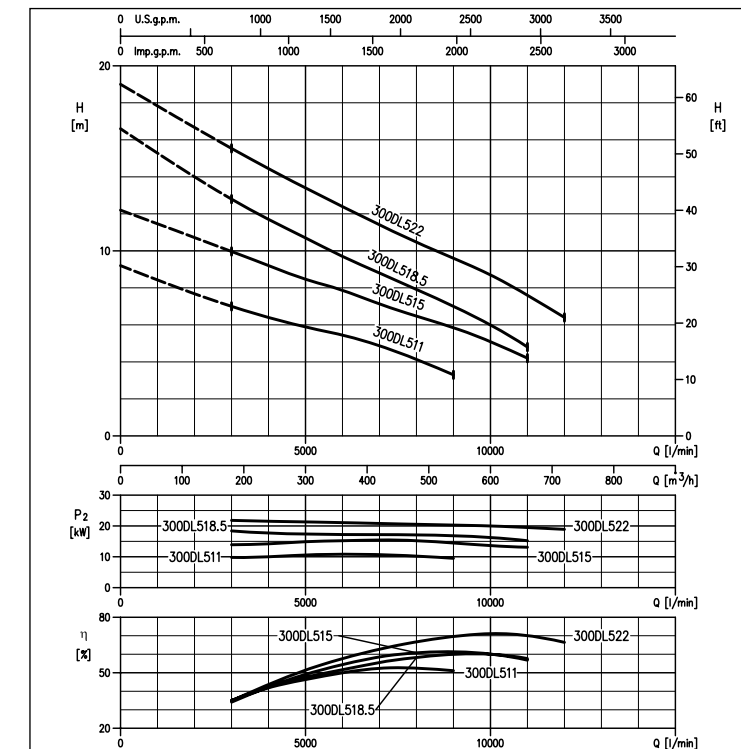
PERFORMANCE CURVES 200DL55.5 (5.5 kW)
200DL511 (11 kW)
200DL518.5 (18.5 kW)
200DL57.5 (7.5 kW)
200DL515 (15 kW)
200DL522 (22 kW)



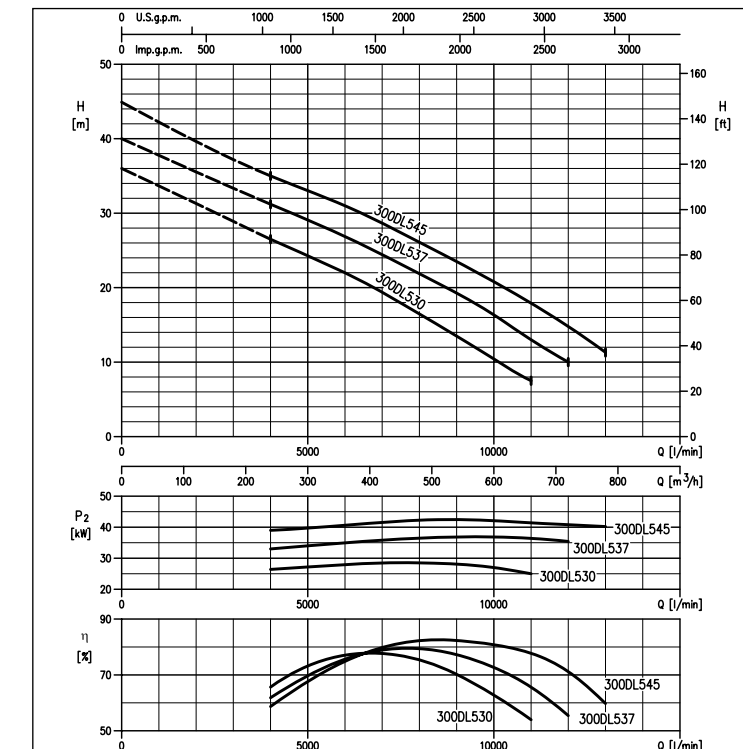
PERFORMANCE CURVES 200DL530 (30 kW)
200DL537 (37 kW)
200DL545 (45 kW)



PERFORMANCE CURVES 300DL511 (11 kW)
300DL515 (15 kW)
300DL518.5 (18.5 kW)
300DL522 (22 kW)



PERFORMANCE CURVES 300DL530 (30 kW)
300DL537 (37 kW)
300DL545 (45 kW)



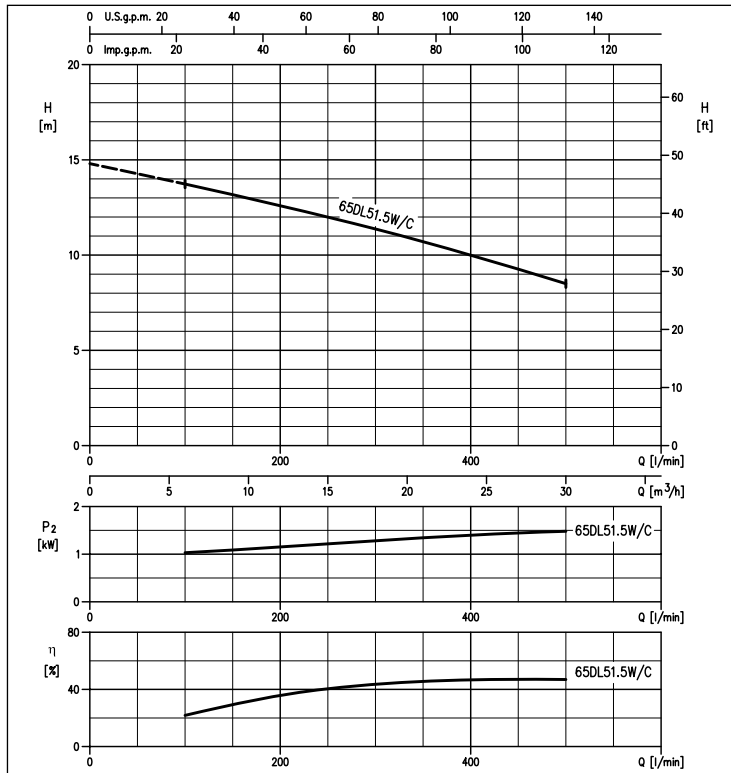
DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron

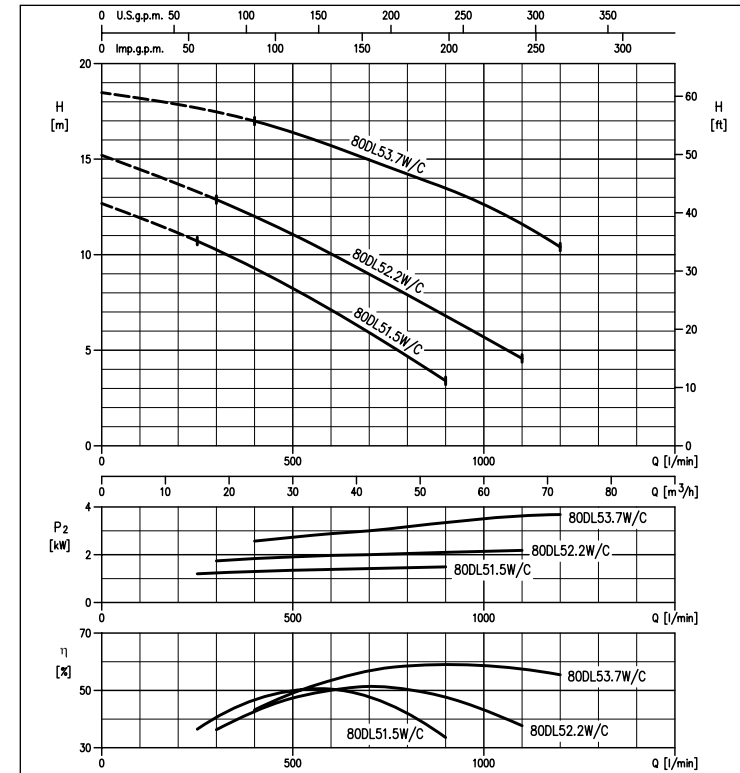
DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron

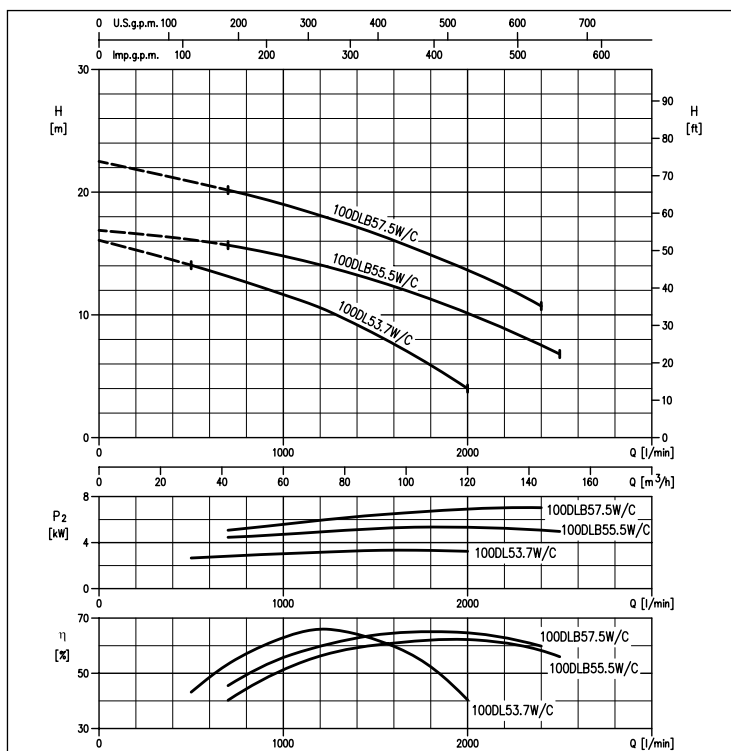
PERFORMANCE CURVES 65DL51.5 W/C (1.5 kW)



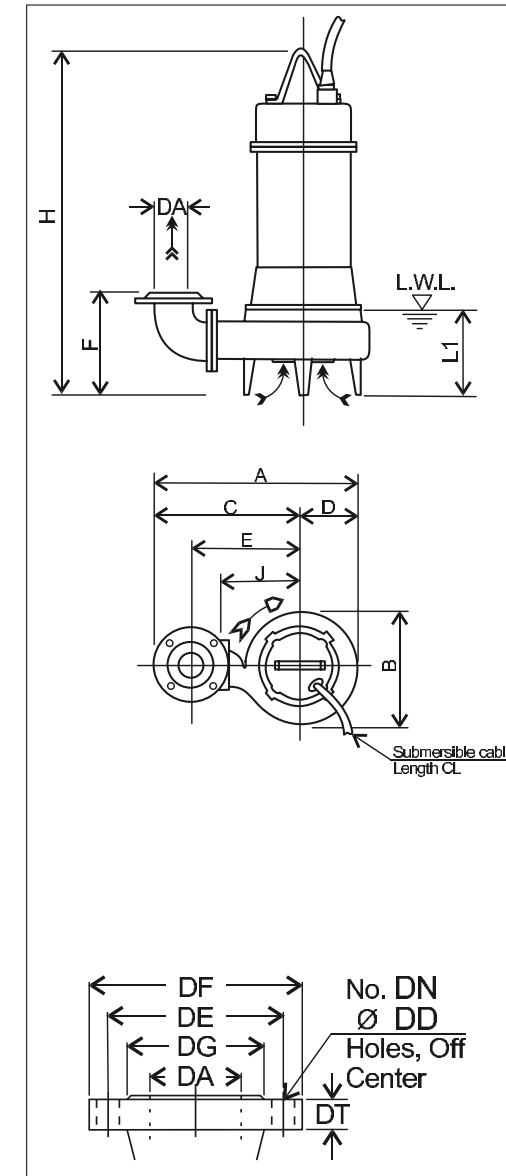
PERFORMANCE CURVES 80DL51.5 W/C (1.5 kW)
80DL52.2 W/C (2.2 kW)
80DL53.7 W/C (3.7 kW)



PERFORMANCE CURVES 100DL53.7 W/C (3.7 kW)
100DLB55.5 W/C (5.5 kW)
100DLB57.5 W/C (7.5 kW)



DIMENSIONS DL



Discharge flanges dimensions [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		
	200	295	340	266	25	12	23
250	350	395	319	25			
300	400	445	370	24			

DIMENSIONS TABLE DL

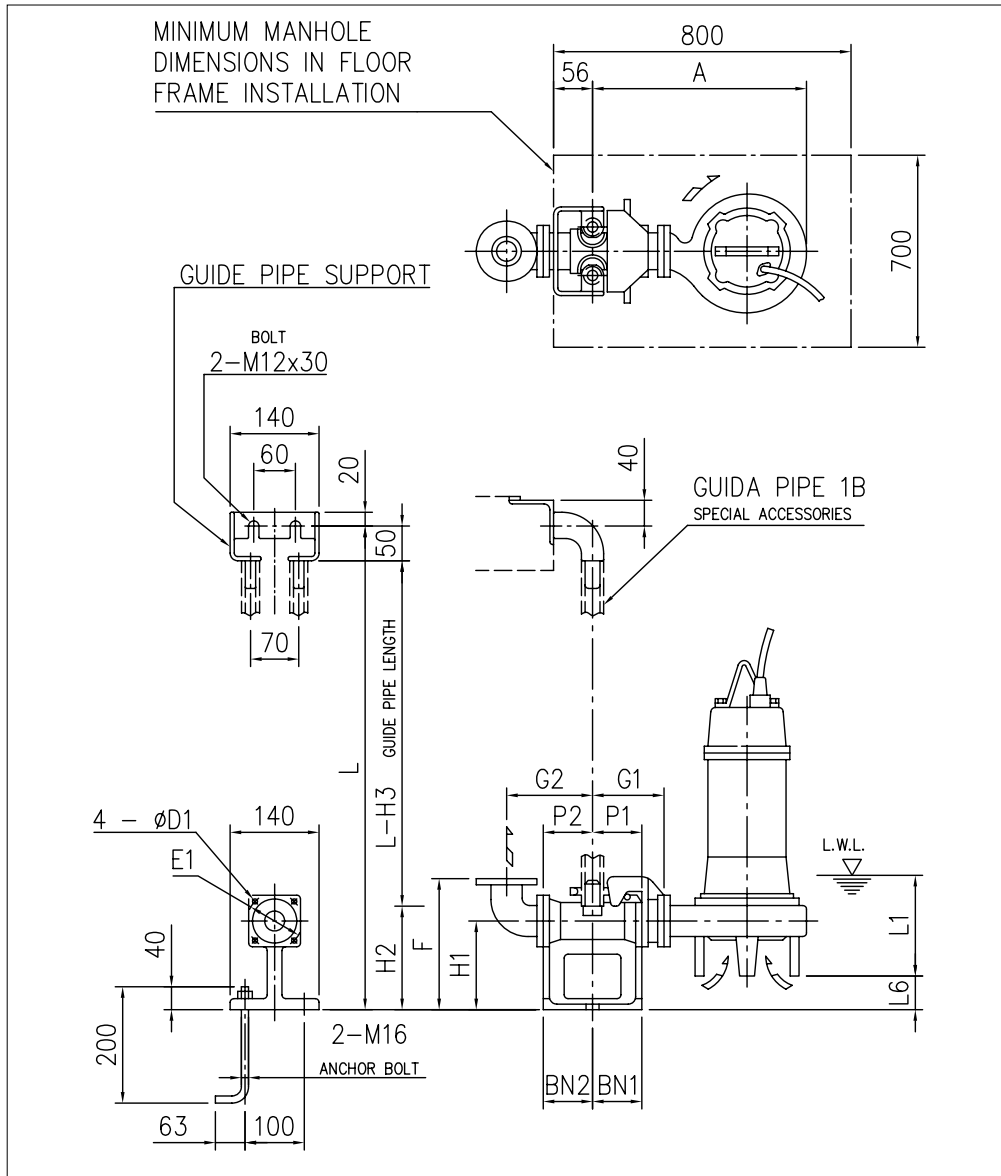
DA	Model	[kW]	A	B	C	D	E	F	H	J	L1 (*)	E1	Weight [kg]
65	65DL51.5	1.5	497	291	353	144	265	200	576	200	140		52
80	80DL51.5	1.5	524	292	378	146	285	220	597	210	165		55
	80DL52.2	2.2	542	308	388	154	295	220	654	220			67
	80DL53.7	3.7	567	328	403	164	310	307	687	235	205		75
	80DLC55.5	5.5	618	379	428	190	335	307	753	260			134
	80DLC57.5	7.5	648	399	448	200	355	305	751	280			148
100	100DL53.7	3.7	614	335	445	169	340	250	706	235	185		79
	100DLB55.5	5.5	646	369	460	186	355	323	768	250			123
	100DLC55.5	5.5	660	379	470	190	365	322	753	260	205		134
	100DLB57.5	7.5	673	385	480	193	375	323	760	270			141
	100DLC57.5	7.5	690	399	490	200	385	320	751	280			148
	100DL511	11	701	402	500	201	395	323	859	290	245		180
	100DL515	15	741	441	520	221	415	330	954	310			230
	100DL518.5	18.5	741	441	520	221	415	330	958	310			285
	150DL55.5	5.5	750	398	550	200	410	381	799	280		245	
	150DL57.5	7.5	780	418	570	210	430	377	784	300			158
150DL511	11	810	438	590	220	450	377	883	320		199		
150DL515	15	810	438	590	220	450	377	972	320		237		
150DL518.5	18.5	848	476	610	238	470	381	979	340		300		
150	150DL522	22	848	476	610	238	470	381	979	340	245		325
	150DL530	30		520	650	262	510	468	1284	360			486
	150DL537	37	912	520	650	262	510	468	1404	360	494		350
	150DL545	45	912	520	650	262	510	468	1404	360			350
	200DL55.5	5.5	832	430	615	217	450	414	826	300		10	
	200DL57.5	7.5	863	453	635	228	470	410	809	320			176
	200DL511	11	896	479	655	241	490	411	908	340	285		
200DL515	15	896	479	655	241	490	411	995	340				260
200DL518.5	18.5	932	512		257		415	1001			305		
200DL522	22									486			330
200DL530	30				675	510		1284	360				350
200DL537	37	937	520		262		483	1404		494			370
200DL545	45	937	520		262		483	1404					370
250	250DL57.5	7.5	969	525	700	269	500	622	904	370	400		
	250DL511	11	993	541	720	273	520	634	1000	390			320
	250DL515	15							1086		400		380
	250DL518.5	18.5	1007	549	730	277	530	646	1089	400			420
	250DL522	22									538		440
	250DL530	30							1336				458
	250DL537	37	1125	660	790	335	590	706	1475	460	565		522
	250DL545	45	1125	660	790	335	590	706	1475	460			540
300	300DL511	11	1100	588	798	302	575	671	1050	420	450		365
	300DL515	15											395
	300DL518.5	18.5	1135	618	818	317	595	668	1131	440		440	
	300DL522	22									538		465
	300DL530	30							1336				458
	300DL537	37	1172	660	838	335	615	726	1475	460	565		522
	300DL545	45	1172	660	838	335	615	726	1475	460			540

(*) - L.W.L (Low Water Level)

DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron

DIMENSIONS 65DL, 80DL (1.5÷3.7 kW) with QDC (quick discharge connector)



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

DIMENSIONS TABLE 65DL, 80DL (1.5÷3.7 kW) with QDC (quick discharge connector)

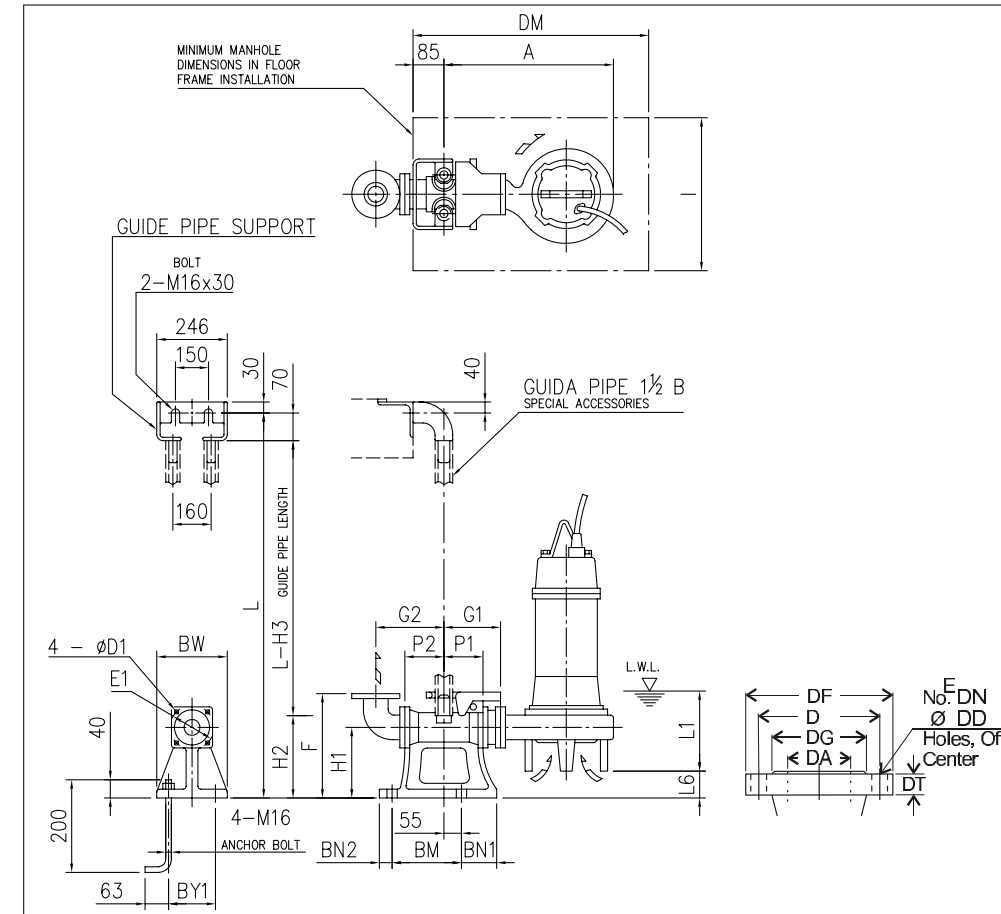
DA	Model	[kW]	A	P1	P2	G1	G2	F	H1	H2	H3	L1 (*)	L6	BN1	BN2	D1	E1	QDC (quick discharge connector) Model	Weight [kg]
65	65DL51.5	1.5	464	75	95	120	160	250	145	190	240	140	50	75	95	12	140	LM65	14
	80DL51.5	1.5	481																
	80DL52.2	2.2	499																
	80DL53.7	3.7	524																
80	80DL51.5	1.5	481	75	90	125	165	285	175	230	280	165	65	75	90	15	155	LM80	17
	80DL52.2	2.2	499																
	80DL53.7	3.7	524																
	80DL57.5	7.5	648																
	80DL57.5	7.5	665																
	80DL511	11	676																

(*) - L.W.L (Low Water Level)

DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron

DIMENSIONS 80DL (5.5÷7.5), 100DL with QDC (quick discharge connector)



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

DIMENSIONS TABLE 80DL (5.5÷7.5), 100DL with QDC (quick discharge connector)

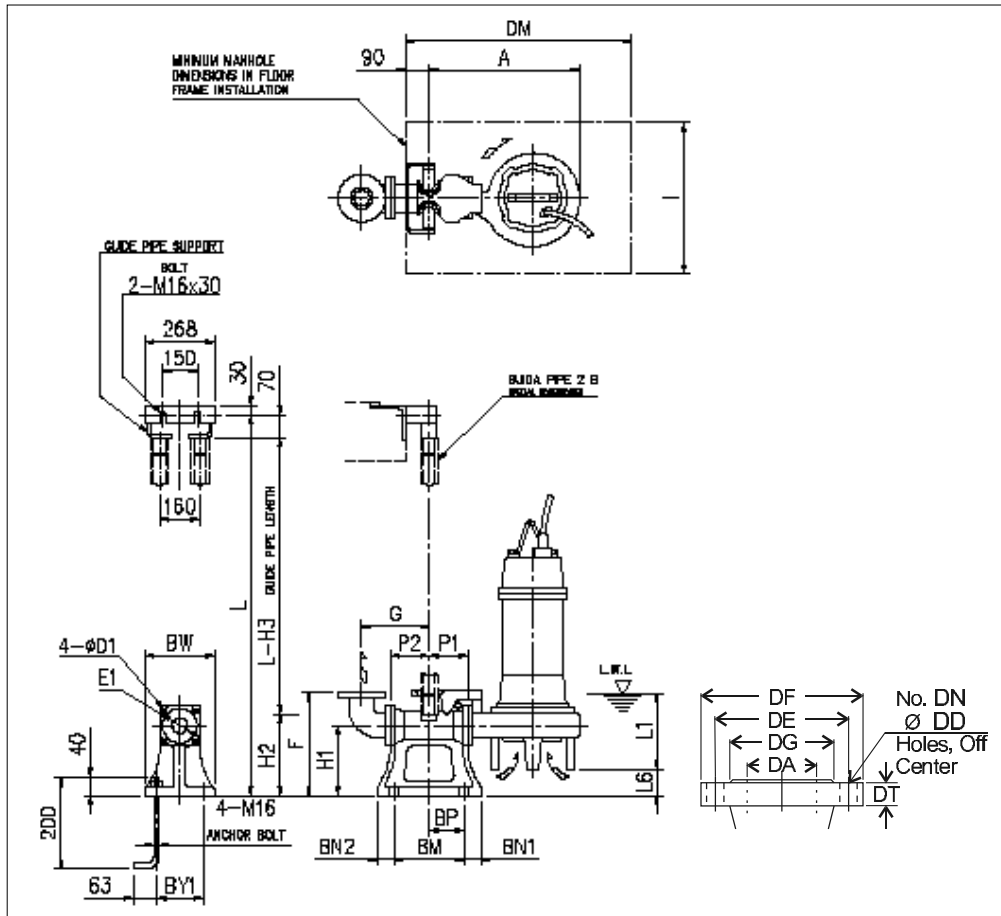
DA	Model	[kW]	A	P1	P2	G1	G2	F	H1	H2	H3	L1 (*)	L6	BN1	BN2	BM	BY1	BW	DM	I	D1	E1	QDC (quick discharge connector) Model	Weight [kg]
80	80DLC55.5	5.5	635	105	120	185	210	350	255	325	205	43	45	100	40	220	180	230	800	700	15	155	LL80	44
	80DLC57.5	7.5	665																					
100	100DL53.7	3.7	589	105	120	185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

(*) - L.W.L (Low Water Level)

DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron

DIMENSIONS 150DL, 200DL with QDC (quick discharge connector)

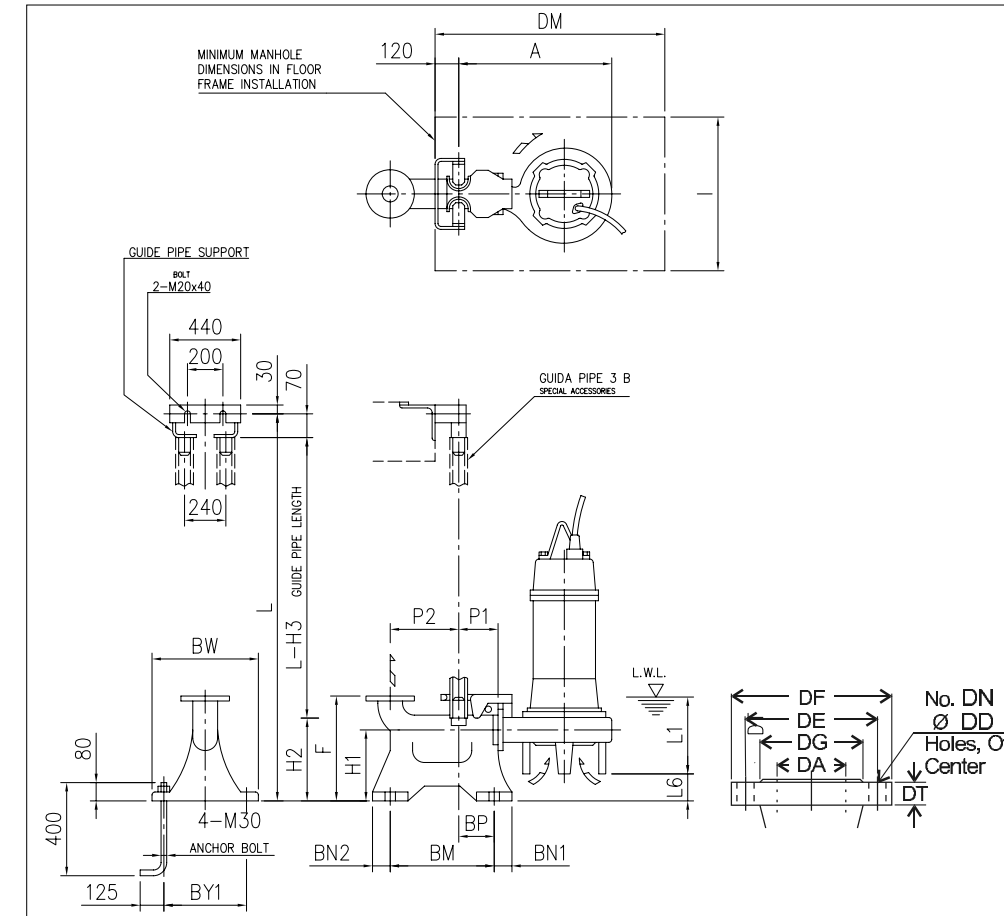


Discharge flanges dimensions [mm] - EN 1092-2							
Type	DA	DE	DF	DG	DT	DN	DD
Round	150	240	285	211	23	8	23
	200	295	340	266			

DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron

DIMENSIONS 250DL, 300DL with QDC (quick discharge connector)



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

DIMENSIONS TABLE 150DL, 200DL with QDC (quick discharge connector)

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

(*) - L.W.L. (Low Water Level)

DIMENSIONS TABLE 250DL, 300DL with QDC (quick discharge connector)

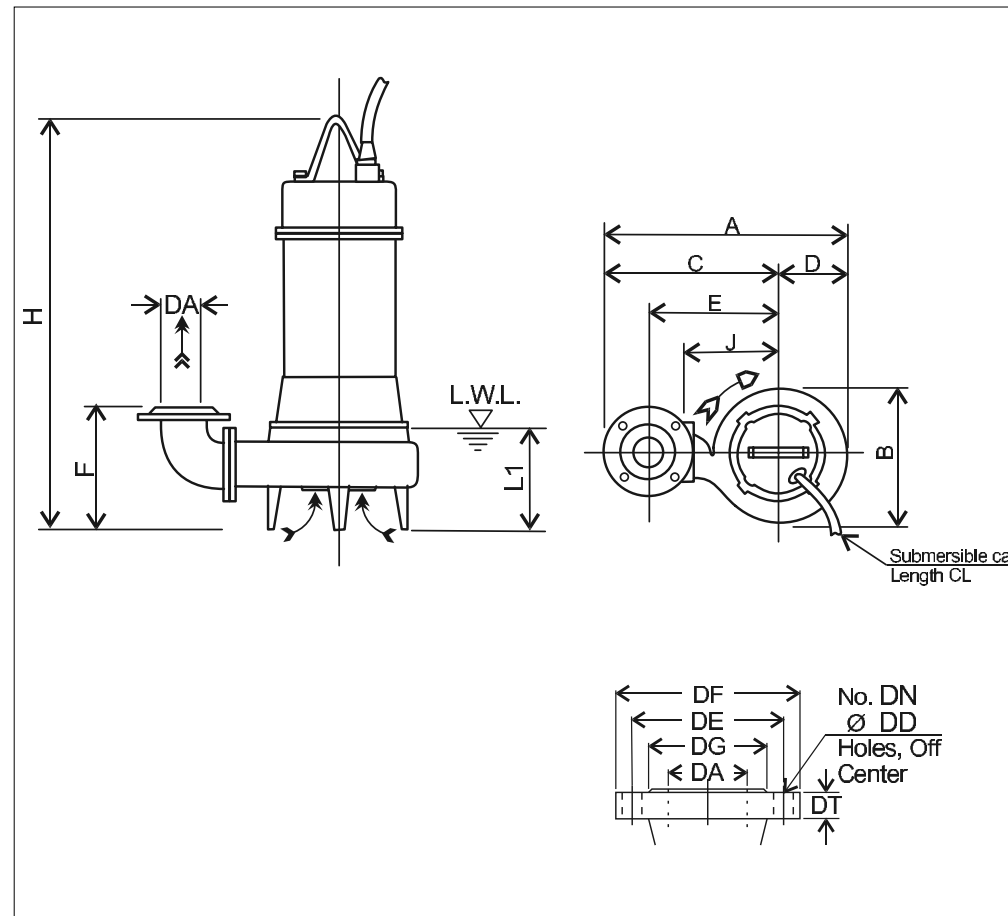
DA	Model	[kW]	A	P1	P2	F	H1	H2	H3	L1 (*)	L6	BN1	BN2	BM	BP	BY1	BW	DM	I	D1	E1	QDC (quick discharge connector) Model	QDC Weight [kg]	
250	250DL57.5	7.5	834	435	700	350	440	510	400	400	58	70	70	650		500	560				210	LL250	150	
	250DL511	11	858																					
	250DL515	15	872																					
	250DL518.5	18.5	872																					
	250DL522	22	990																					
	250DL530	30	990																					
	250DL545	45	990																					
300	300DL511	11	917	465	800	430	550	620	450	450	109	70	680		580	640				250	LL300	200		
	300DL515	15	952																					
	300DL518.5	18.5	952																					
	300DL522	22	990																					
	300DL530	30	990																					
	300DL537	37	990																					
	300DL545	45	990																					

(*) - L.W.L. (Low Water Level)

DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron

DIMENSIONS DL W/C (with cutter)

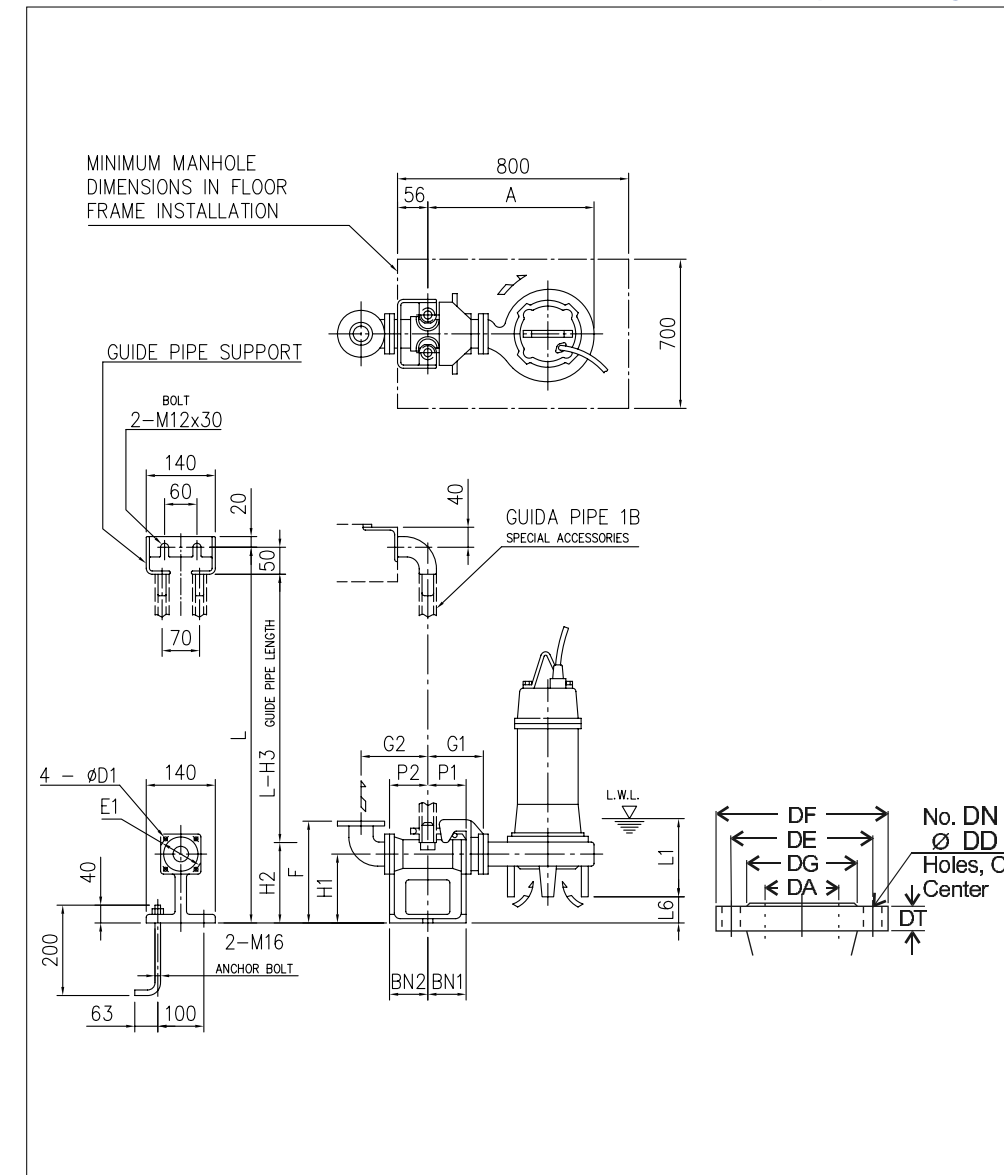


Discharge flanges dimensions [mm] - EN 1092-2							
Type	DA	DE	DF	DG	DT	DN	DD
Round	64	145	185	118	17	4	19
	80	160	200	132	19	8	
	100	180	220	156	21	8	

DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron

DIMENSIONS 65DL W/C, 80DL W/C (with cutter) (1.5÷3.7 kW) with QDC (quick discharge connector)



Discharge flanges dimensions [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	

DIMENSIONS TABLE 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	205		79
	100DLB55.5W/C	5.5	646	369	460	186	355	323	768	250		123	
	100DLB57.5W/C	7.5	673	385	480	193	375	760	270	141			

(*) - L.W.L. (Low Water Level)

DIMENSIONS TABLE 65DL W/C, 80DL W/C (with cutter) (1.5÷3.7 kW) with QDC (quick discharge connector)

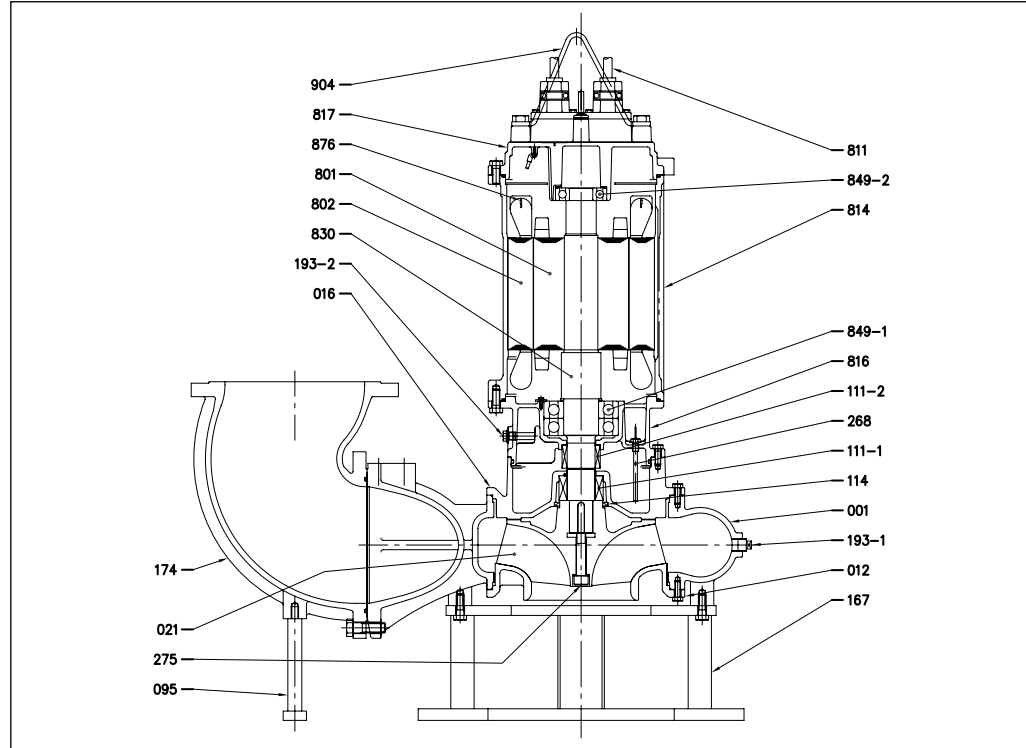
DA	Model	[kW]	A	P1	P2	G1	G2	F	H1	H2	H3	L1 (*)	L6	BN1	BN2	D1	E1	QDC (quick discharge connector) Model	Weight [kg]												
65	65DL51.5W/C	1.5	464	75	95	120	160	250	145	190	240	140	50	75	95	12	140	LM65	14												
80	80DL51.5W/C	1.5	481															90	125	165	285	175	230	280	165	65	90	15	155	LM80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

(*) - L.W.L. (Low Water Level)

DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (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)**



MATERIALS TABLE 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 plug + Gasket	NBR/EN 1.4301(AISI304)
012	Suction side lid	CAST IRON EN-GHJL-200-EN 1561	211	Airvent valve [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)	802	Stator	-
080	Bushing	EN 1.4301 (AISI304)	811	Cable	-
095	Stay [1]	EN 1.4301 (AISI304)	814	Motor case	CAST IRON EN-GHJL-200-EN 1561
111	Mechanical seal	-	816	Motor support	CAST IRON EN-GHJL-200-EN 1561
111-1	Mechanical seal	-	817	Motor cover	CAST IRON EN-GHJL-200-EN 1561
111-2	Mechanical seal	-	830	Shaft	EN 1.4006 (AISI403)
114	Gasket	NBR	849-1	Ball bearing	-
135	Seal washer	EN 1.4301 (AISI304)	849-2	Ball bearing	-
174	Discharge bend	CAST IRON EN-GHJL-200-EN 1561	876	Protector	-
193	Oil plug	NBR/EN 1.4301 (AISI304)	904	Lifting hanger	STAINLESS STEEL
193-1	Plug	EN 1.4301 (AISI304)			

[1] - Excluded 150DL, 200DL, 250DL e 300DL

DL - DL W/C

SUBMERSIBLE SEWAGE PUMPS (DL) WITH CUTTER (DL W/C)
in cast iron

DL, DL W/C (with cutter) (1.5÷3.7 kW) MOTOR DATA

[P2]	[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		
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
		Speed	[min ⁻¹]	1438	1449	1446	1440	1452	1458	1447	1449	1455
	100%	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
		Speed	[min ⁻¹]	1414	1432	1426	1417	1437	1443	1427	1430	1440
	Locked Rotor Torque	[%]	319	378	385	216	277	301	229	275	296	
	Start Current	[A]	23.70	24.50	23.60	29.30	30.00	32.00	49.40	47.50	49.00	
No. starts per hour		10										
Model		ZDLEU										

DL (5.5÷11 kW), DL W/C (with cutter) (5.5÷7.5 kW) MOTOR DATA

[P2]	[kW]	5.5			7.5			11				
Resistance at 20°C	[Ω]	2.339			1.513			-				
GD ²	[kg•m ²]	0.61			0.071			0.12				
Voltage	[V]	380	400	415	380	400	415	380	400	415		
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
		Speed	[min ⁻¹]	1464	1458	1464	1467	1463	1467	-	1468	1470
	100%	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
		Speed	[min ⁻¹]	1451	1442	1451	1455	1449	1455	-	1456	1458
	Locked Rotor Torque	[%]	271	249	271	288	272	288	-	185	155	
	Start Current	[A]	81.00	70.00	74.00	120.00	104.00	108.00	-	121.0	128.0	
No. starts per hour		10										
Model		ZDLEU										



DML - DMLF

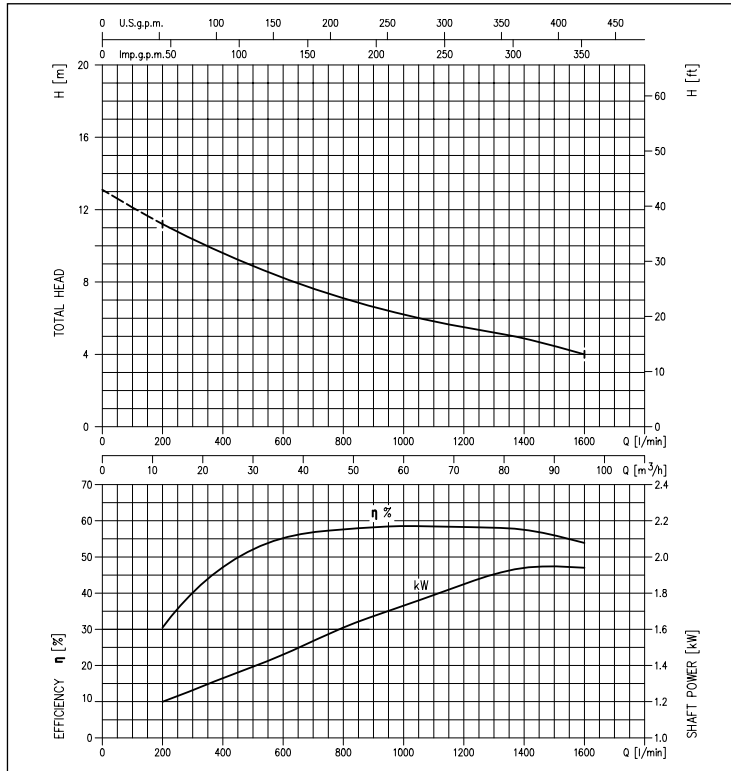
SUBMERSIBLE SEWAGE PUMPS (SINGLE-CHANNEL)
in cast iron



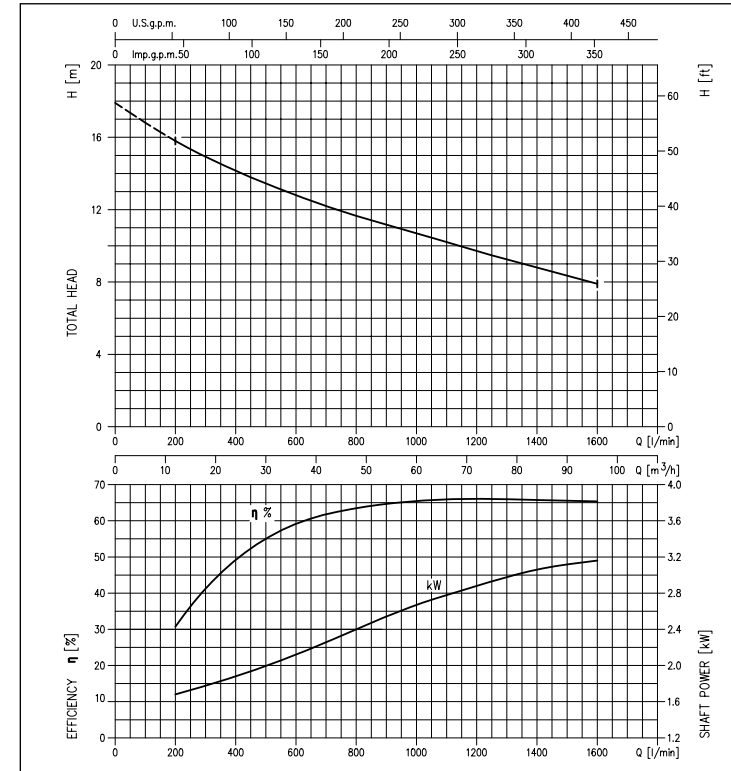
DML - DMLF

SUBMERSIBLE SEWAGE PUMPS (SINGLE-CHANNEL)
in cast iron

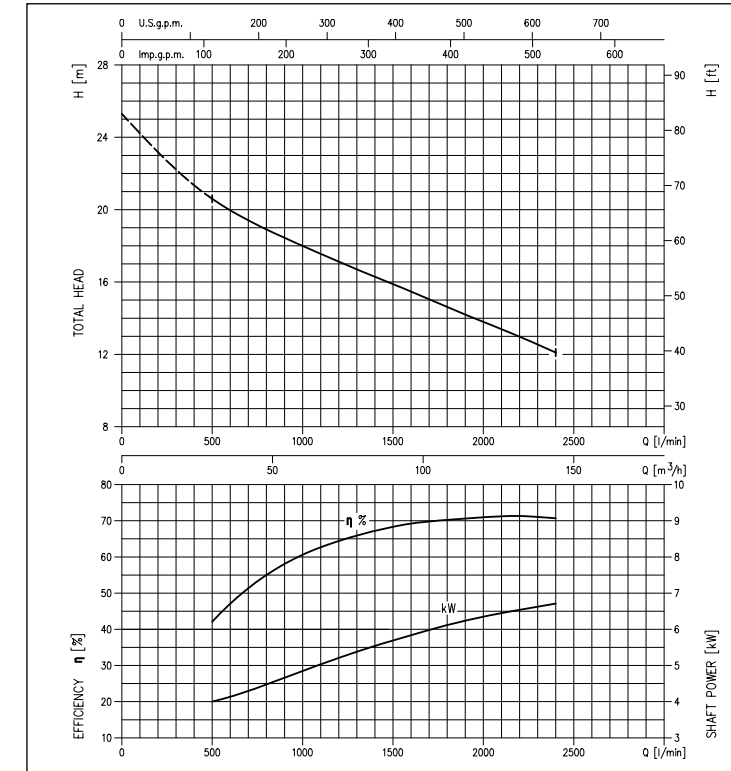
80DML52.2 range PERFORMANCE CURVES
(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 179 mm



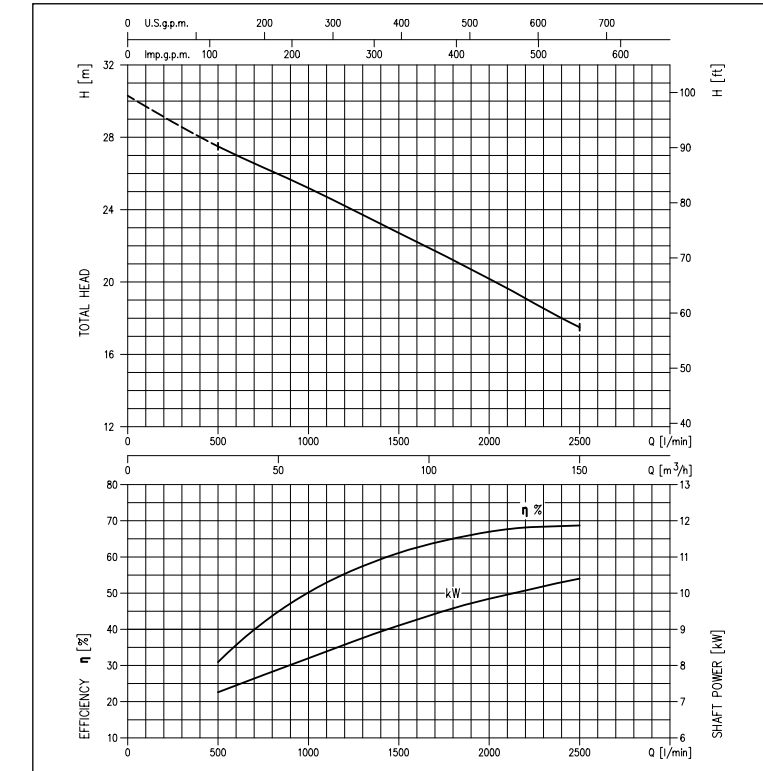
80DML53.7 range PERFORMANCE CURVES
(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 210 mm



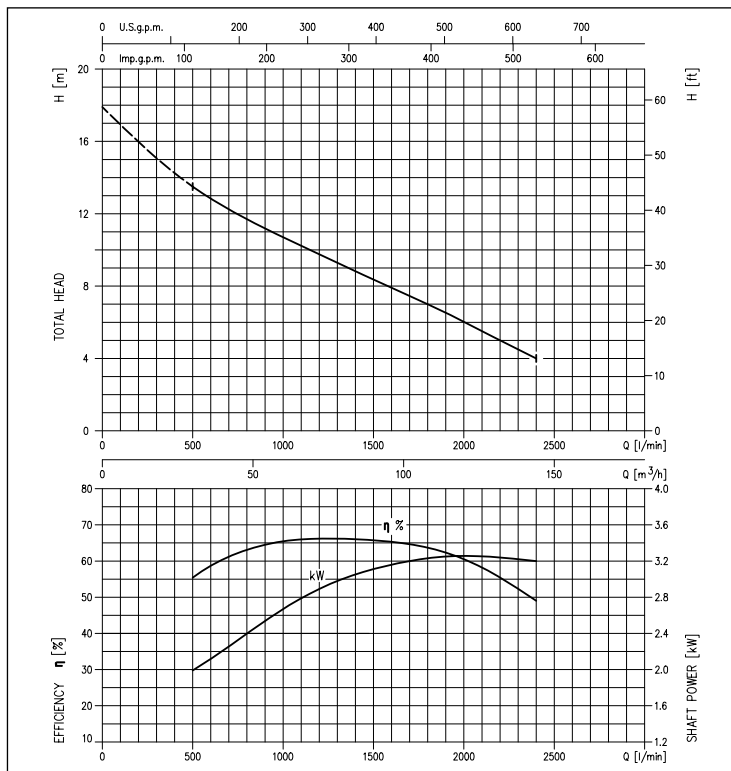
100DML57.5 range PERFORMANCE CURVES
(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 248 mm



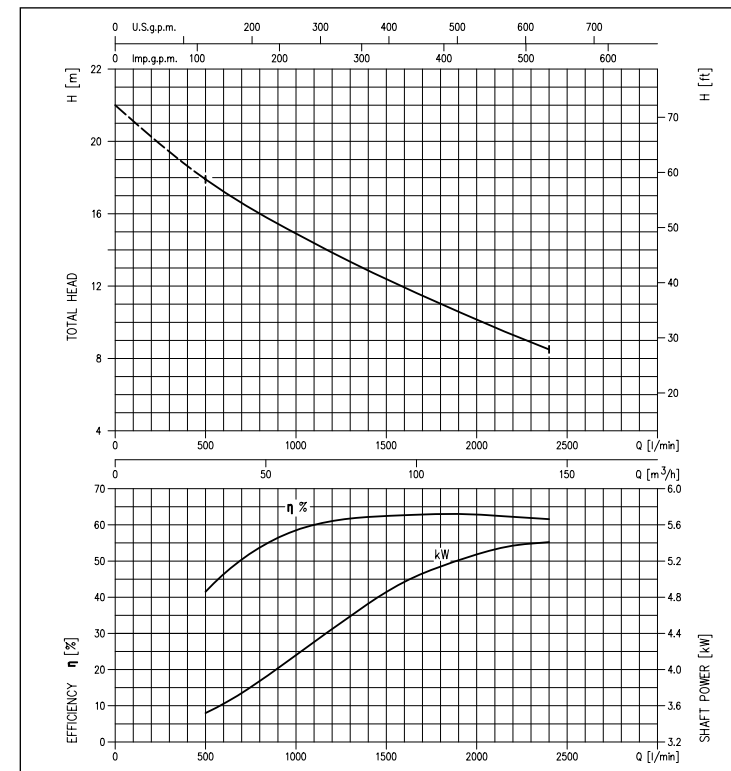
100DML511 range PERFORMANCE CURVES
(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 286 mm



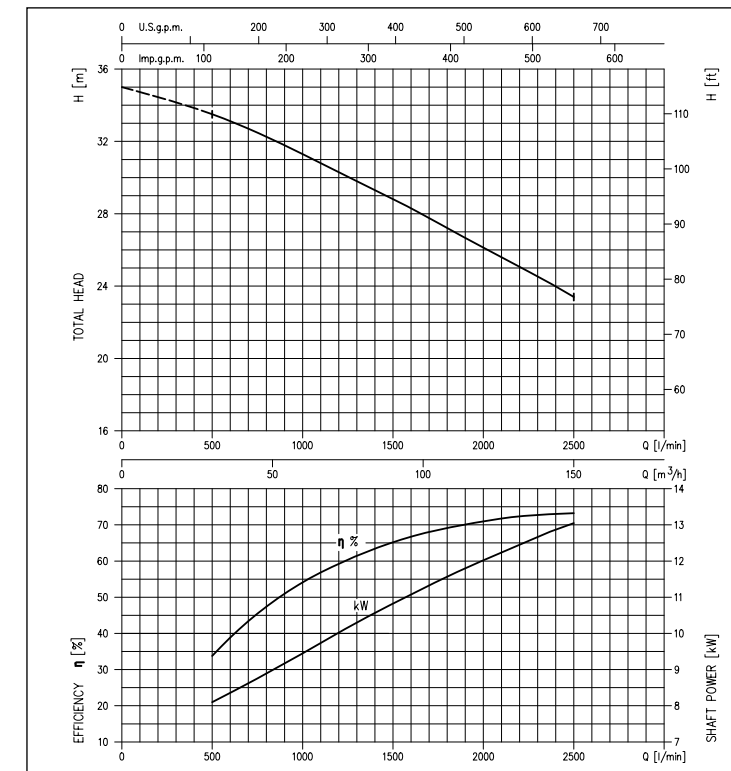
100DML53.7 range PERFORMANCE CURVES
(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 210 mm



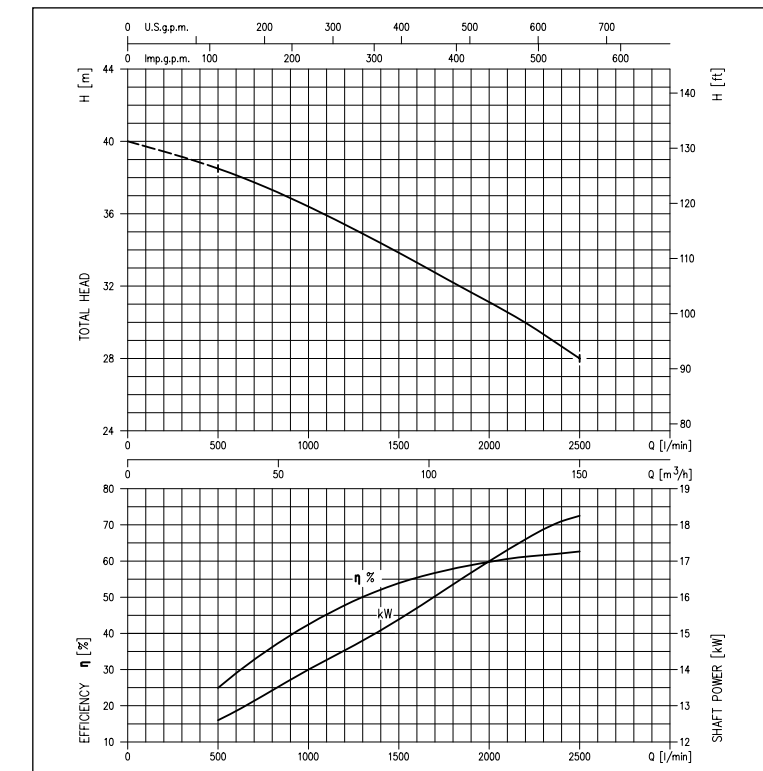
100DML55.5 range PERFORMANCE CURVES
(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 232 mm



100DML515 range PERFORMANCE CURVES
(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 309 mm



100DML522 range PERFORMANCE CURVES
(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 330 mm





DML - DMLF

SUBMERSIBLE SEWAGE PUMPS (SINGLE-CHANNEL)
in cast iron

PERFORMANCE TABLE DML 80

Model	P ₁		l/min m ³ /h	Q=Flow rate						
	[HP]	[kW]		200	400	600	800	1000	1200	1400
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

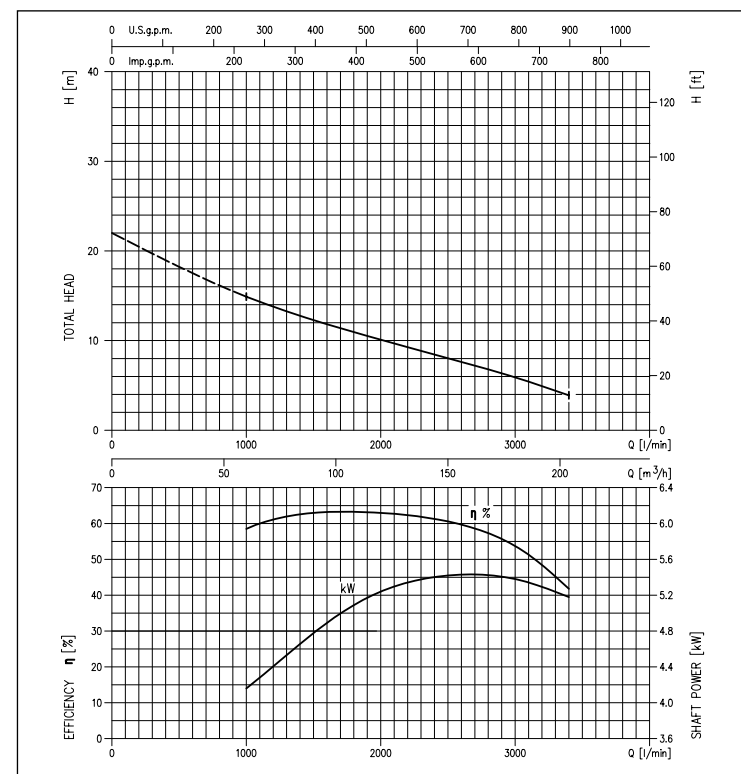
PERFORMANCE TABLE DML 100

Model	P ₁		l/min m ³ /h	Q=Flow rate						
	[HP]	[kW]		500	1000	1300	1600	1900	2200	2400
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

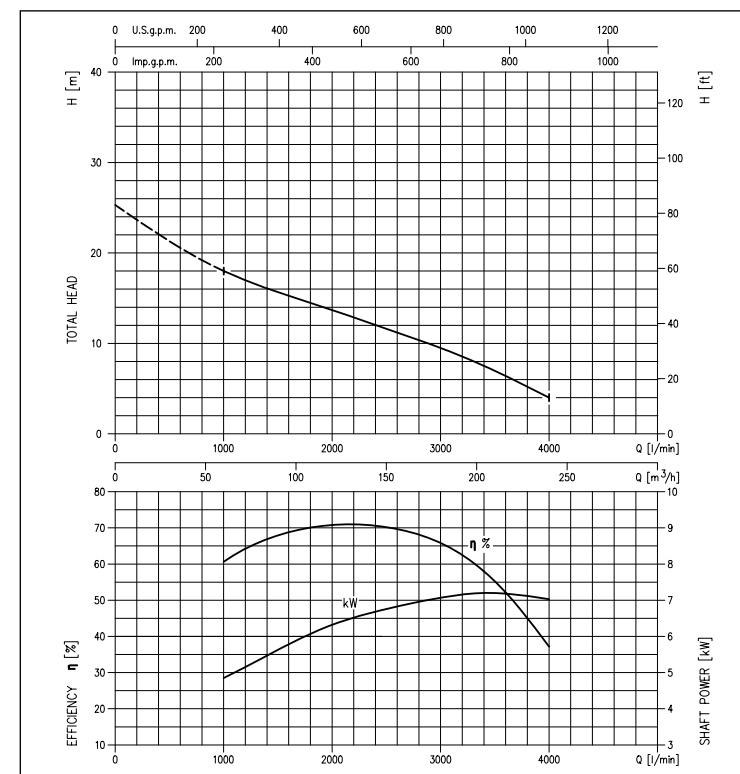
PERFORMANCE TABLE DML 150

Model	P ₁		l/min m ³ /h	Q=Flow rate							
	[HP]	[kW]		1000	2000	2500	3000	3400	4000	4500	5000
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

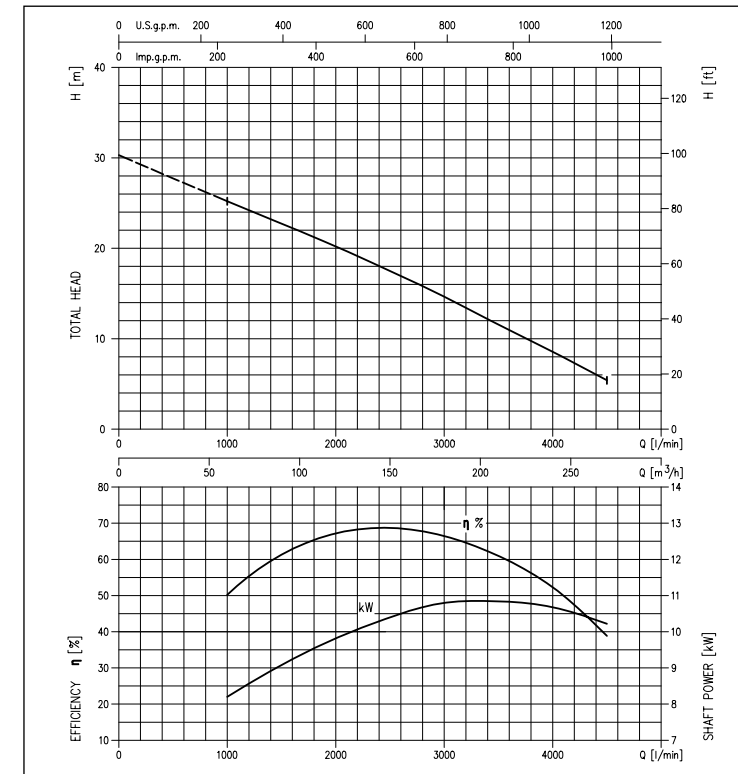
150DML 55.5 range PERFORMANCE CURVES
(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 232 mm



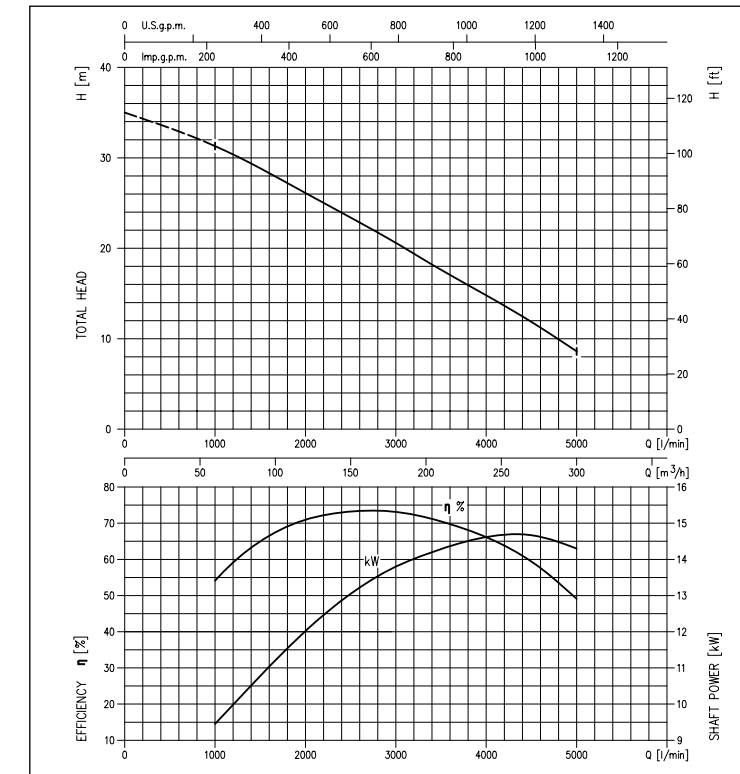
PERFORMANCE CURVES range PERFORMANCE CURVES
(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 248 mm



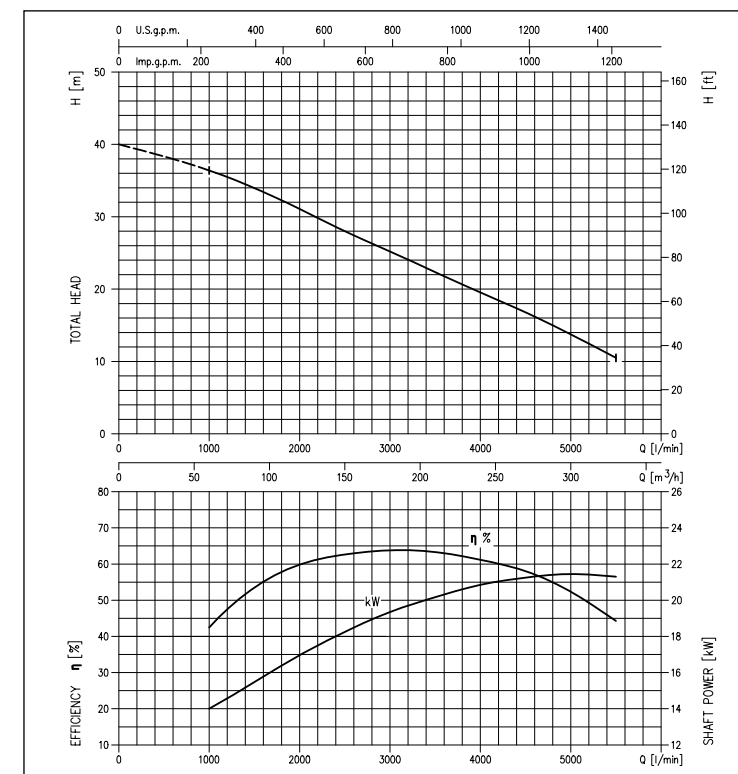
150DML 511 range PERFORMANCE CURVES
(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 286 mm



150DML 515 range PERFORMANCE CURVES
(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 309 mm



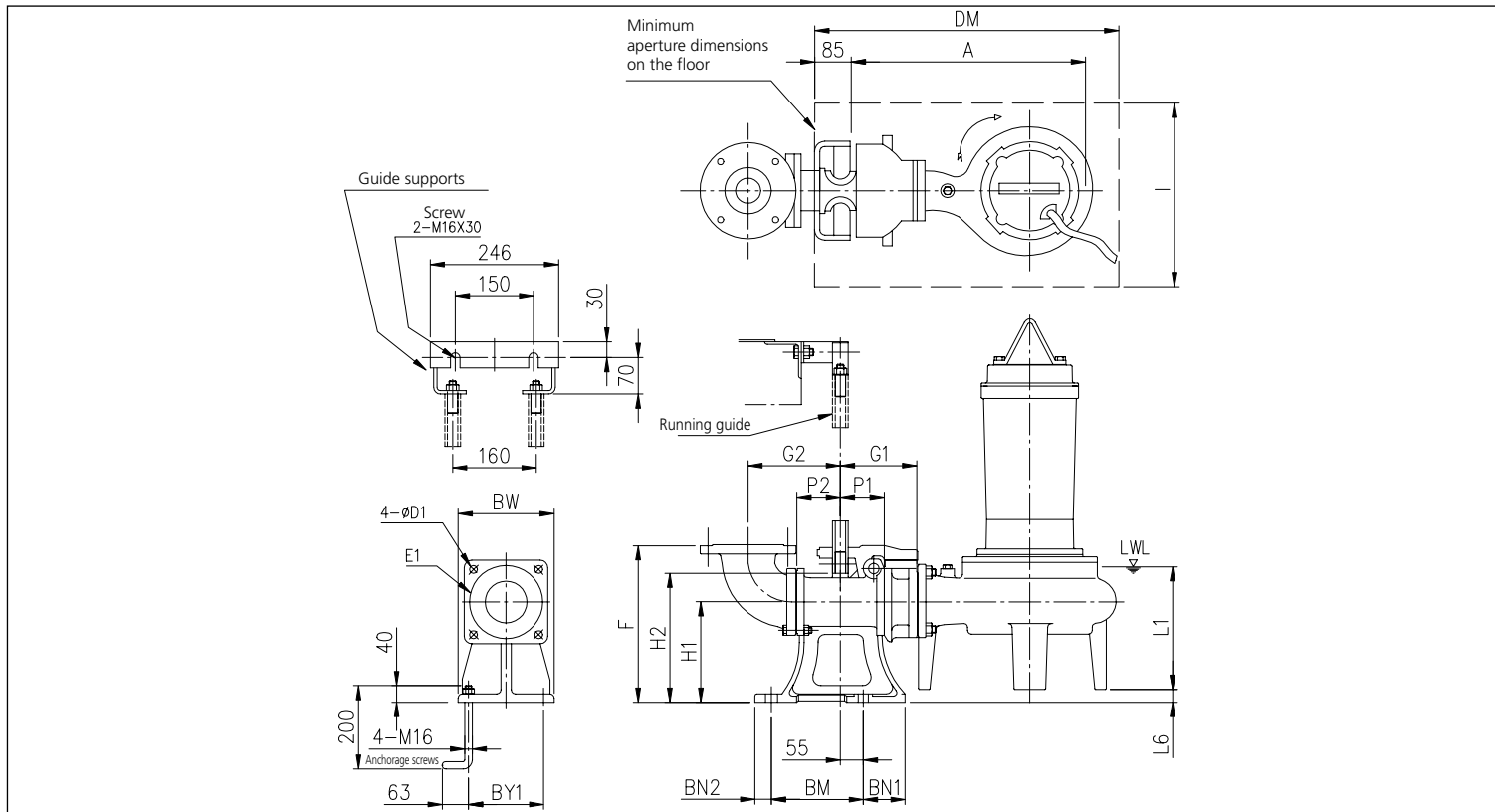
150DML522 range PERFORMANCE CURVES
(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 330 mm



DML - DMLF

SUBMERSIBLE SEWAGE PUMPS (SINGLE-CHANNEL)
in cast iron

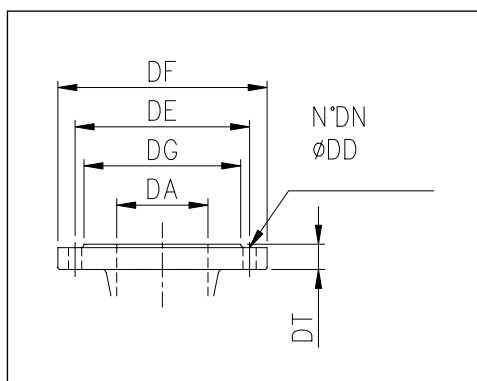
DIMENSIONS QDC (quick discharge connector) LL 100 (for model 100 (150) DML)



DIMENSIONS TABLE QDC (quick discharge connector)

Model	Dimensions [mm]																			Coupling foot	Weight [kg]
	A	P1	P2	G1	G2	F	H1	H2	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

DIMENSIONS FLANGES



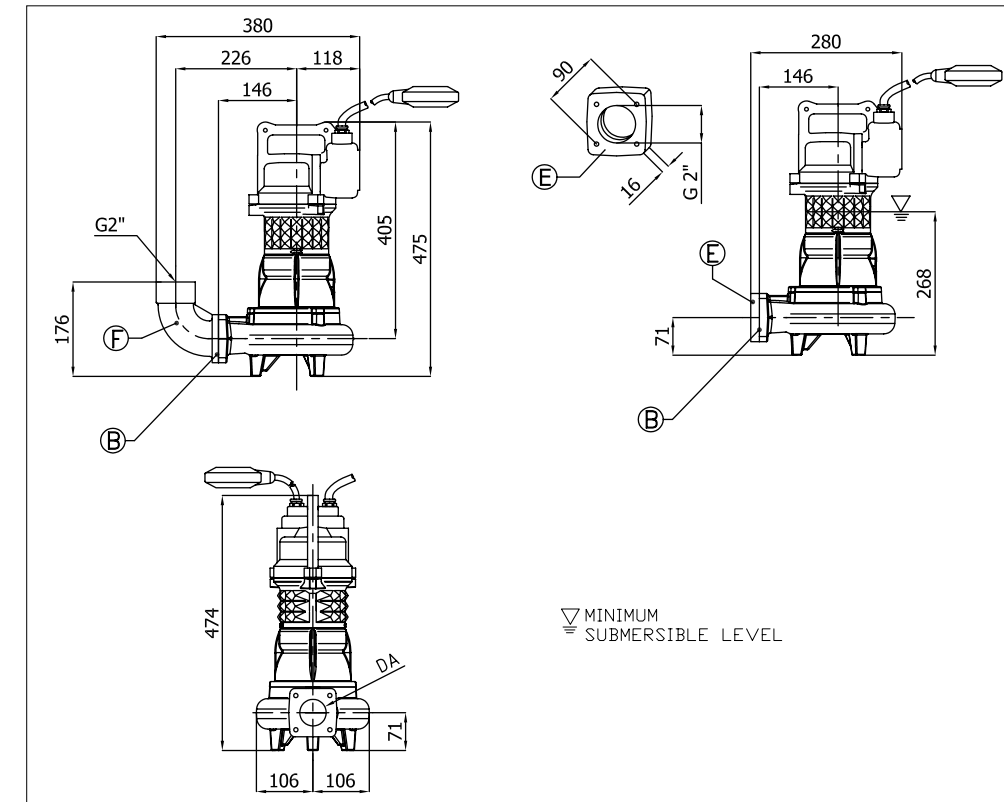
DISCHARGE FLANGES DIMENSIONS

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

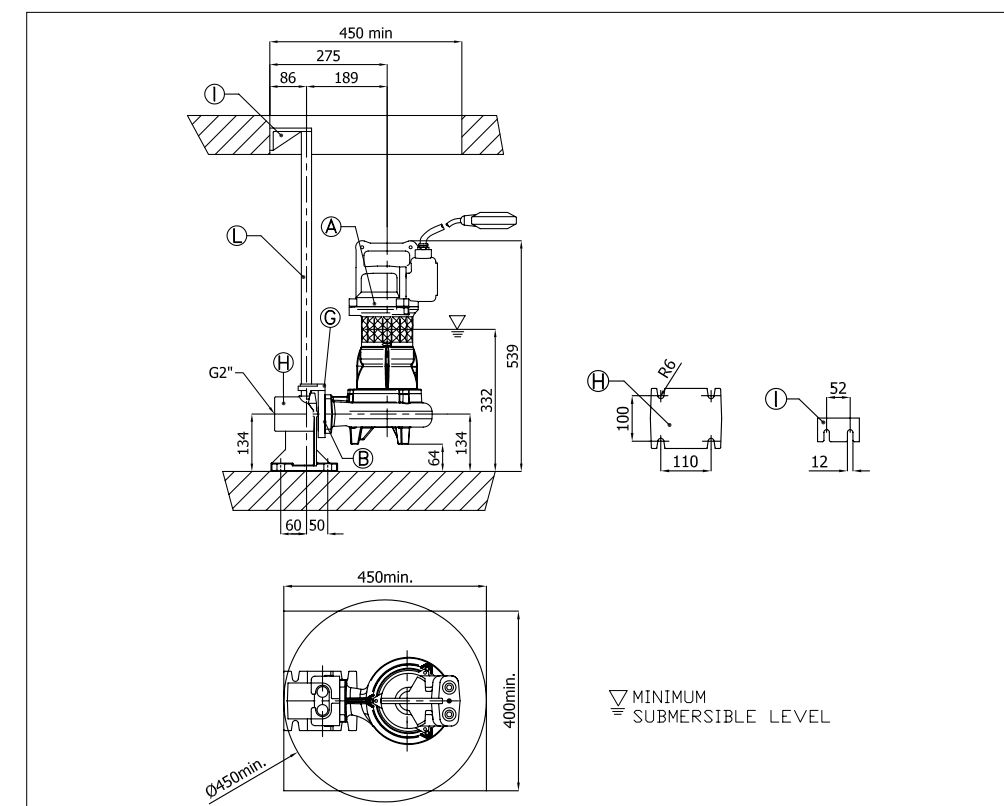
SUBMERSIBLE SEWAGE PUMPS (SINGLE-CHANNEL)
in cast iron

DIMENSIONS 50DMLF (1.1 kW)



DIMENSIONS TABLE 50DMLF (1.1 kW)

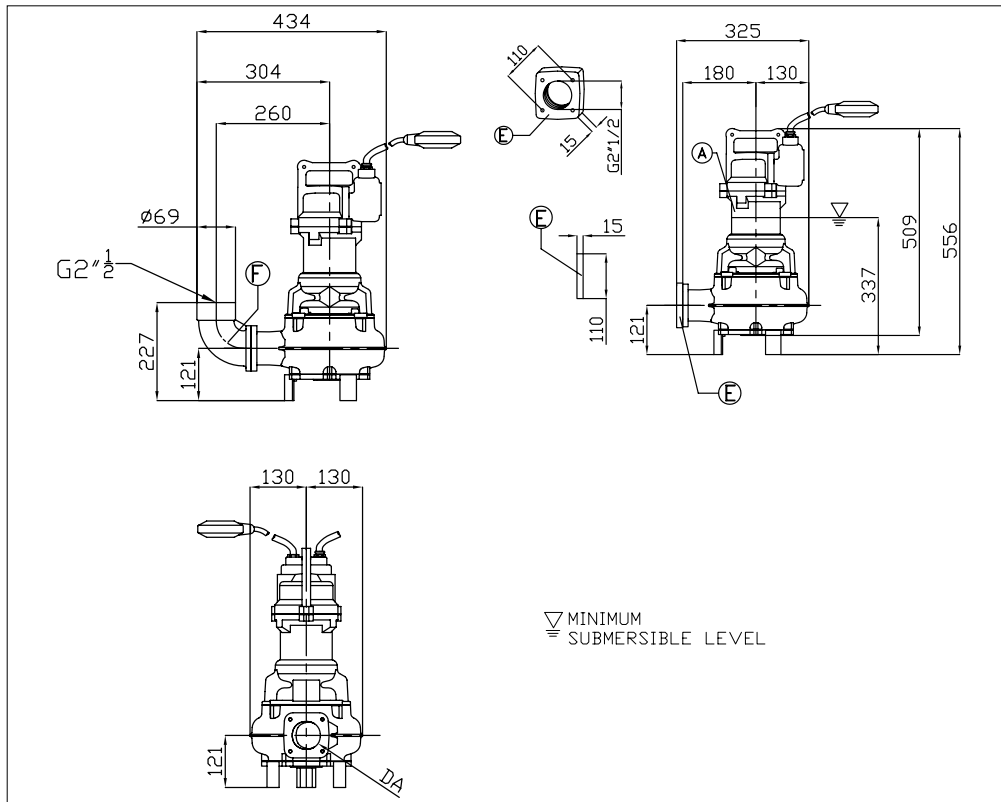
DA	Model	[kW]	Weight [kg]
50	50DMLF51.1M (120)	1.1	31



DML - DMLF

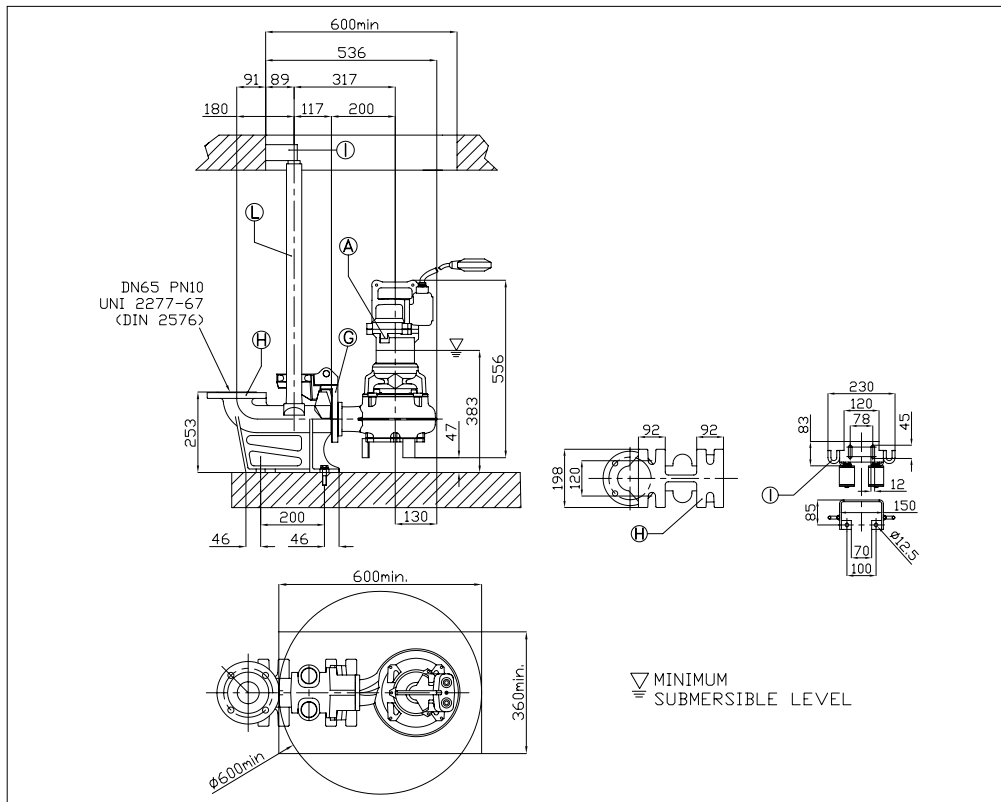
SUBMERSIBLE SEWAGE PUMPS (SINGLE-CHANNEL)
in cast iron

DIMENSIONS 65DMLF (1.1÷1.8 kW)



DIMENSIONS TABLE 65DMLF (1.1÷1.8 kW)

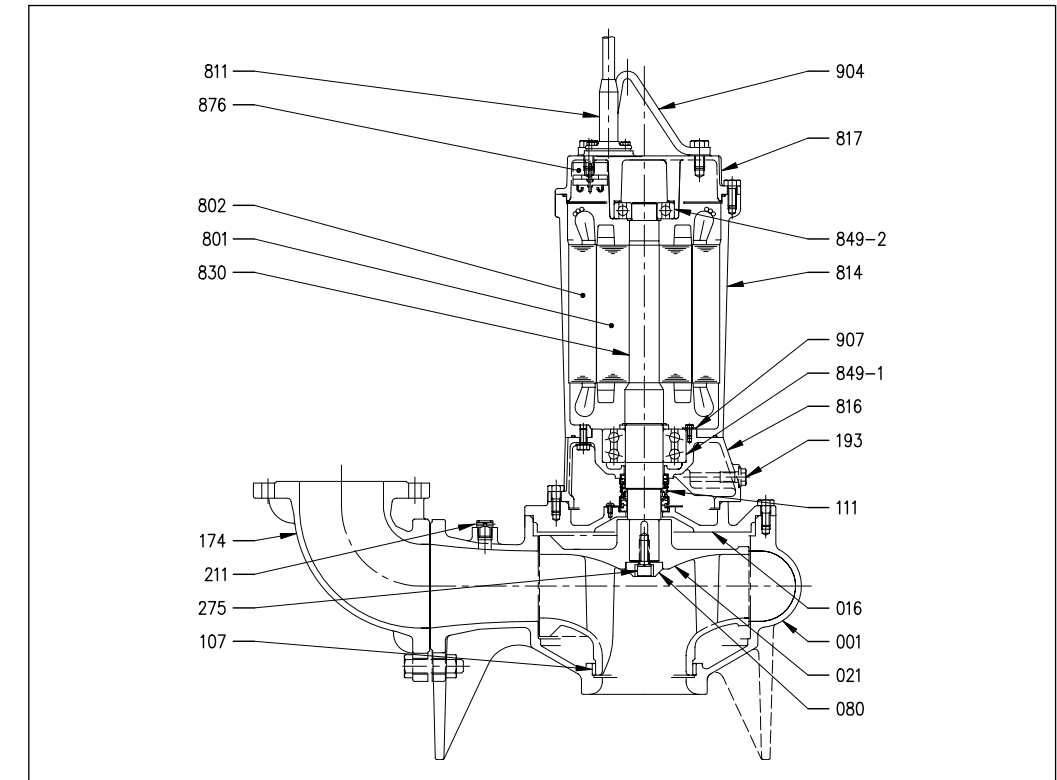
DA	Model	[kW]	Weight [kg]
65	65DMLF51.1M (135)	1.1	42
	65DMLF51.8M (125)	1.8	45



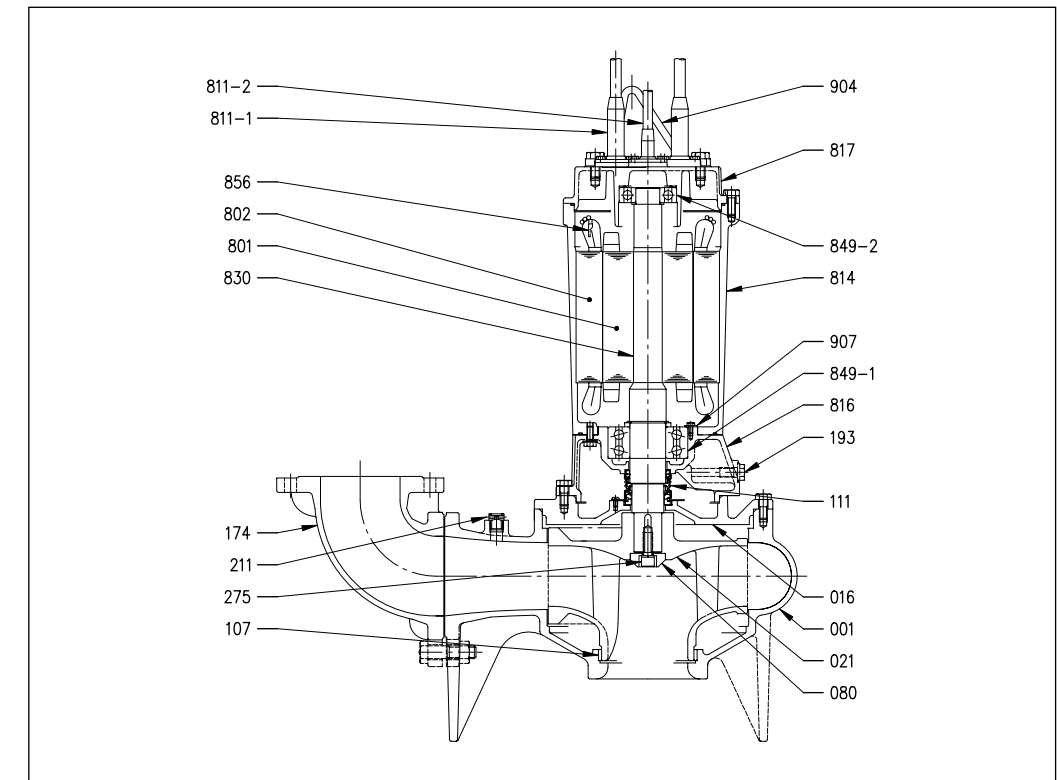
DML - DMLF

SUBMERSIBLE SEWAGE PUMPS (SINGLE-CHANNEL)
in cast iron

SECTIONAL VIEW 80DML 52.2



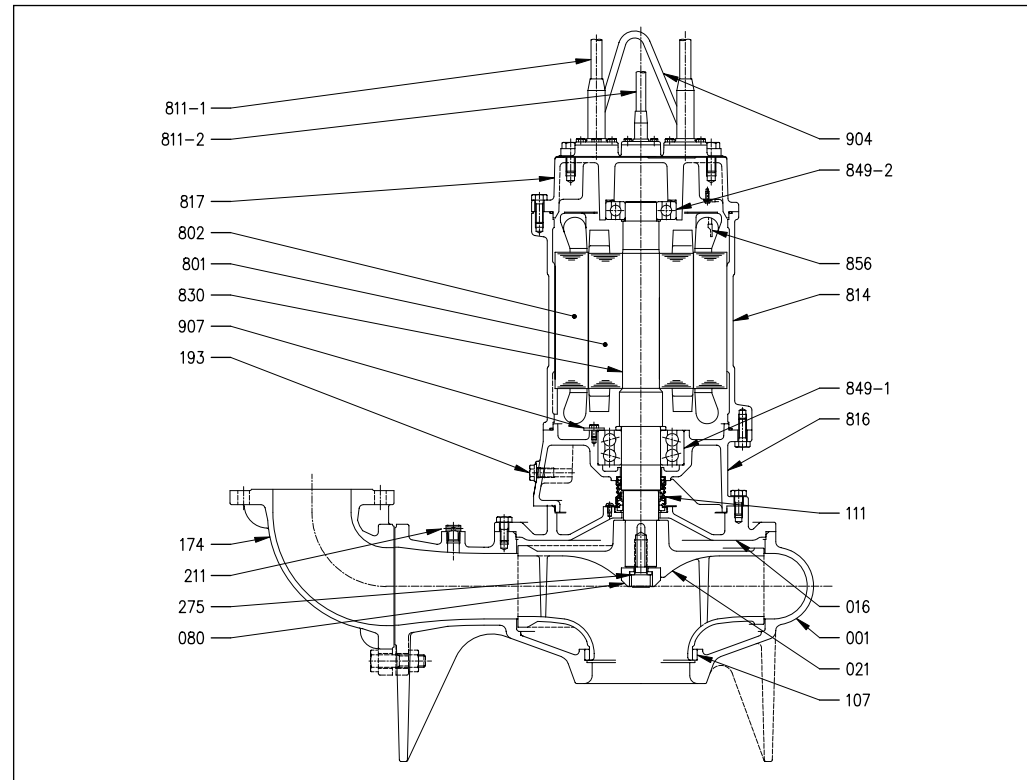
SECTIONAL VIEW 80 (100) (150) DML (3.7÷7.5kW)



DML - DMLF

SUBMERSIBLE SEWAGE PUMPS (SINGLE-CHANNEL)
in cast iron

SECTIONAL VIEW 100 (150) DML (11÷22kW)



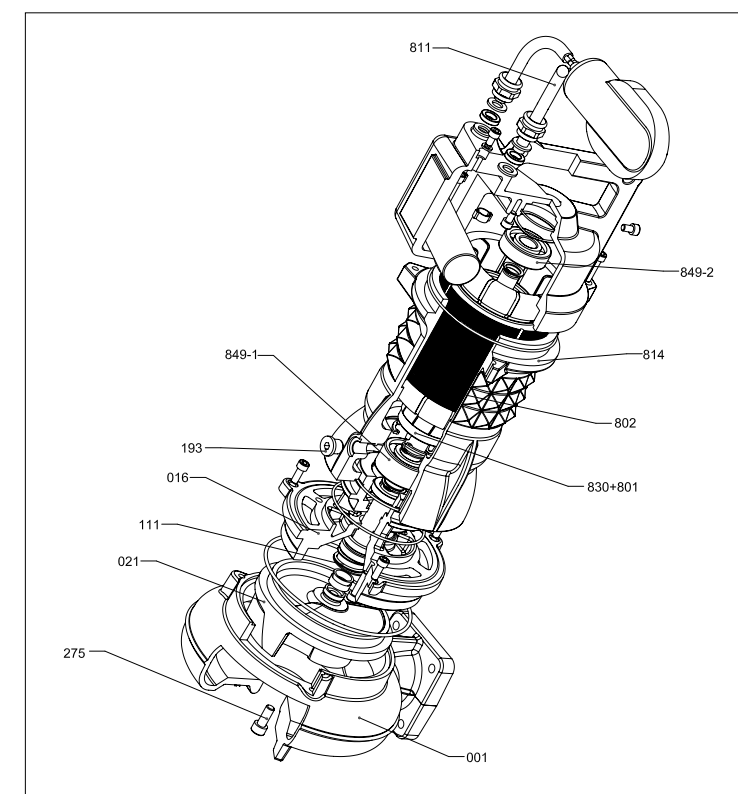
MATERIALS TABLE DML

Ref.	Name	Material	Ref.	Name	Material
001	Pump body	CAST IRON EN-GHJL-200 - EN 1561	811-1	Cable (alimentazione)	-
016	Mechanical seal cover	CAST IRON EN-GHJL-200 - EN 1561	811-2	Cable (segnale)	-
021	Impeller	CAST IRON EN-GHJL-200 - EN 1561	814	Motor case	CAST IRON EN-GHJL-200 - EN 1561
080	Bushing	STEEL	816	Power side bracket	CAST IRON EN-GHJL-200 - EN 1561
107	Wearing ring	BRONZE	817	Opposite side bracket	CAST IRON EN-GHJL-200 - EN 1561
111	Mechanical seal	-	830	Shaft	EN 1.4006 (AISI403)
174	Discharge bend	CAST IRON EN-GHJL-200 - EN 1561	849-1	Ball bearing	-
193	Oil plug	NBR/STEEL INOX	849-2	Ball bearing	-
211	Airvent valve	BRASS	856	Thermal Protector	-
275	Screw (Impeller)	STEEL INOX A2-70 CLASS ISO 3506/1	876	Protector	-
801	Rotor	-	904	Lifting hanger	STEEL
802	Stator	-	907	Cover	STEEL
811	Cable	-			

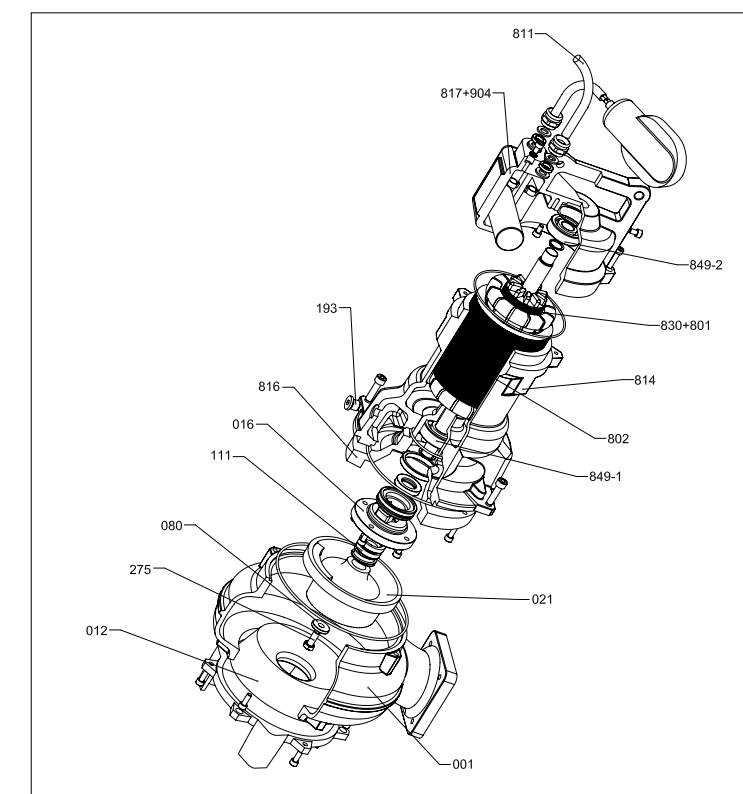
DML - DMLF

SUBMERSIBLE SEWAGE PUMPS (SINGLE-CHANNEL)
in cast iron

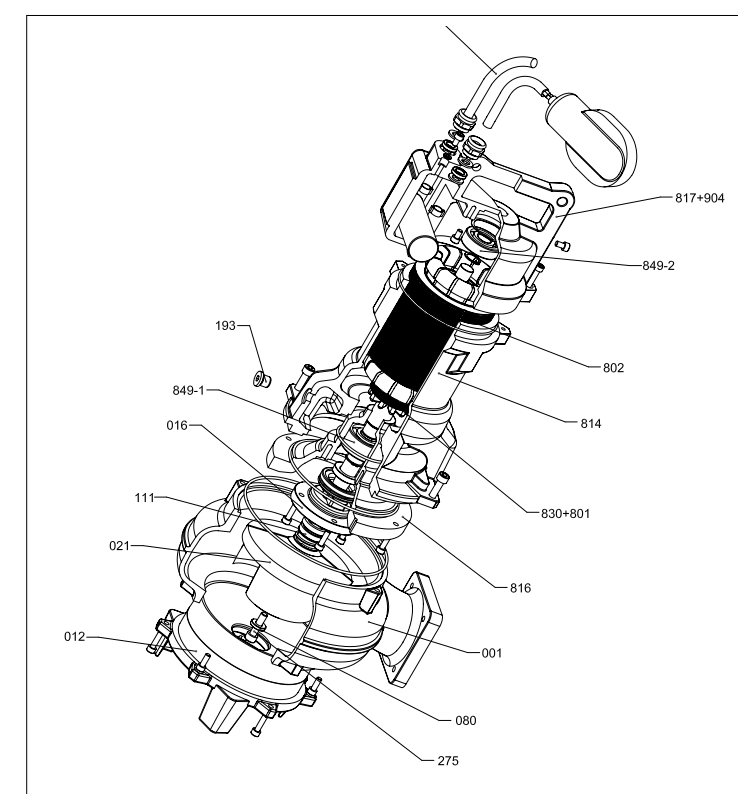
SECTIONAL VIEW 50DMLF (1.1 kW)



SECTIONAL VIEW 65DMLF (1.1 kW)



SECTIONAL VIEW 65DMLF (1.8 kW)



MATERIALS TABLE DMLF

Ref.	Name	Material
001	Pump body	CAST IRON EN-GJL-250
012	Suction side lid	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 plug	NBR/STAINLESS STEEL
275	Impeller nut	AISI304 CLASSE A2
801	Rotor	-
802	Stator	-
811	Cable	-
814	Motor case	CAST IRON EN-GJL-250
816	Power side bracket	CAST IRON EN-GJL-250
817	Opposite side bracket	CAST IRON EN-GJL-250
830	Shaft	AISI 420B
849-1	Ball bearing	-
849-2	Ball bearing	-
904	Lifting hanger	CAST IRON EN-GJL-250



DML - DMLF

SUBMERSIBLE SEWAGE PUMPS (SINGLE-CHANNEL)

in cast iron

DML(V) (2.2÷3.7 kW) MOTOR DATA

[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		
Load	0%	Current	[A]	2.13	2.52	2.81	3.29	3.88	4.45
		Power	[W]	450	480	580	620	780	840
	75%	Current	[A]	4.33	4.21	4.32	6.79	6.77	6.95
		Efficiency	[%]	67.11	68.45	67.13	72.12	71.40	69.56
		Power factor	[%]	86.20	82.63	79.22	86.08	82.84	79.82
	100%	Speed	[min ⁻¹]	1428	1437	1442	1439	1443	1447
		Current	[A]	5.50	5.20	5.20	8.60	8.40	8.40
		Efficiency	[%]	67.56	69.50	68.98	72.79	72.71	71.61
		Power factor	[%]	89.53	87.56	85.08	89.58	87.44	85.44
	Speed	[min ⁻¹]	1400	1411	1421	1416	1422	1428	
	Locked Rotor Torque	[%]	182	204	221	203	226	244	
	Start Current	[A]	24.30	25.70	26.70	45.50	48.10	50.00	
Poles		4							
Phase		3							
Frequency	[Hz]	50							
No. starts per hour		10							
Voltage Tolerance	[%]	-10 +6%		±10%					
Frequency Tolerance	[%]	±1%							
Insulation Class		F							
Model		ZDMEU							

DML(V) (5.5÷11 kW) MOTOR DATA

[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		
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
	75%	Current	[A]	10.30	10.51	10.83	13.65	14.06	14.48	18.26	19.27	19.66
		Efficiency	[%]	73.72	72.26	71.38	75.24	76.86	71.60	81.12	75.49	74.70
		Power factor	[%]	82.50	78.43	74.23	83.20	75.16	75.46	84.63	81.87	78.15
	100%	Speed	[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
		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
	Speed	[min ⁻¹]	1437	1440	1445	1445	1447	1455	1447	1446	1451	
	Locked Rotor Torque	[%]	227	252	272	231	256	278	154	170	184	
	Start Current	[A]	78.00	82.60	87.80	110.20	116.50	121.70	128.20	136.00	141.90	
Poles		4										
Phase		3										
Frequency	[Hz]	50										
No. starts per hour		10			7							
Voltage Tolerance	[%]	±10%										
Frequency Tolerance	[%]	±1%										
Insulation Class		F										
Model		ZDMEU										



DML - DMLF

SUBMERSIBLE SEWAGE PUMPS (SINGLE-CHANNEL)

in cast iron

DML(V) (15÷22 kW) MOTOR DATA

[P2]	[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		
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%	Speed	[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
	Speed	[min ⁻¹]	1449	1451	1455	1462	1466	1466	
	Locked Rotor Torque	[%]	176	195	211	155	172	185	
	Start Current	[A]	199.80	211.90	220.90	299.80	318.50	332.70	
No. starts per hour		7							
Model		ZDMEU							

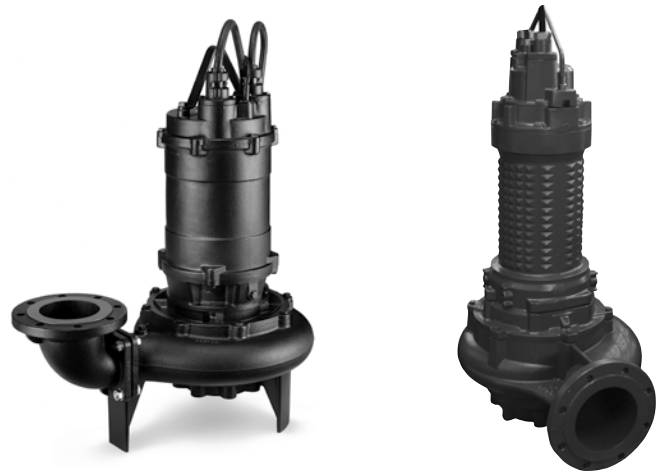
DMLF (1.1÷1.8 kW) MOTOR DATA

[P2]	[kW]	1,1 (DMLF50)		1,1 (DMLF65)		1,8	
Resistance at 20°C	[Ω]	2,83/6,48		1,97/4,38		1,9/4,3	
GD ²	[kg•m ²]	0,000430		0,000520		0,000520	
Voltage	[V]	230		230		230	
Load	0%	Current	[A]	3,3	2,31	2,5	
		Power	[W]	560	415	420	
	75%	Current	[A]	5,5	5,4	7,6	
		Efficiency	[%]	67	67	80	
		Power factor	[%]	0,95	0,96	0,98	
	100%	Speed	[min ⁻¹]	2820	2868	2795	
		Current	[A]	7,5	7,5	10	
		Efficiency	[%]	68	68	80,5	
		Power factor	[%]	0,98	0,98	0,99	
	Speed	[min ⁻¹]	2750	2750	2710		
	Locked Rotor Torque	[%]	20	20	30		
	Start Current	[A]	21	21	35		
No. starts per hour		15					
Model		M272ML-9108-394-9756		M271MM-2282-3028-3534-6437		M271ML-3026-3536-5432-5372-6436	

DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)

in cast iron



Submersible sewage pumps (vortex) in cast iron

APPLICATIONS

- Evacuation of civil and industrial waste waters
- Treating liquid manure
- Draining sub-layer zones
- Generally moving foul waste liquids also containing solid substances and/or suspended filamentary substances
- Emptying seepage water
- Moving sewage (sanitary services)
- Emptying cesspits

TECHNICAL DETAILS

- Equipped with vortex impeller
- Shaft seal upper and lower part (DMLV)
- Turbulence less in oil chamber (DMLV)

TECHNICAL DATA

- Maximum temperature of the liquid: 40°C
- Max solids size for passage: 80÷100mm (DMLV)
- Max solids size for passage: 30÷100mm (DMLVF)
- 4 poles motor (DMLV)
- 2/4/6 poles motor (DMLVF)
- Insulation class F (DMLV)
- Insulation class H (DMLVF)
- Protection degree IP68
- 380-415-10+6%, 50Hz (DMLV 2,2 kW) threephase voltage
- 380-415±10%, 50Hz (DML 3,7÷22 kW) threephase voltage
- 230±10%, 50Hz (DMLVF) singlephase voltage
- 400/690V±10%, 50Hz (DMLVF) threephase voltage
- Flanges: DN80, DN100 (DMLV)
1" 1/4 (32DMLVF), DN50, DN55, DN65, DN80, DN100, DN150 (DMLVF)
- Power up to 22kW (DMLV)
up to 35,7 kW (DMLVF)

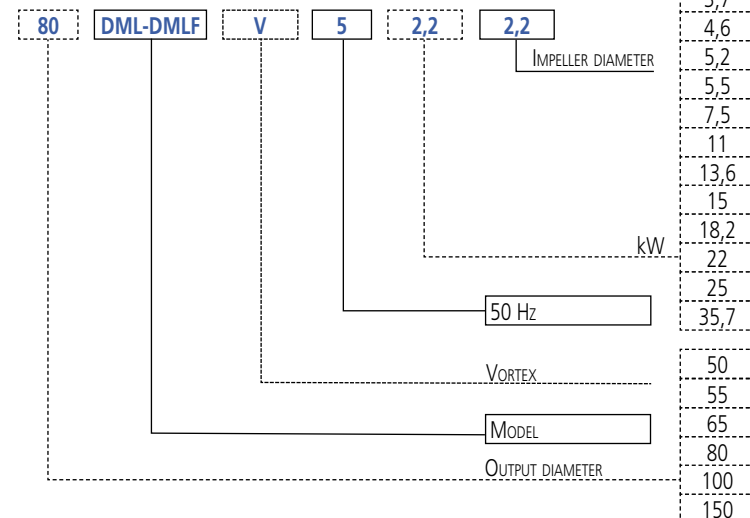
MATERIALS

- Pump body, vortex, impeller, elbow 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 (pump side)(32DMLVF)
SiC/SiC/NBR (pump side) (DMLVF except 32DMLVF)
Carbon/ Ceramic/NBR (motor side)(DMLVF4.6kW and above)

ACCESSORIES (ON REQUEST)

- See from page 134

PUMP IDENTIFICATION CODE



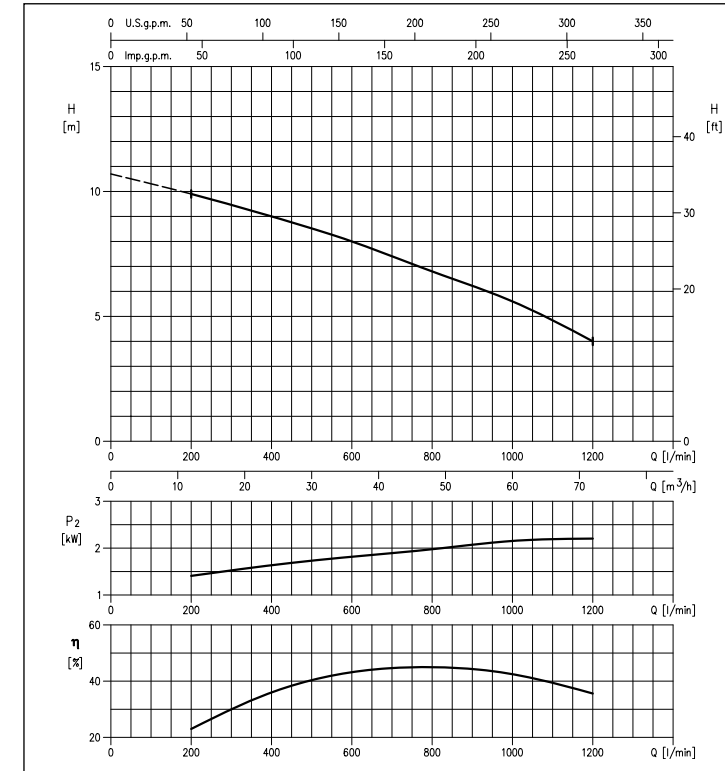
DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)

in cast iron

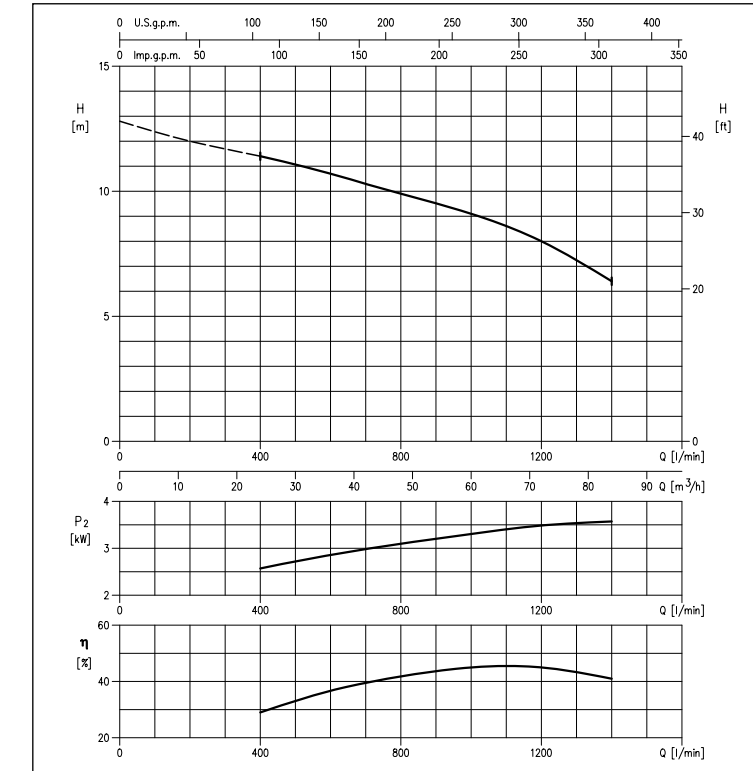
80DMLV 52.2 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 185 mm



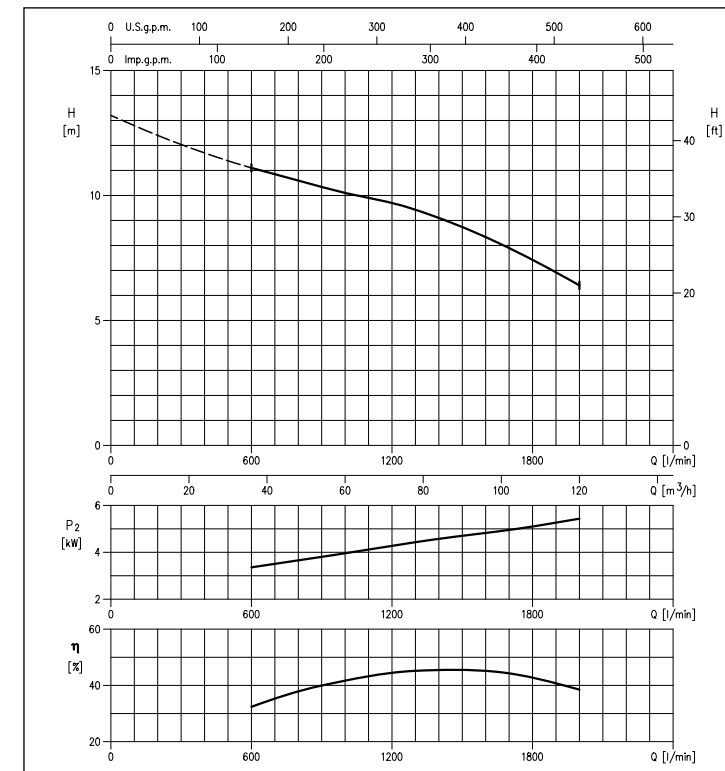
80DMLV 53.7 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 204 mm



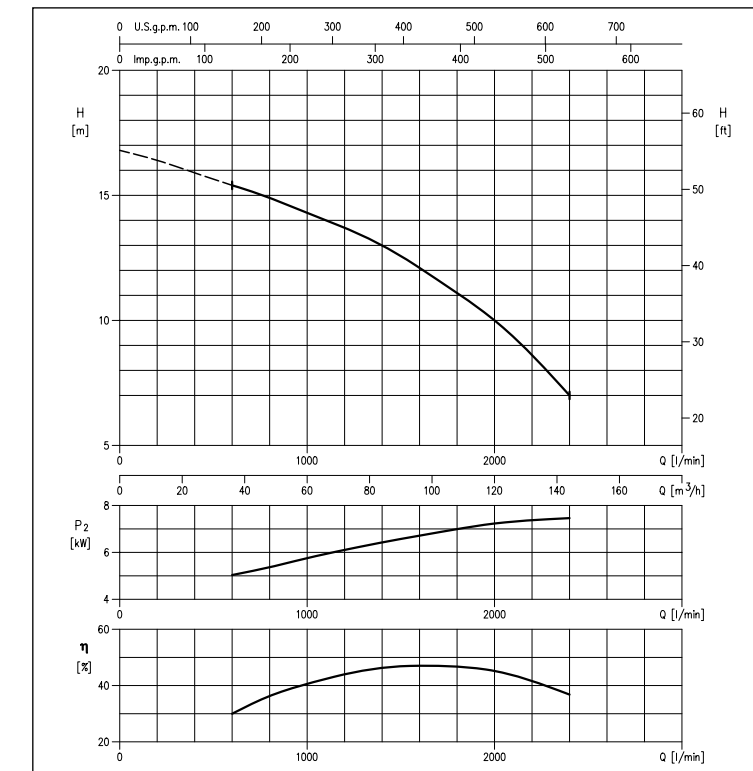
100DMLV 55.5 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 211 mm



100DMLV 57.5 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A) IMPELLER DIAMETER: 231 mm





DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

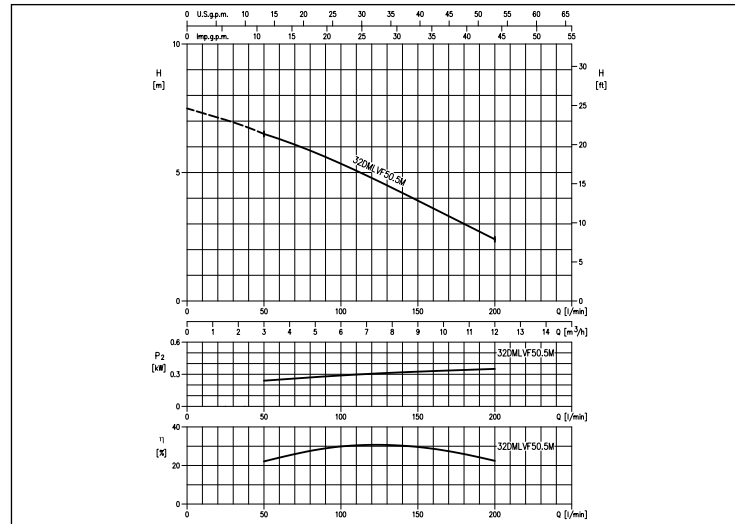


DMLV - DMLVF

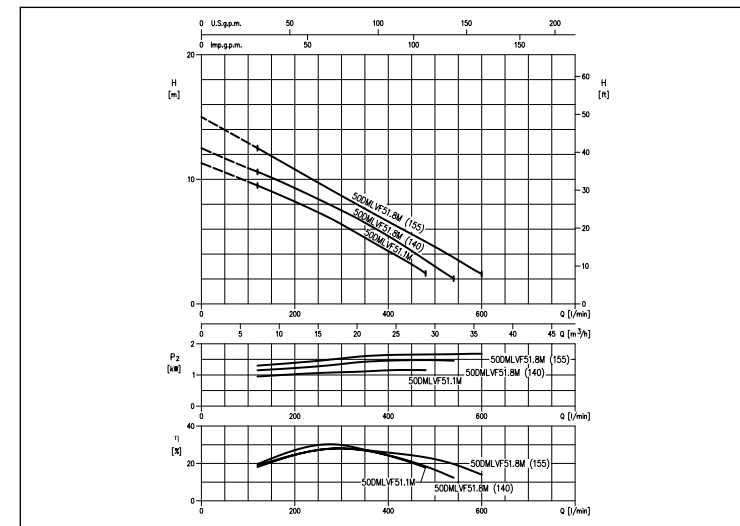
SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron



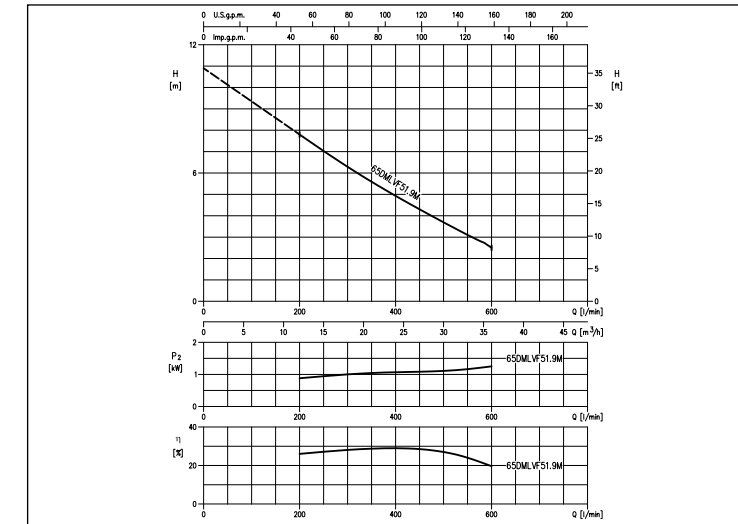
32DMLVF50.5M (0.5kW)



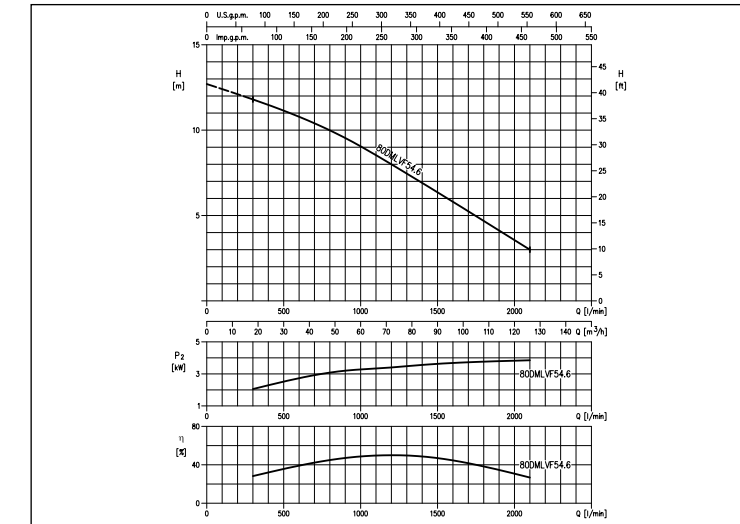
50DMLVF51.1M (1.1 kW)
50DMLVF 51.8 (1.8 kW) - Impeller Diameter = 140 mm
50DMLVF 51.8 (1.8 kW) - Impeller Diameter = 155 mm



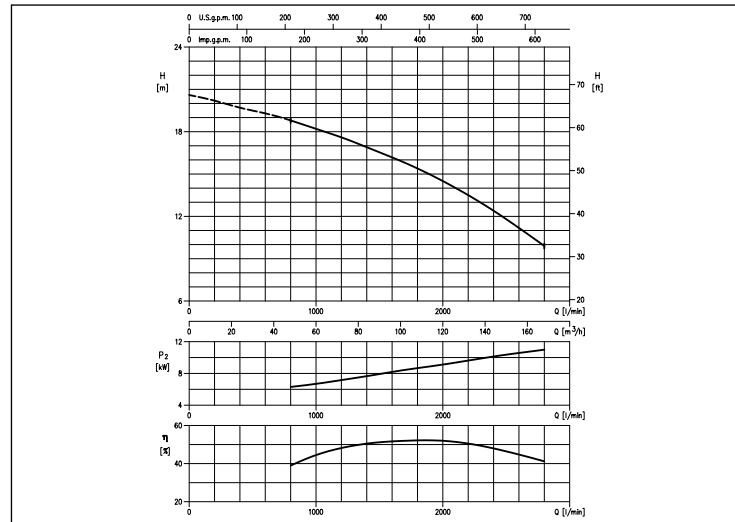
65DMLVF51.9 (1.9kW)



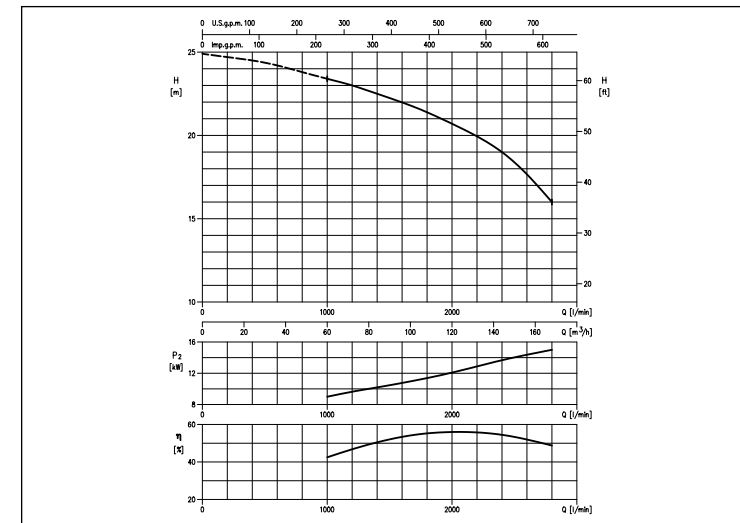
80DMLVF54.6 (4.6 kW)



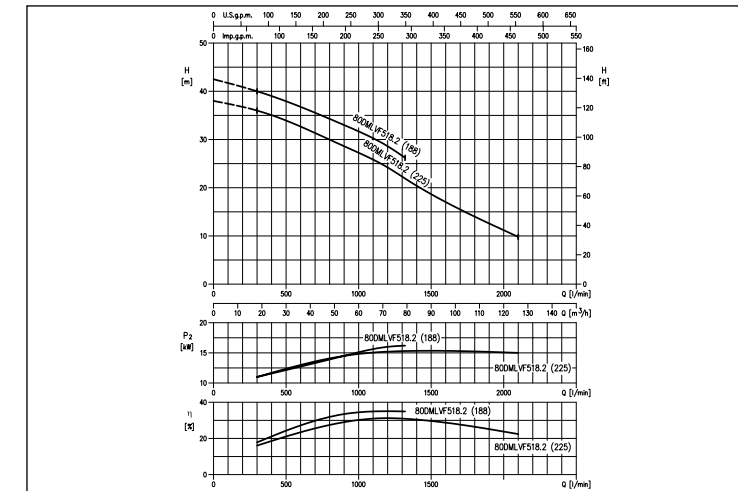
100DMLV511



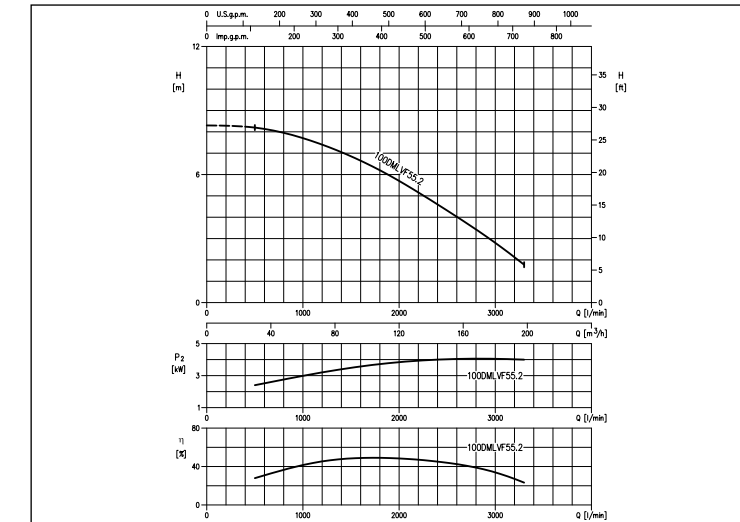
100DMLV515



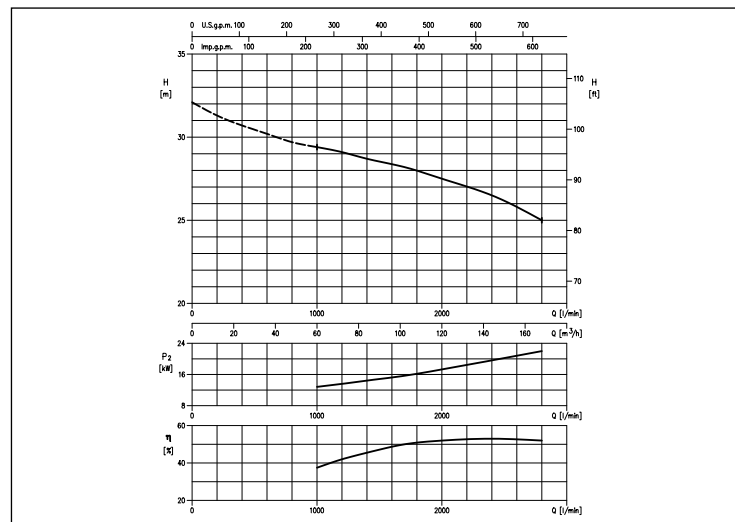
80DMLVF518.2 (18.2 kW) - Impeller Diameter = 255 mm
80DMLVF518.2 (18.2 kW) - Impeller Diameter = 188 mm



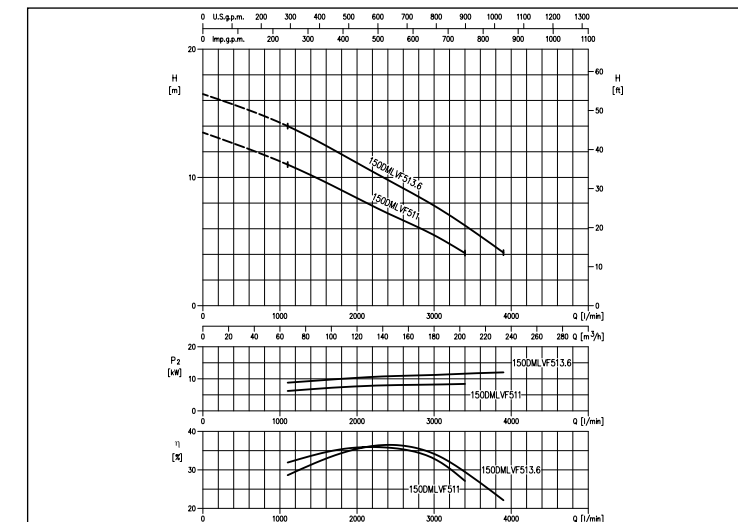
100DMLVF55.2 (5.2 kW)



100DMLV522

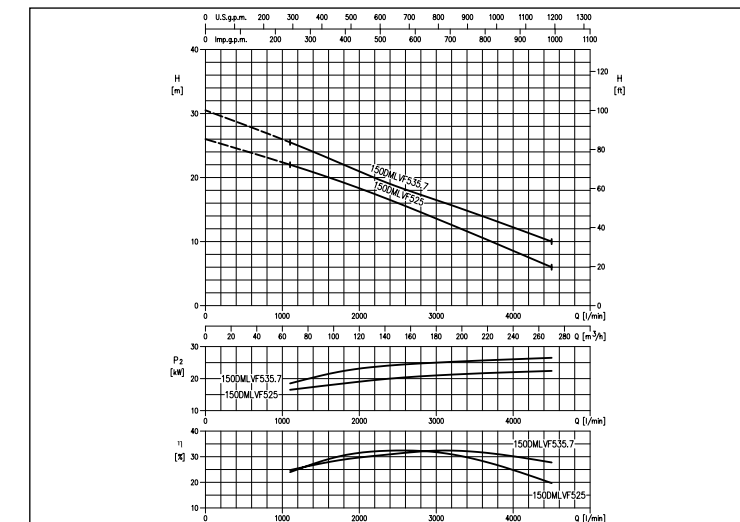


150DMLVF511 (11 kW)



150DMLVF513.6 (13.6 kW)

150DMLVF525 (25 kW)



150DMLVF535.7 (35.7 kW)



DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron



DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

PERFORMANCE TABLE 32-50-65 DMLVF

Model	P ₁		Q=Flow rate										
	[HP]	[kW]	l/min 50	90	120	180	200	300	333	400	480	540	600
			m ³ /h 3	5	7	11	12	18	20	24	29	32	36
			H=Head [m]										
32DMLVF50.5M	1,5	0,5	6,5	5,6	4,7	3	2,4	-	-	-	-	-	-
50DMLVF51.1M	0,7	1,1	-	-	9,5	8,5	8,2	6,4	5,8	4,3	2,2	-	-
50DMLVF51.8M (140)	2,5	1,8	-	-	10,6	9,7	9,3	7,5	6,8	5,5	3,7	2	-
50DMLVF51.8M (155)	2,5	1,8	-	-	12,5	11,3	10,9	8,5	7,8	6,5	4,7	3,5	2,2
65DMLVF51.9M	2,6	1,9	-	-	-	-	7,8	6,4	6	5,1	4,0	3,2	2,5

PERFORMANCE TABLE 80DMLV - 80DMLVF

Model	P ₁		Q=Flow rate									
	[HP]	[kW]	l/min 200	300	400	600	900	1200	1320	1400	2100	
			m ³ /h 12	18	24	36	54	72	79	84	126	
			H=Head [m]									
80DMLV52.2	3	2,2	9,9	9,5	9,0	8	6,4	4	-	-	-	-
80DMLV53.7	5	3,7	-	-	11,5	10,7	9,4	7,9	7,2	6,4	-	-
80DMLV54.6	6,2	4,6	-	11,8	11,5	10,8	9,5	8	7,2	6,7	3	-
80DMLV518.2 (225)	25	18,2	-	36	35	33	28,6	24,2	22,4	21	9,8	-
80DMLV518. (188)	25	18,2	-	40	39	37	33	28,6	26,2	-	-	-

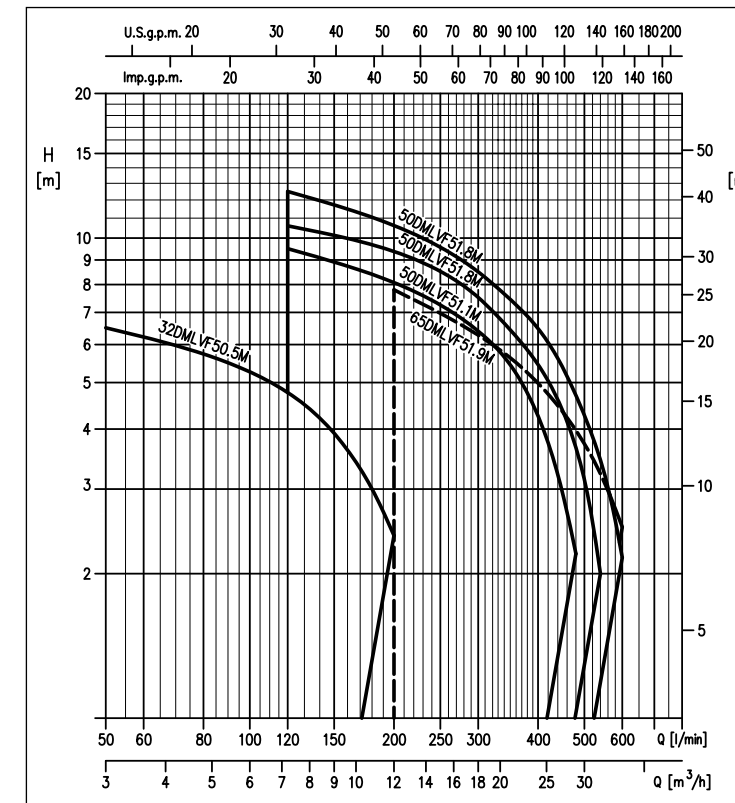
PERFORMANCE TABLE 100 DMLV - 100DMLVF

Model	P ₁		Q=Flow rate									
	[HP]	[kW]	l/min 500	600	800	1000	1200	1700	2000	2400	2800	3300
			m ³ /h 30	36	48	60	72	102	120	144	168	198
			H=Head [m]									
100DMLV55.2	7	5,2	8,2	8,2	8	7,7	7,4	6,3	5,7	4,6	3,5	1,8
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	-

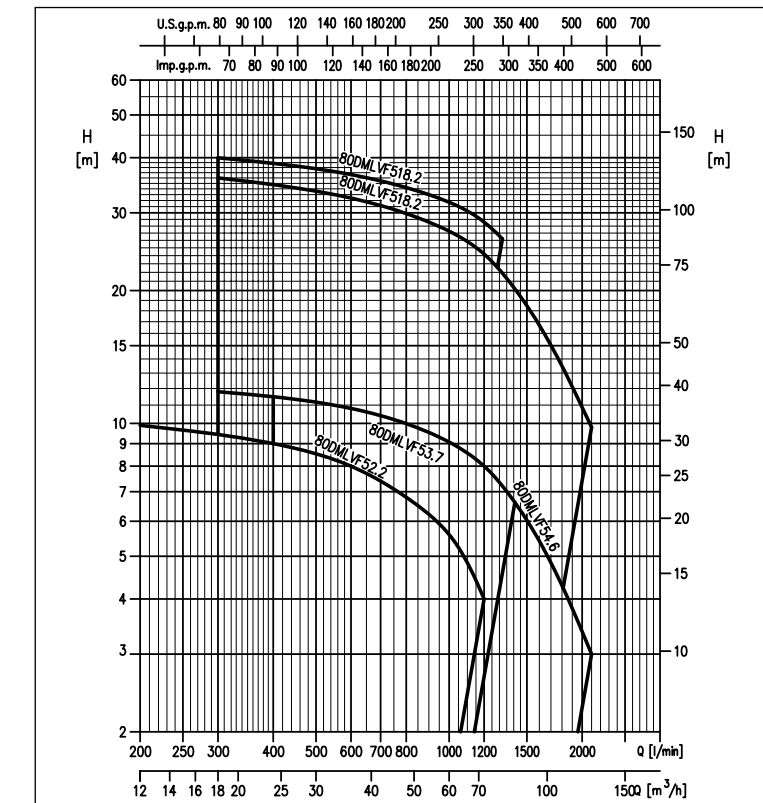
PERFORMANCE TABLE 150DMLVF

Model	P ₁		Q=Flow rate						
	[HP]	[kW]	l/min 1100	1800	2400	3000	3400	3900	4500
			m ³ /h 66	108	144	180	204	234	270
			H=Head [m]						
150DMLVF511	15	11	11,00	9,00	7,20	5,50	4,10	-	-
150DMLVF513.6	18,5	13,6	14,00	11,80	9,80	7,80	6,10	4,18	-
150DMLVF525	34	25	22,00	19,20	16,50	13,60	11,69	9,19	6,00
150DMLVF535.7	48,5	35,7	25,50	22,24	19,43	16,72	14,84	12,63	10,00

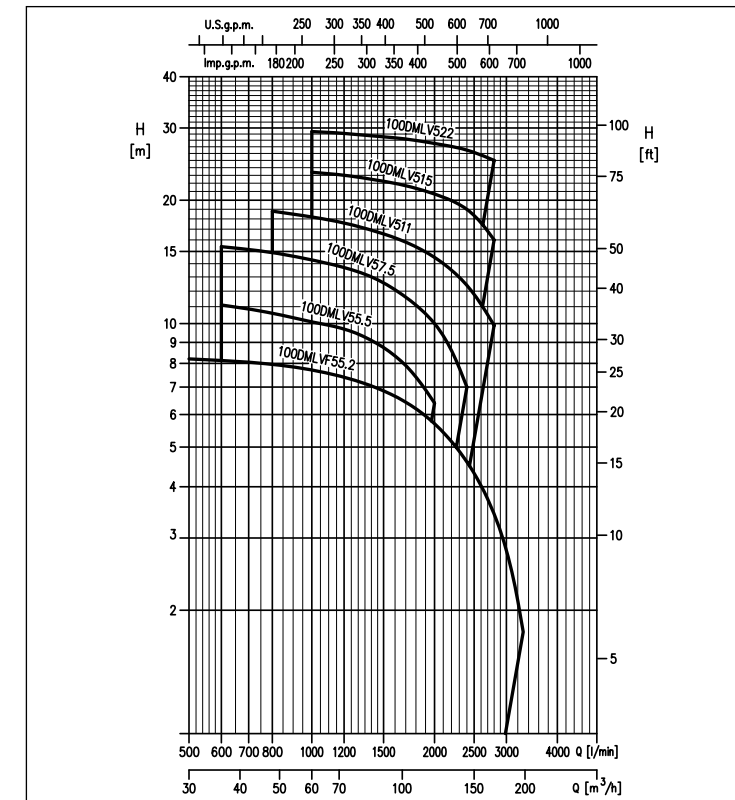
32-50-65 DMLVF range PERFORMANCE CURVES



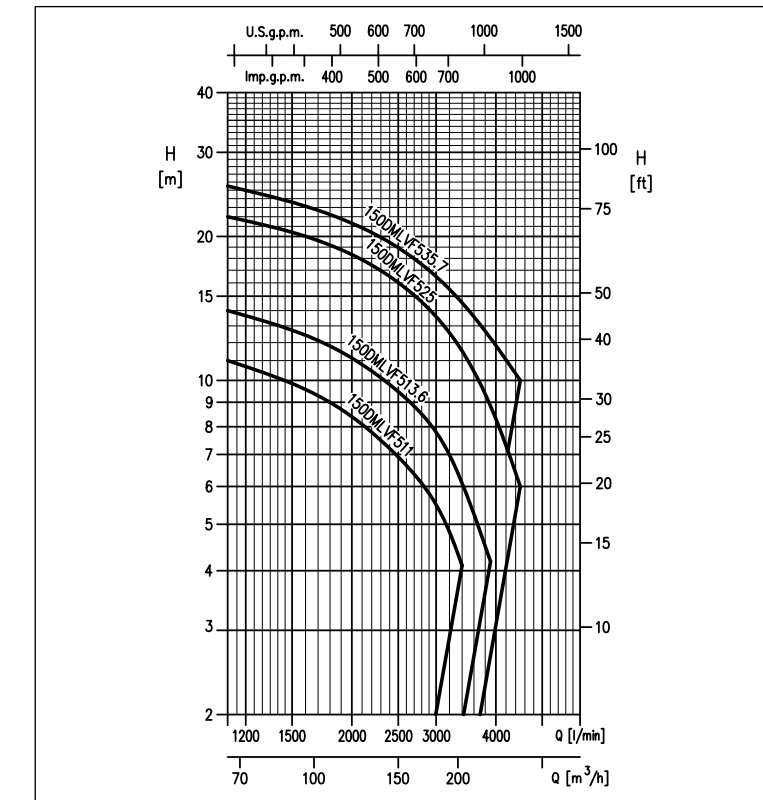
80DMLV - 80DMLVF range PERFORMANCE CURVES



100 DMLV - 100DMLVF range PERFORMANCE CURVES



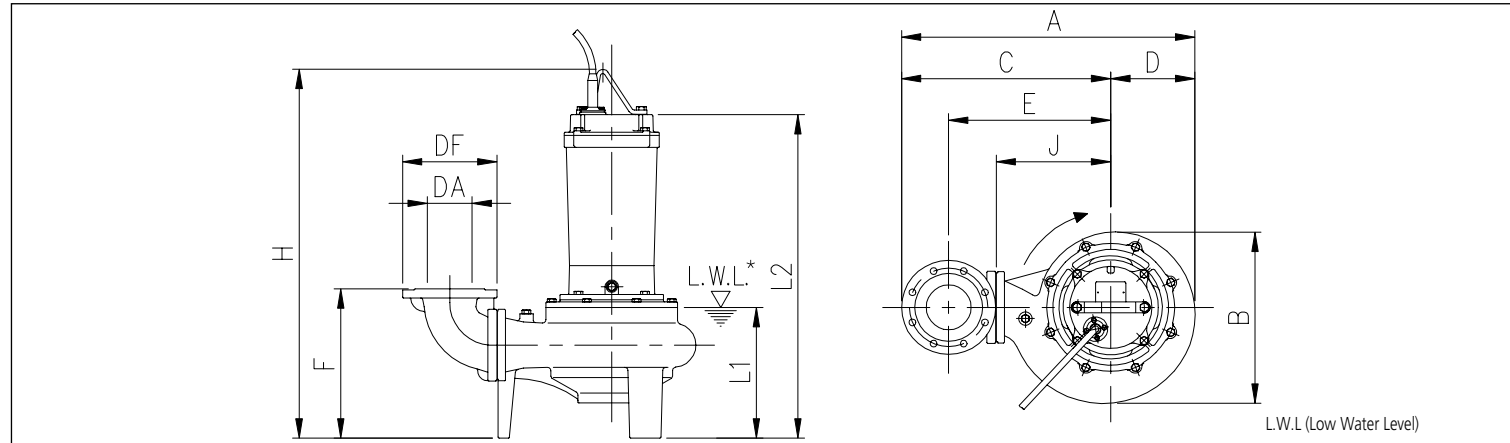
150DMLVF range PERFORMANCE CURVES



DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

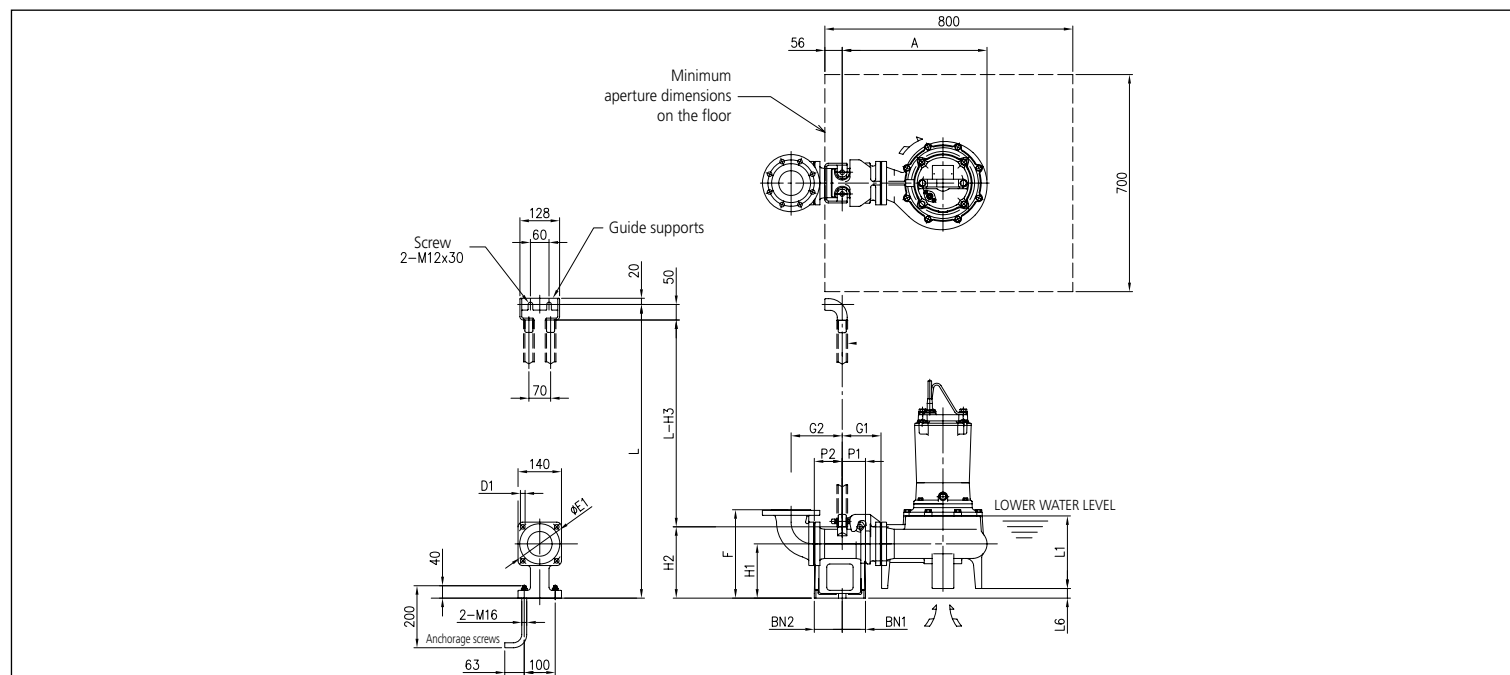
DIMENSIONS DMLV



DIMENSIONS TABLE DMLV

Model	Dimensions [mm]																	Weight [kg]	
	DA	kW	DE	DF	DG	DT	N°	D1	A	B	C	D	E	F	H	J	L1		L2
80DMLV52.2	80	2,2	160	200	138	22	8	18	518	285	375	143	275	254	660	200	200	560	70
80DMLV53.7	80	3,7	160	200	138	22	8	18	518	285	375	143	721	254	721	200	200	620	80
100DMLV55.5	100	5,5	180	220	158	24	8	22	584	308	430	154	860	305	860	215	250	760	105
100DMLV57.5	100	7,5	180	220	158	24	8	22	641	352	465	176	860	305	860	250	250	760	120
100DMLV511	100	11	180	220	158	24	8	22	641	352	465	176	970	305	970	250	250	810	150
100DMLV515	100	15	180	220	158	24	8	22	728	426	515	213	970	305	970	300	250	810	180
100DMLV522	100	22	180	220	158	24	8	22	728	426	515	213	1045	305	1045	300	250	865	235

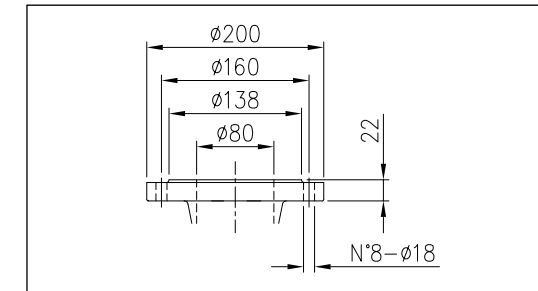
DIMENSIONS QDC (quick discharge connector) LM 80 (for model 80 DMLV 52.2 - 80 DMLV 53.7)



DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

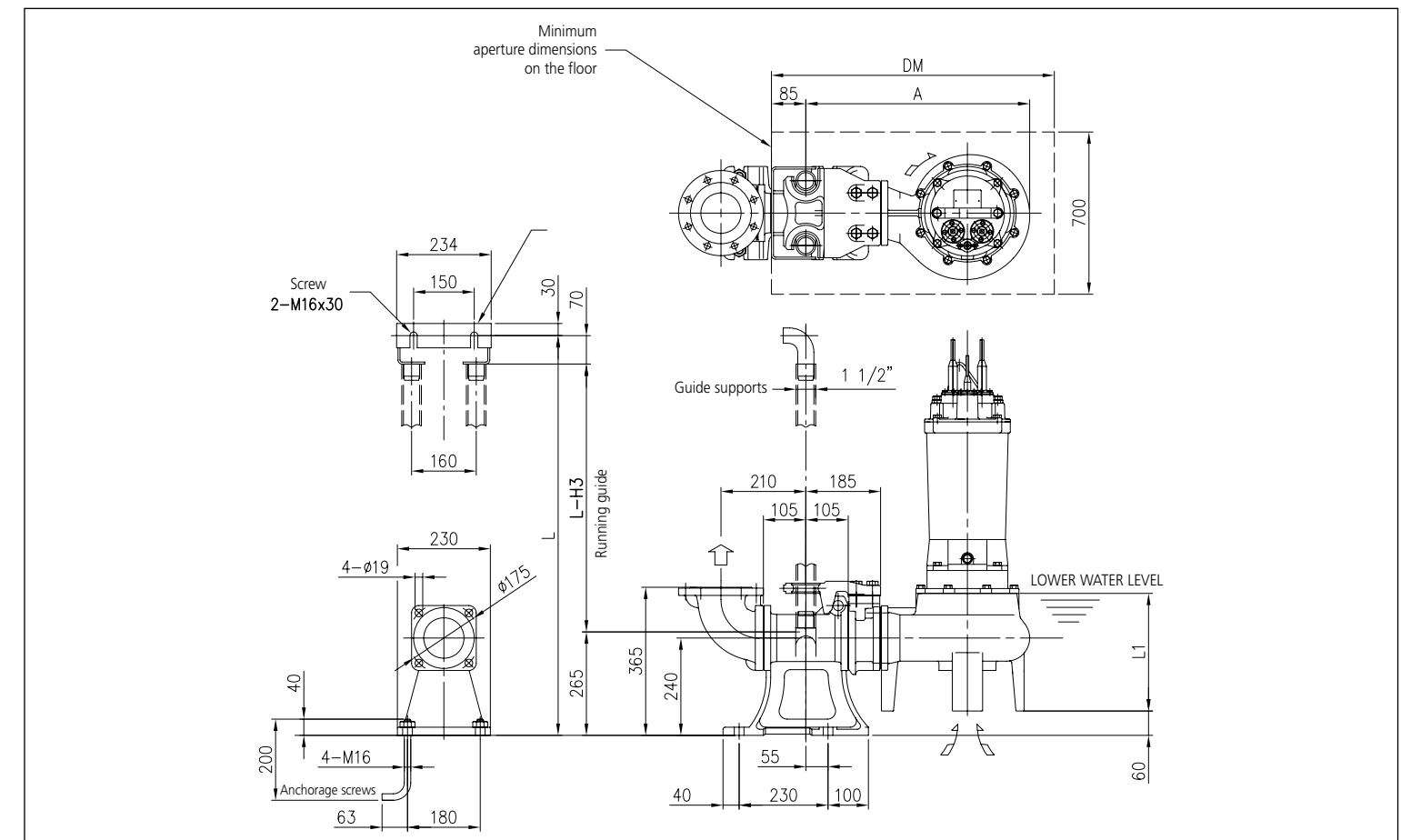
DIMENSIONS FLANGES PN 10 (ACCORDING TO EN 1092-2)



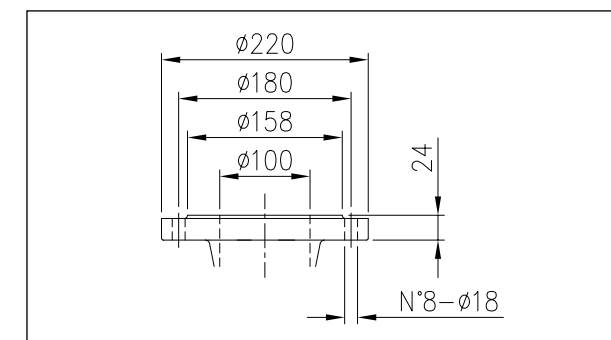
DIMENSIONS TABLE QDC (quick discharge connector) LM 80 (DMLV)

Model	A	P1	P2	G1	G2	F	H1	H2	H3	L1	L6	BN1	BN2	D1	E1	coupl. 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

DIMENSIONS QDC (quick discharge connector) LL 100 (DMLV)



DIMENSIONS FLANGES PN 10 (ACCORDING TO EN 1092-2)



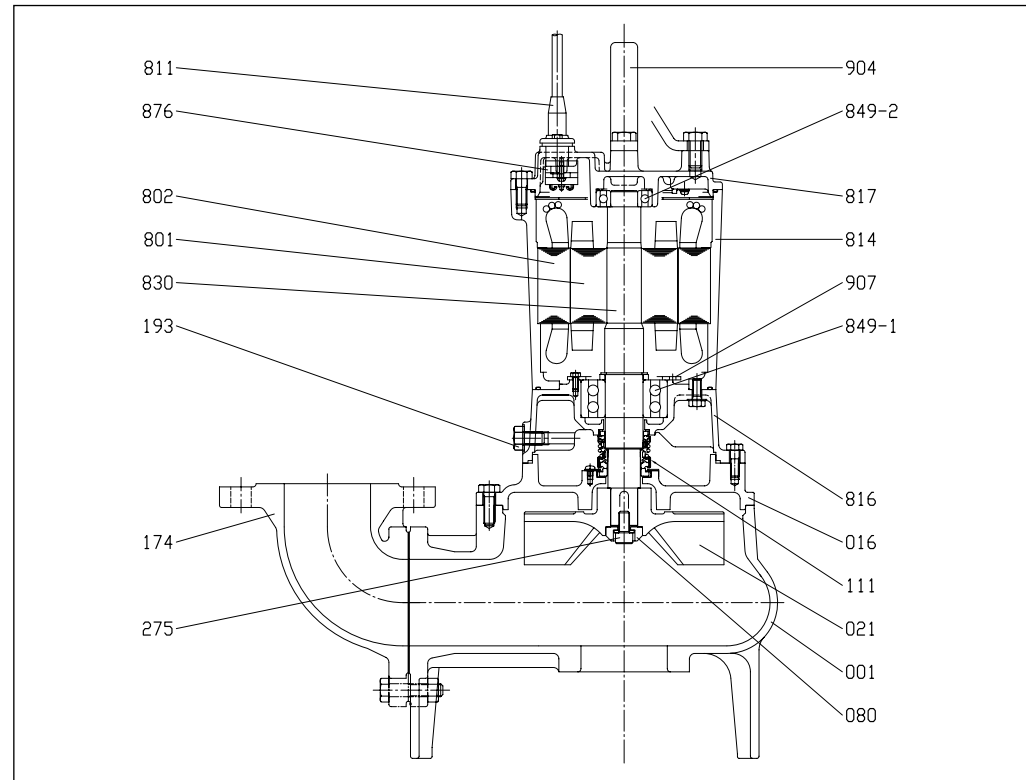
DIMENSIONS TABLE QDC (quick discharge connector) LM 100 (DMLV)

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

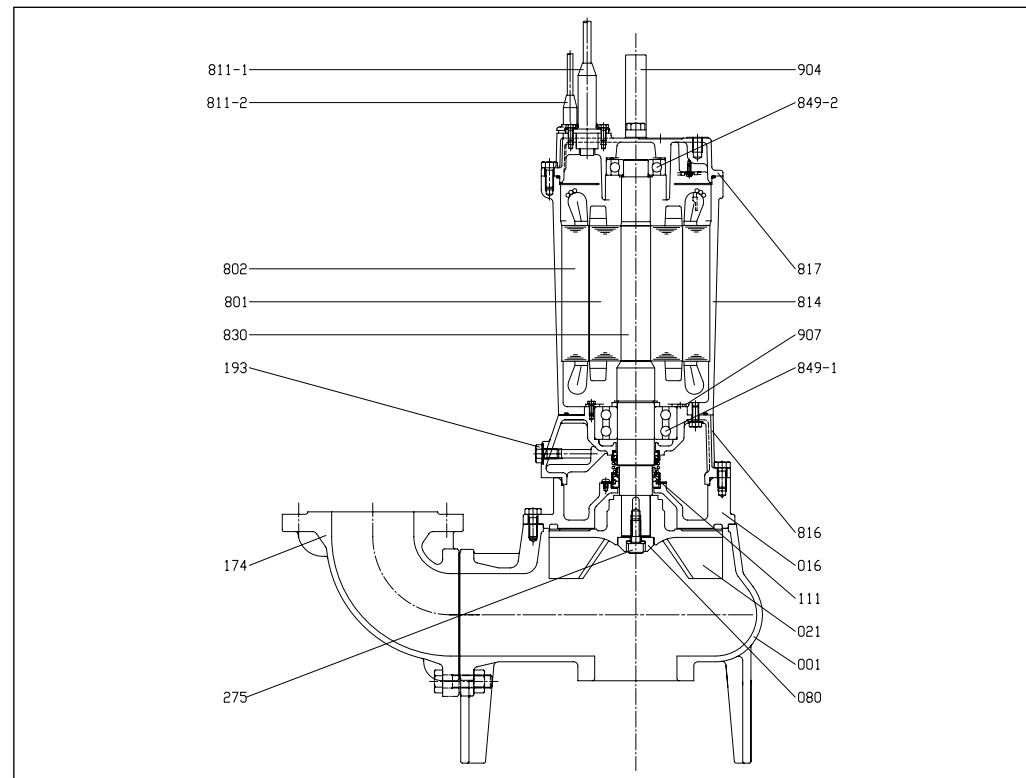
DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

SECTIONAL VIEW 80 DMLV 52.2



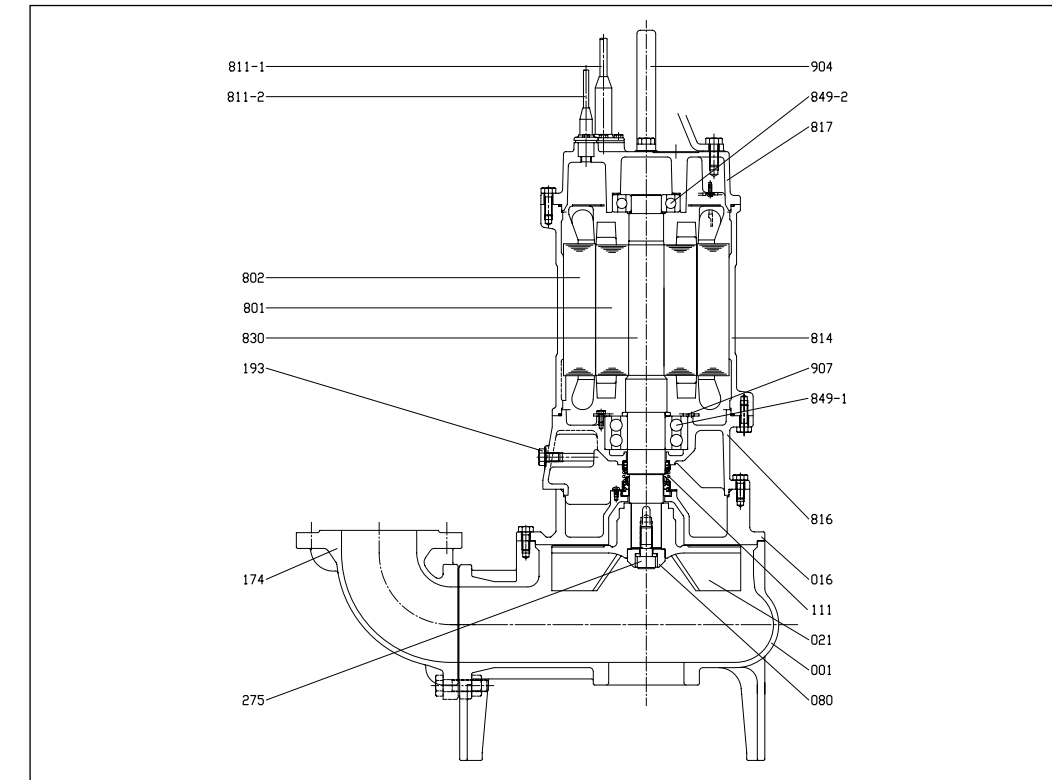
SECTIONAL VIEW DMLV (3.7÷7.5kW)



DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

SECTIONAL VIEW DMLV (11÷22kW)



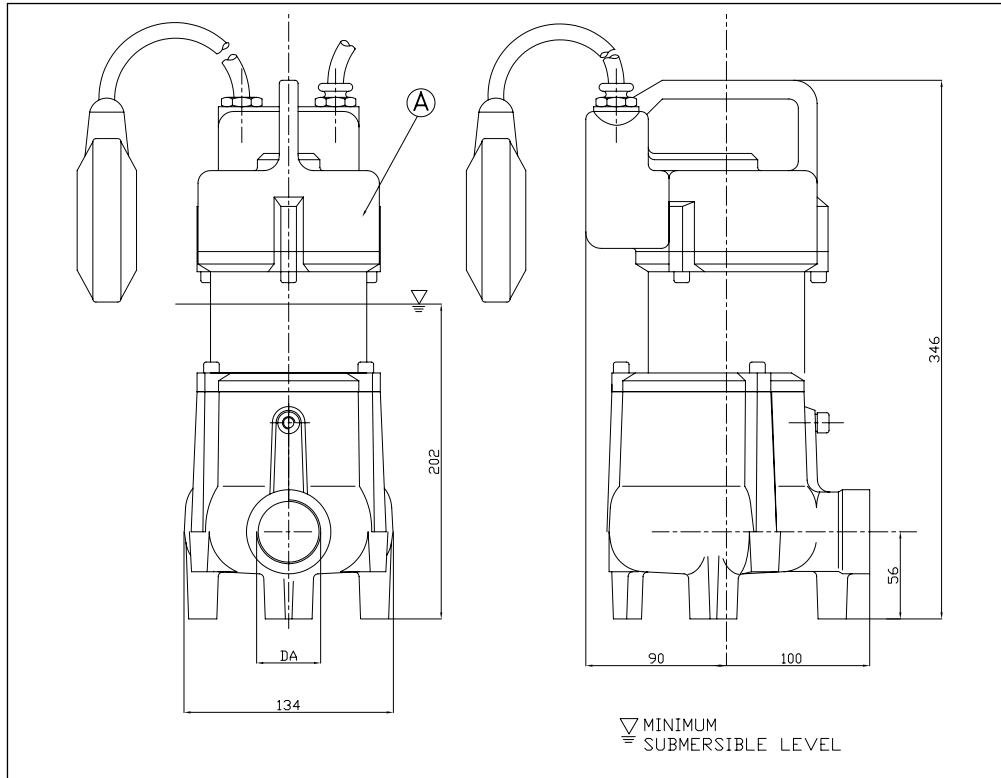
MATERIALS TABLE DMLV

Ref.	Name	Material	Ref.	Name	Material
001	Pump body	CAST IRON EN-GHJL-200 - EN 1561	811-1	Cable (power supply)	-
016	Mechanical seal cover	CAST IRON EN-GHJL-200 - EN 1561	811-2	Cable (signal)	-
021	Impeller	CAST IRON EN-GHJL-200 - EN 1561	814	Motor case	CAST IRON EN-GHJL-200 - EN 1561
080	Bushing	STEEL	816	Power side bracket	CAST IRON EN-GHJL-200 - EN 1561
111	Mechanical seal	-	817	Opposite side bracket	CAST IRON EN-GHJL-200 - EN 1561
174	Discharge bend	CAST IRON EN-GHJL-200 - EN 1561	830	Shaft	EN 1.4006 (AISI403)
193	Oil plug	STEEL INOX	849-1	Ball bearing	-
275	Screw (Impeller)	STEEL INOX A2-70 CLASSE ISO 3506/1	849-2	Ball bearing	-
801	Rotor	-	876	Protector	-
802	Stator	-	904	Lifting hanger	STEEL
811	Cable	-	907	Cover	STEEL

DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

DIMENSIONS 32DMLVF



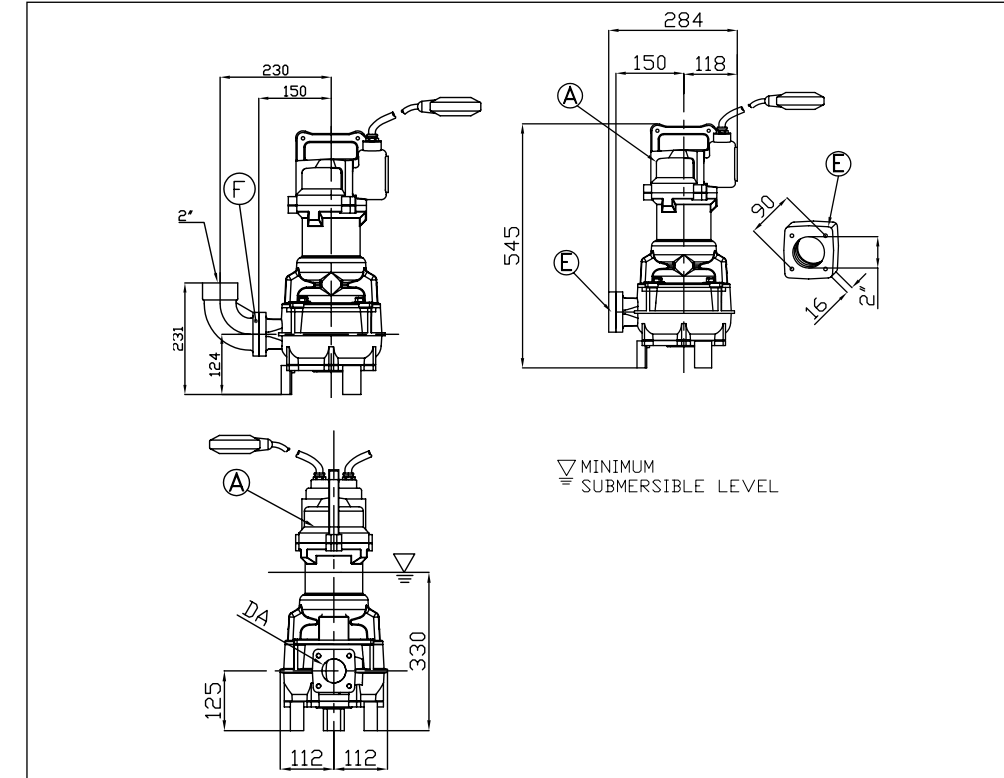
DIMENSIONS TABLE 32DMLVF

DA	Model	[kW]	Weight [kg]
1 1/4"	32DMLVF50,5M (90)	0,5	14

DMLV - DMLVF

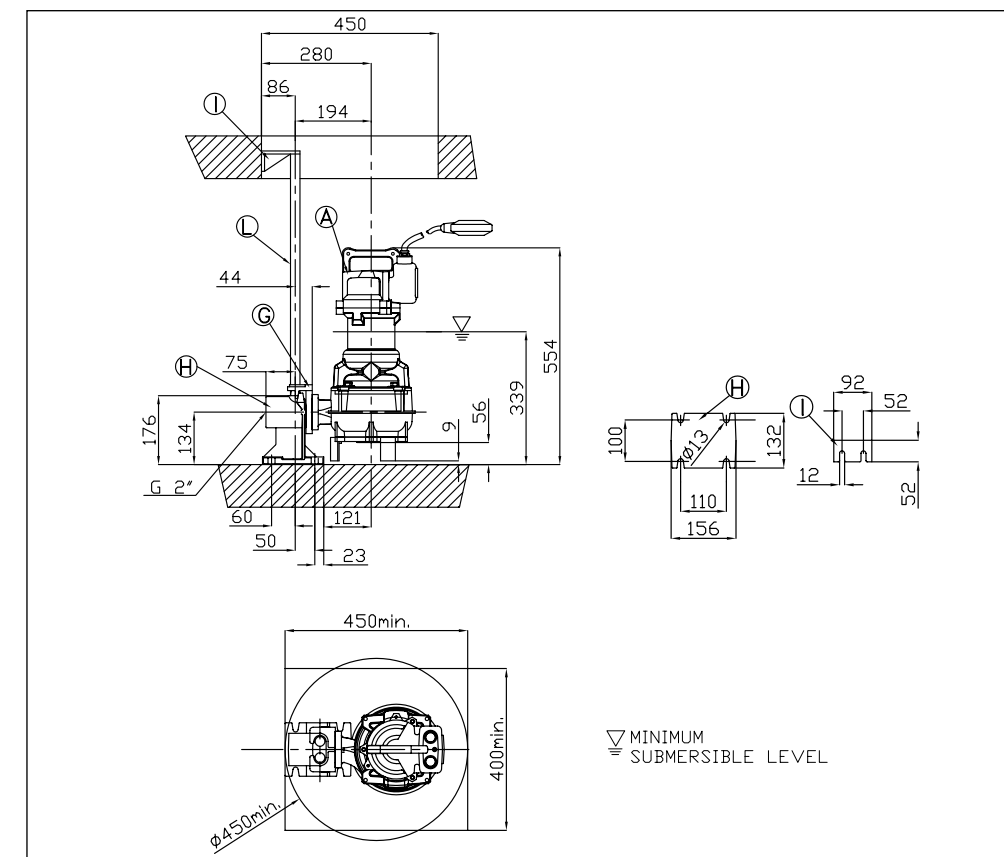
SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

DIMENSIONS 50DMLVF (1.1 ÷ 1.8 kW)



DIMENSIONS TABLE 50DMLVF (1.1 ÷ 1.8 kW)

DA	Model	[kW]	Weight [kg]
50	50DMLVF51,1M (130)	1,1	43
	50DMLVF51,8M (140)	1,8	43
	50DMLVF51,8M (155)	1,8	4,3



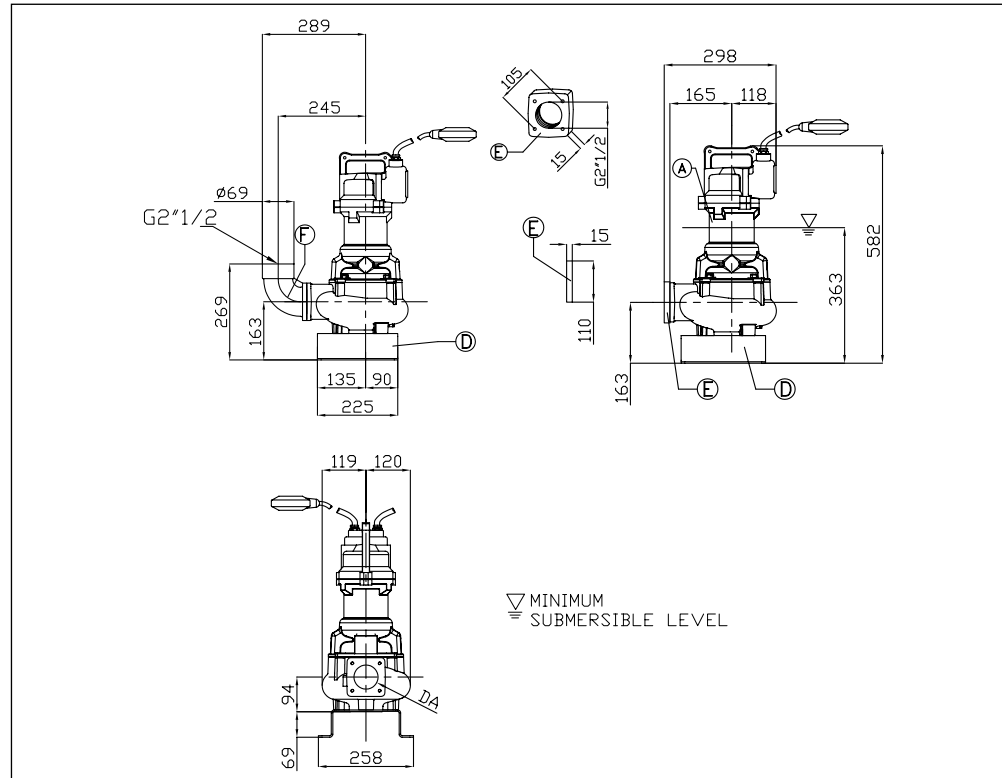
DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

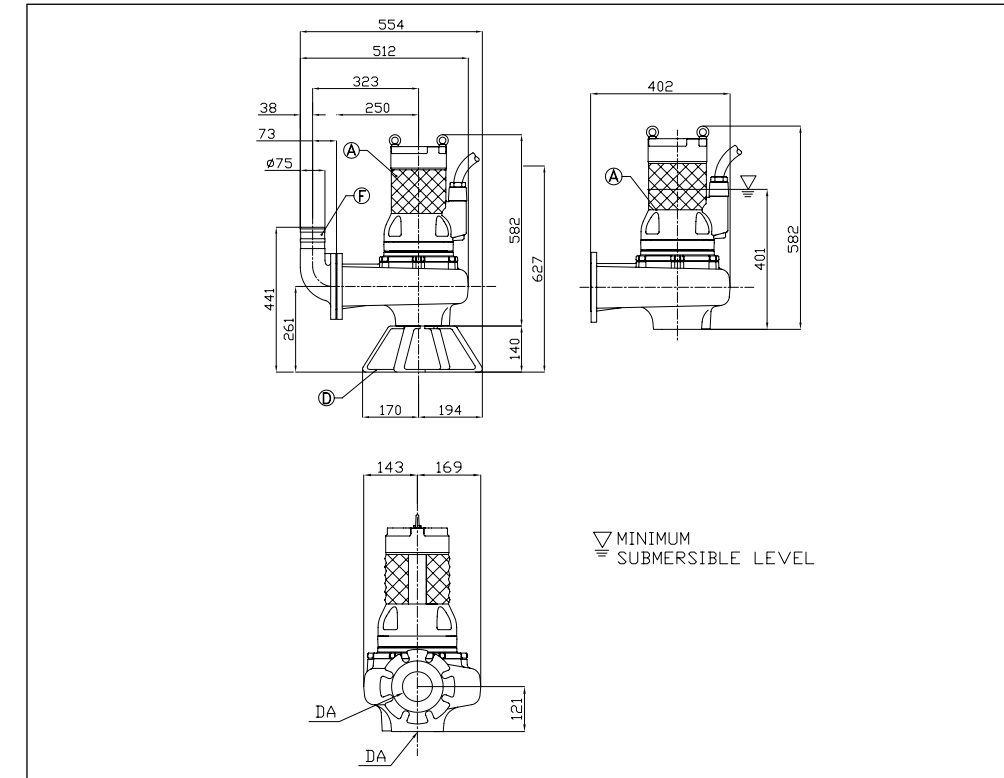
DIMENSIONS 65DMLVF (1.9 kW)



DIMENSIONS TABLE 65DMLVF (1.9 kW)

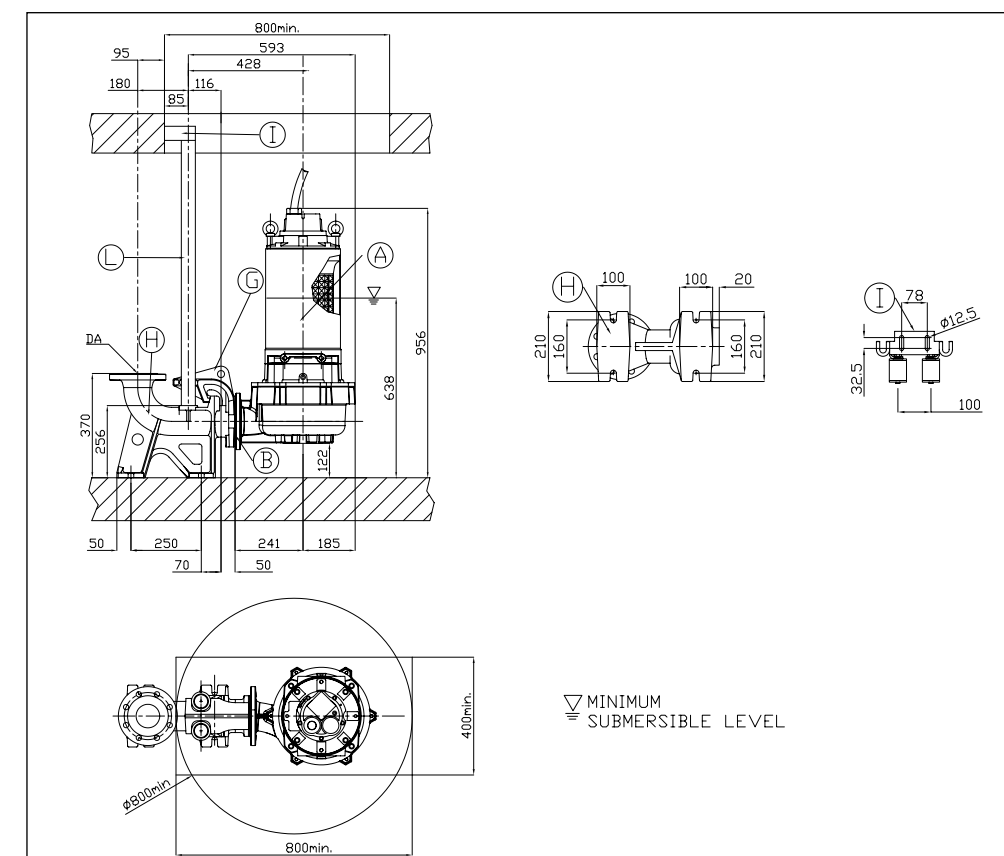
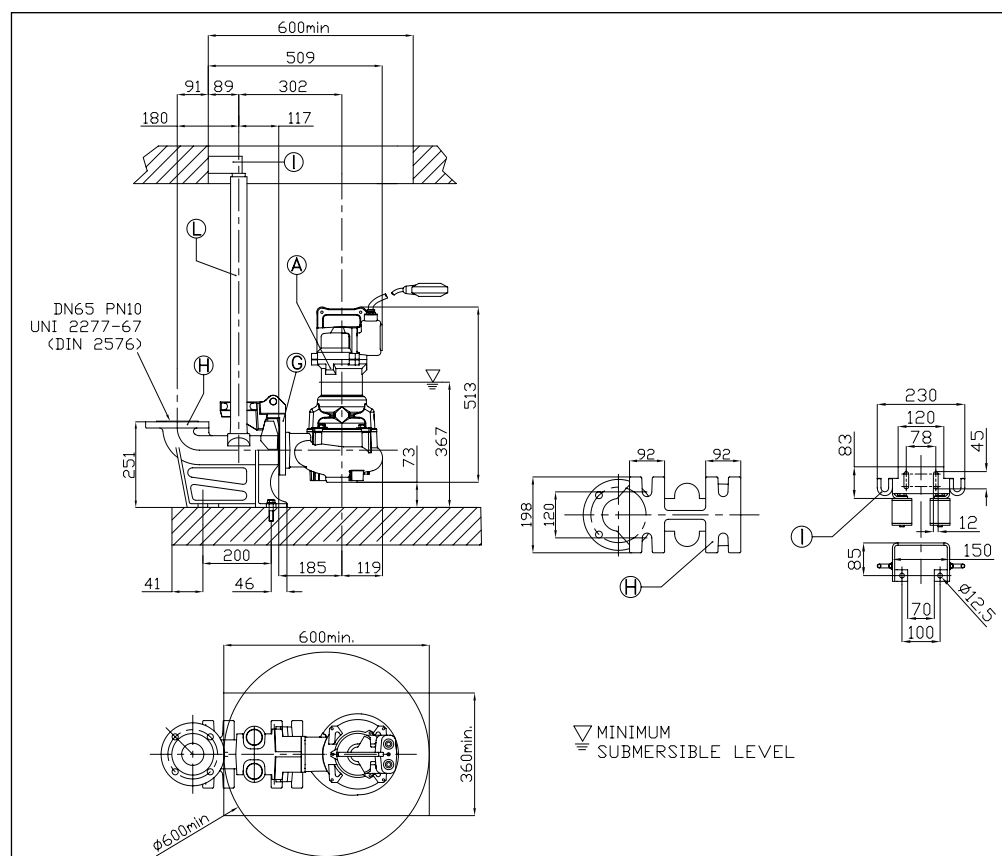
DA	Model	[kW]	Weight [kg]
65	65DMLVF51,9M (109)	1,9	44

DIMENSIONS 80DMLVF (4.6 kW)



DIMENSIONS TABLE 80DMLVF (4.6 kW)

DA	Model	[kW]	Weight [kg]
DN 80	80DMLVF54,6 (206)	4,6	79





DMLV - DMLVF

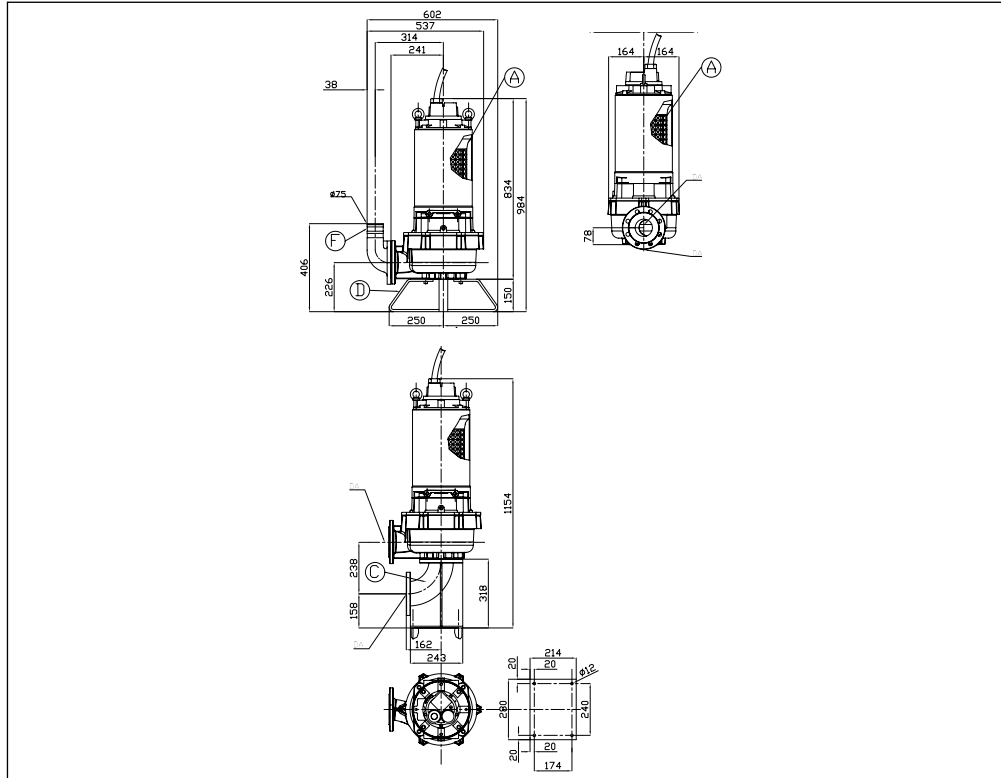
SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron



DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

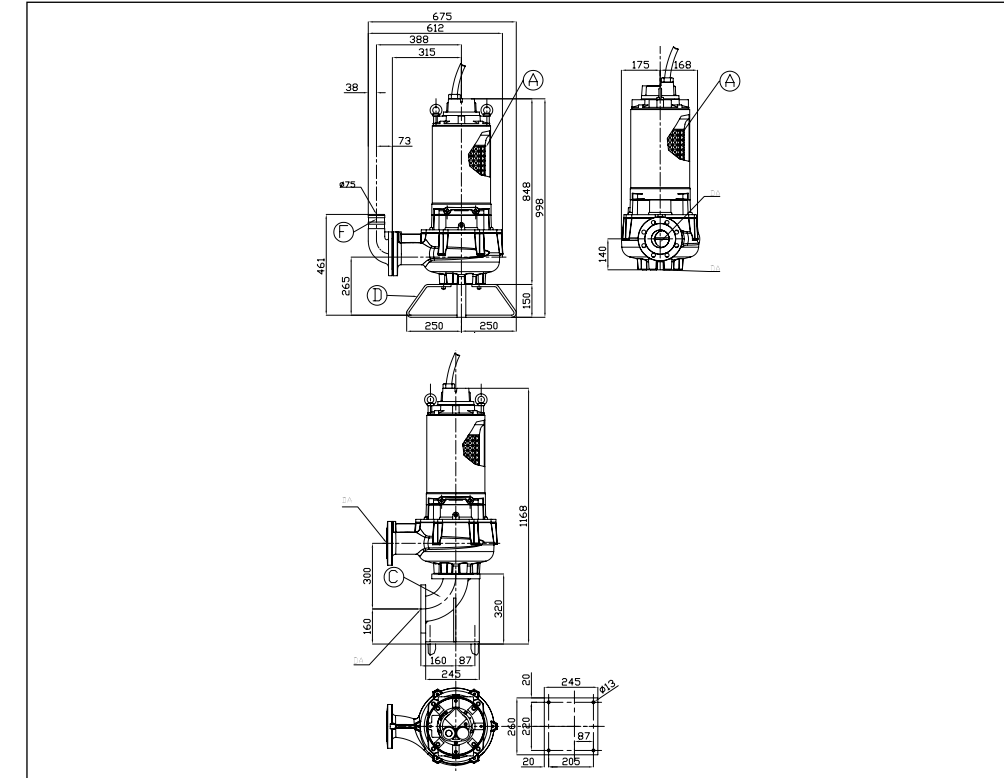
DIMENSIONS 80DMLVF (18.2 kW)



DIMENSIONS TABLE 80DMLVF (18.2 kW)

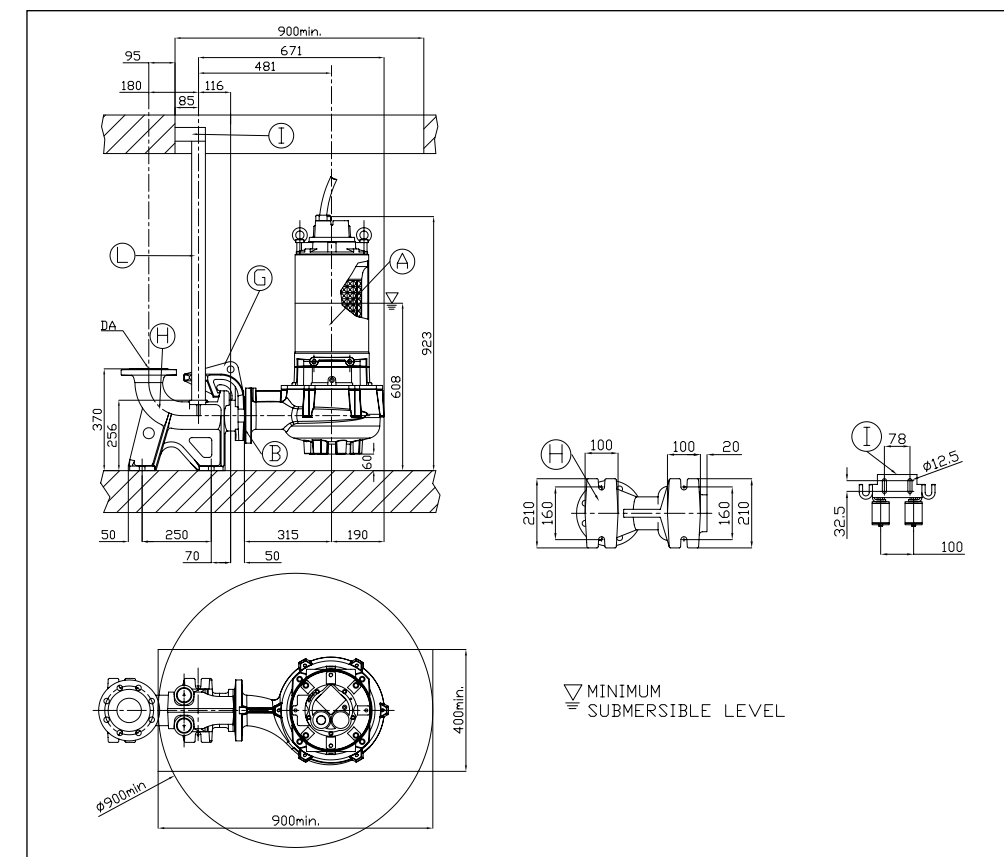
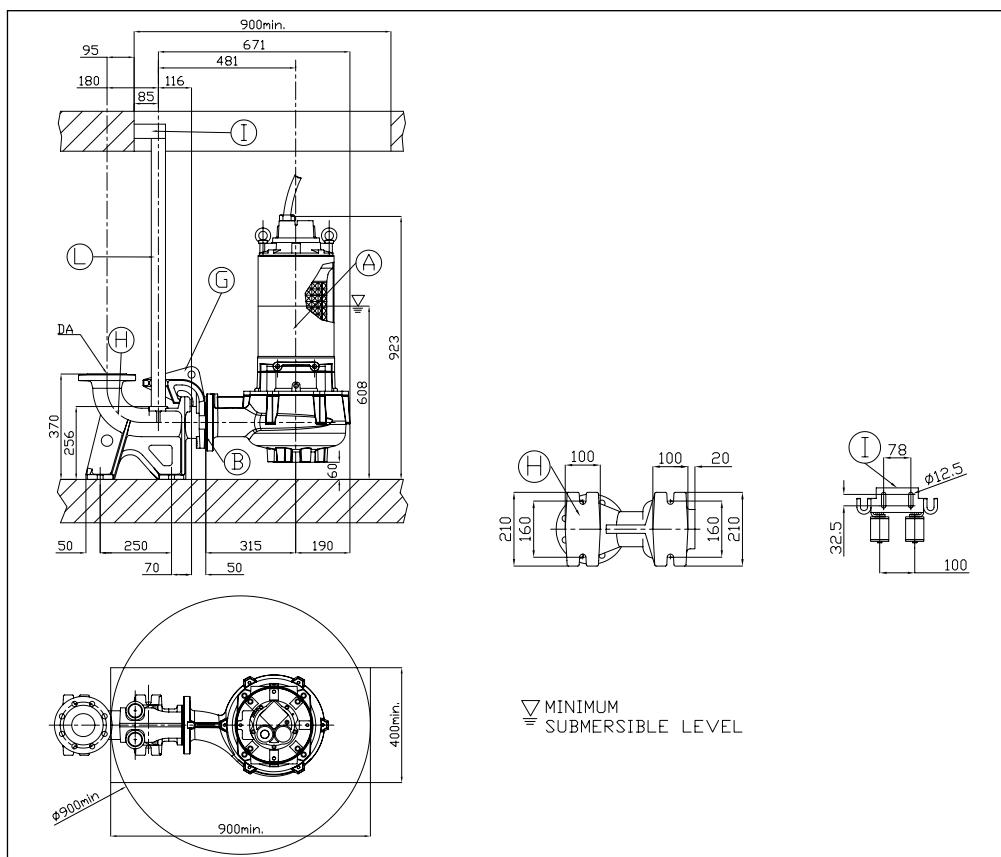
DA	Model	[kW]	Weight [kg]
DN 80	80DMLVF518,2 (188)	18,2	191

DIMENSIONS 80DMLVF (18.2 kW)



DIMENSIONS TABLE 80DMLVF (18.2 kW)

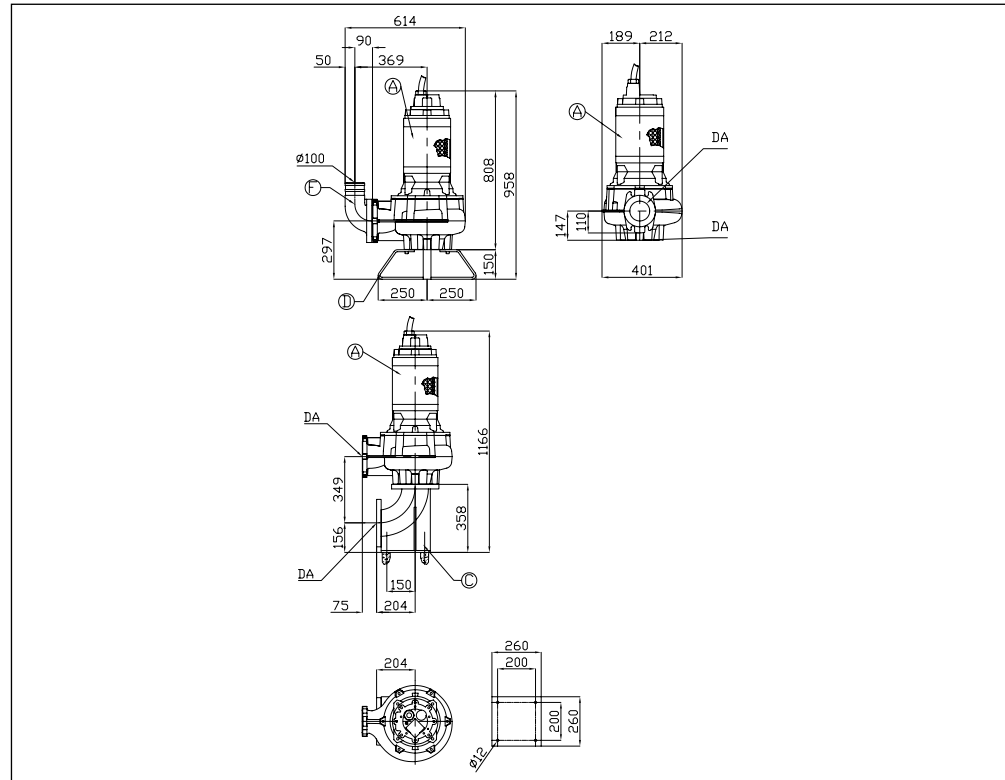
DA	Model	[kW]	Weight [kg]
DN 80	80DMLVF518,2 (225)	18,2	190



DMLV - DMLVF

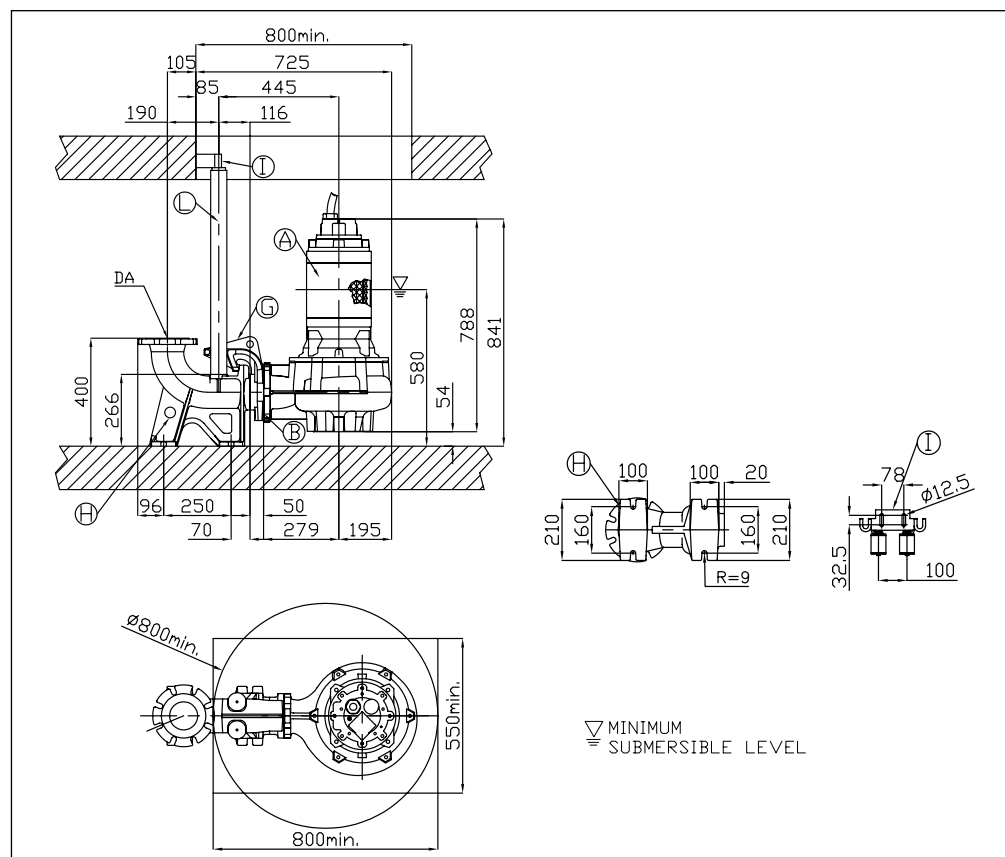
SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

DIMENSIONS 100DMLVF



DIMENSIONS TABLE 100DMLVF

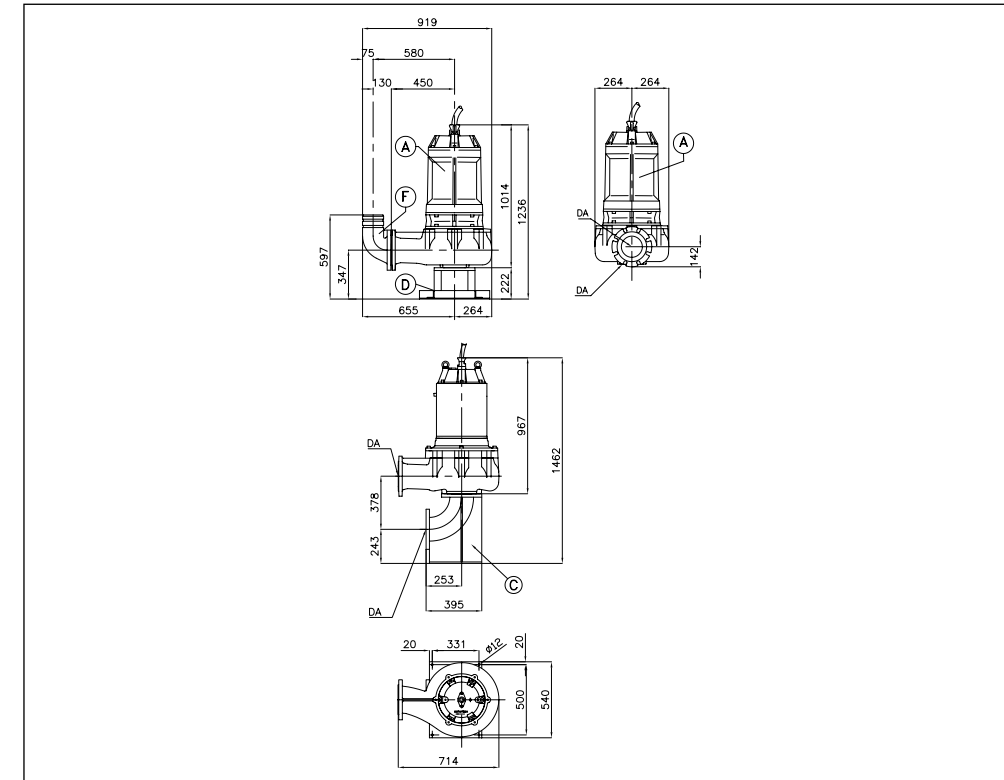
DA	Model	[kW]	Weight [kg]
DN 100	100DMLVF55,2 (260)	5,2	166



DMLV - DMLVF

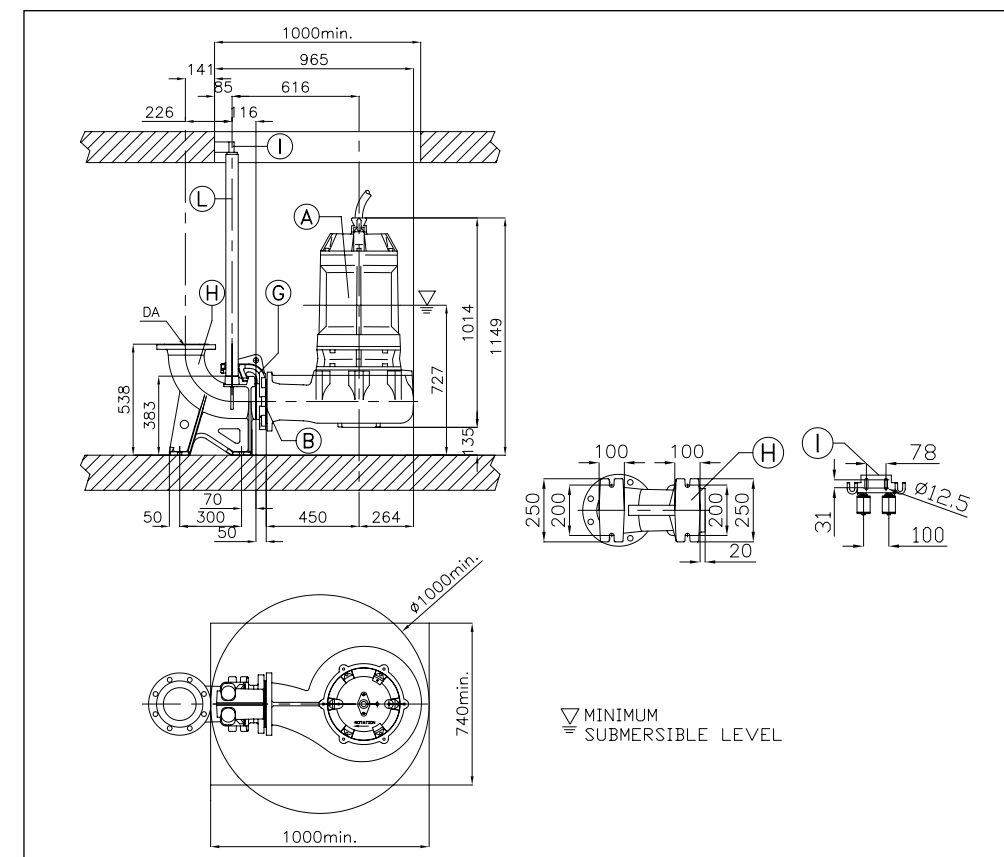
SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

DIMENSIONS 150DMLVF



DIMENSIONS TABLE 150DMLVF

DA	Model	[kW]	Weight [kg]
DN 150	150DMLVF511 (360)	11	361
	150DMLVF513,6 (400)	13,5	361
	150DMLVF525 (340)	25	361
	150DMLVF535,7 (360)	35,7	361



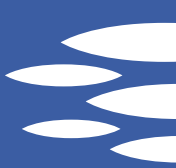
DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron

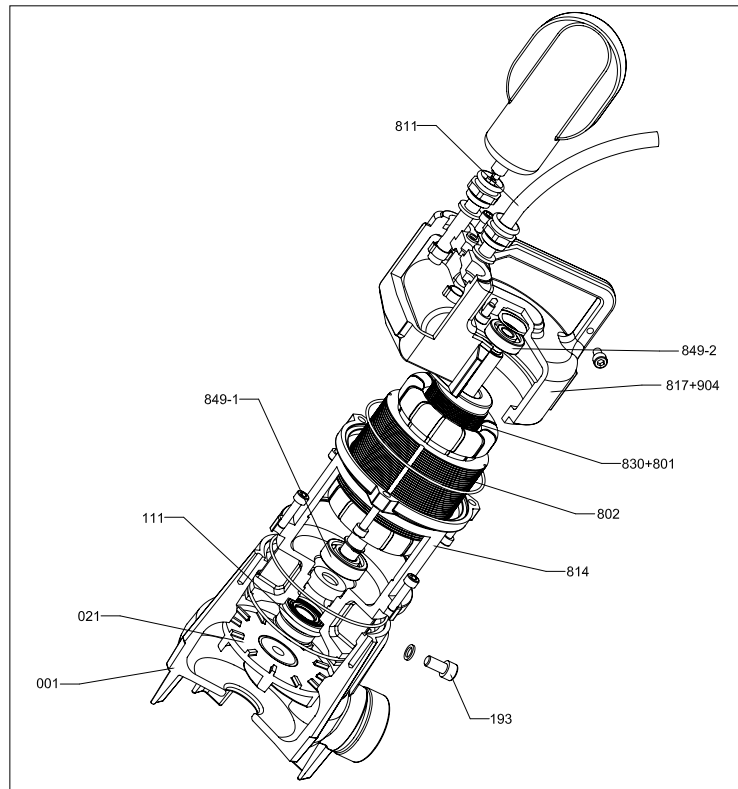


DMLV - DMLVF

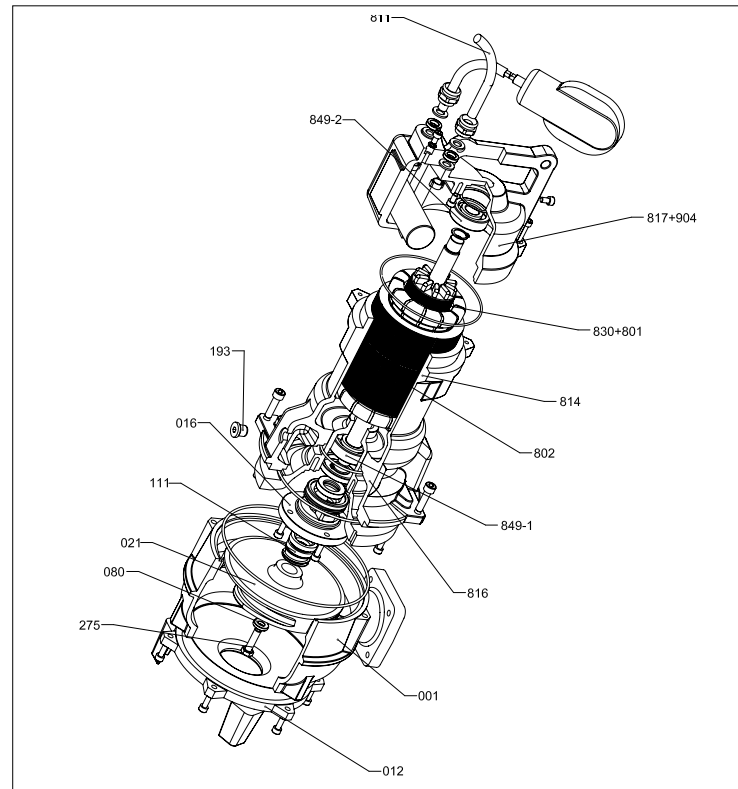
SUBMERSIBLE SEWAGE PUMPS (VORTEX)
in cast iron



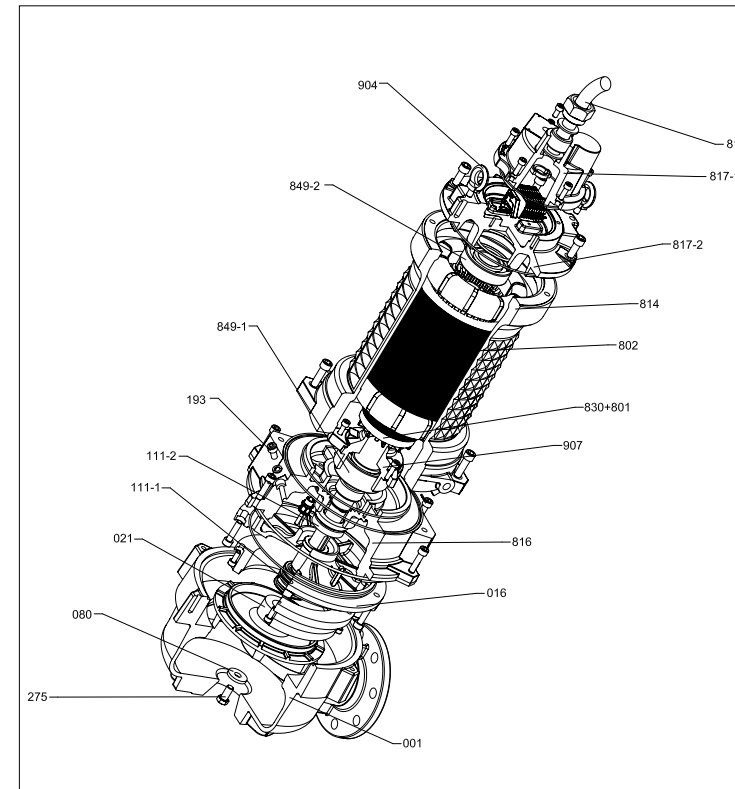
SECTIONAL VIEW 32DMLVF (0.5 kW)



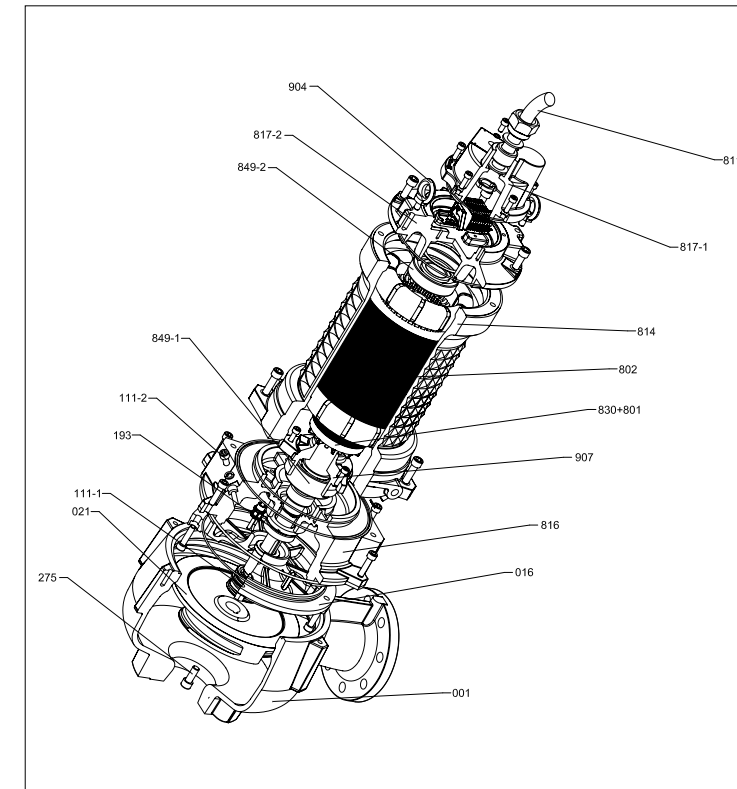
SECTIONAL VIEW 50DMLVF (1.1÷1.8 kW)



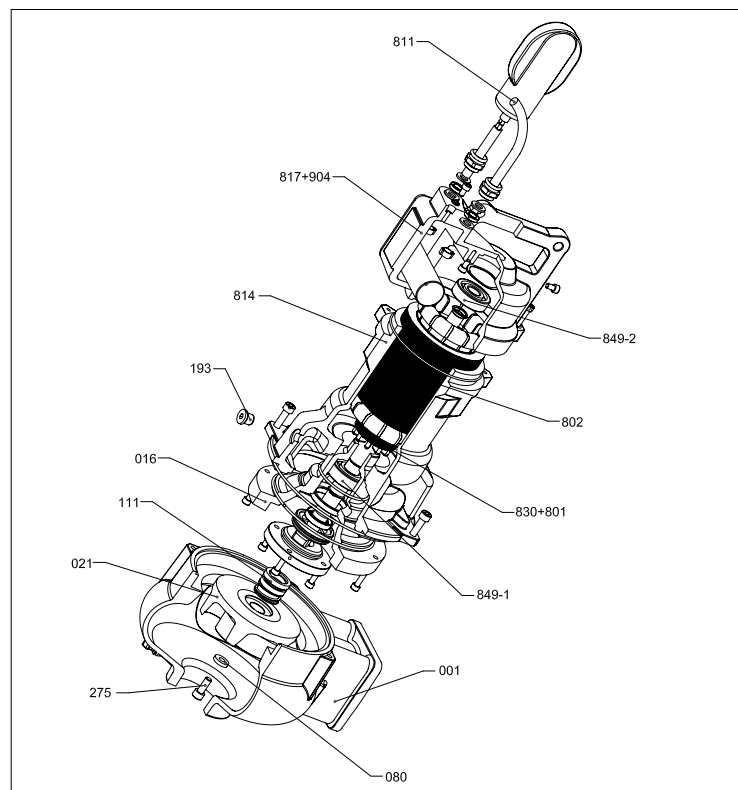
SECTIONAL VIEW 80DMLVF 18.2 (188)



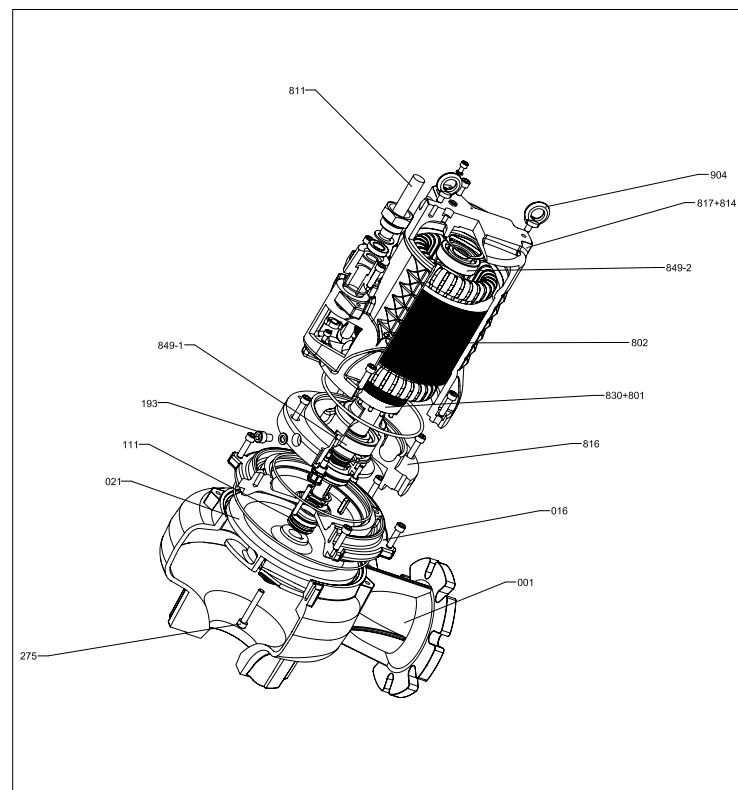
SECTIONAL VIEW 80DMLVF 18.2 (225)



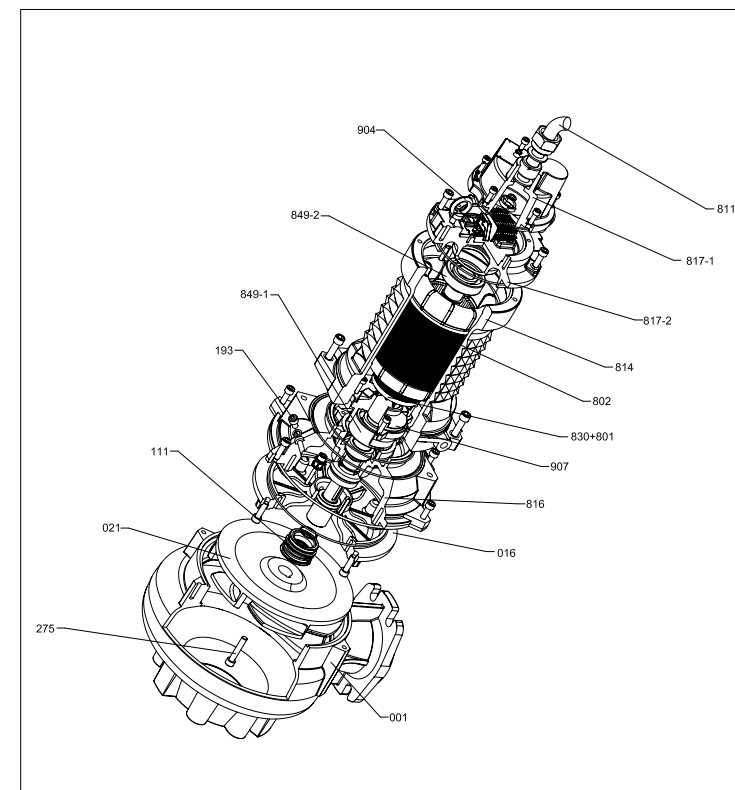
SECTIONAL VIEW 65DMLVF (1.9 kW)



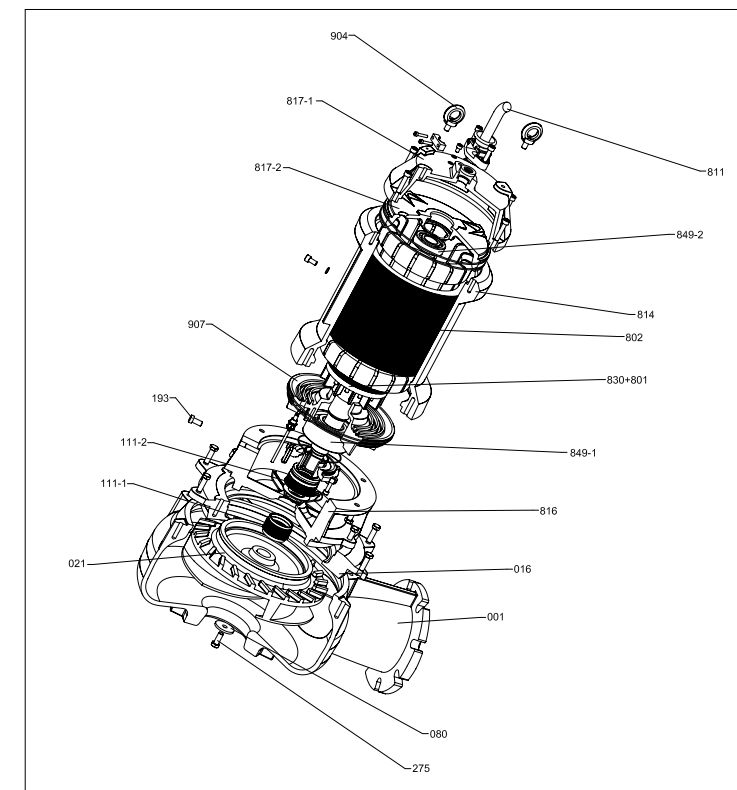
SECTIONAL VIEW 80DMLVF (4.6 kW)



SECTIONAL VIEW 100DMLVF (5.2 kW)



SECTIONAL VIEW 150DMLVF (11÷13.6 kW)



DMLV - DMLVF

SUBMERSIBLE SEWAGE PUMPS (VORTEX)

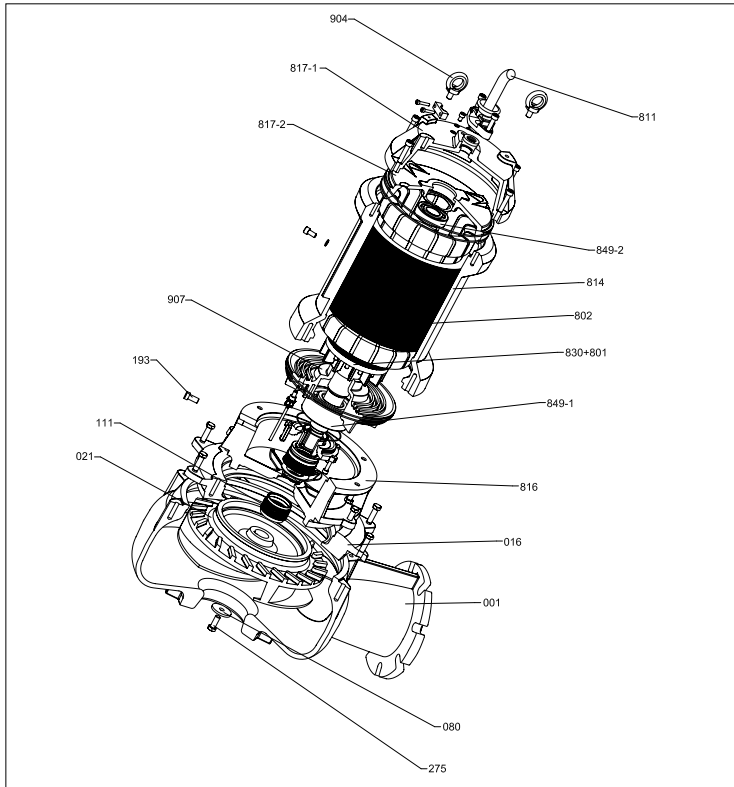
in cast iron

DRS

SUBMERSIBLE SEWAGE PUMPS (GRINDER)

in cast iron

SECTIONAL VIEW 150DMLVF (25÷35.7 kW)



MATERIALS TABLE DMLVF

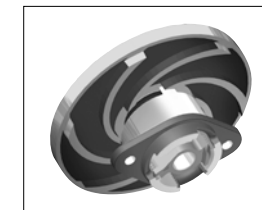
Ref.	Name	Material
001	Pump body	CAST IRON EN-GHJL-250
012	Suction side lid	CAST IRON EN-GHJL-250
016	Mechanical seal cover	CAST IRON EN-GHJL-250
021	Impeller	CAST IRON EN-GHJL-250+Ni
080	Bushing	STEEL
111	Mechanical seal	-
111-1	Mechanical seal	-
111-2	Mechanical seal	-
193	Oil plug	NBR/STAINLESS STEEL
275	Impeller nut	AISI304) CLASSE A2
801	Rotor	-
802	Stator	-
811	Cable	-
814	Motor case	CAST IRON EN-GHJL-250
816	Power side bracket	CAST IRON EN-GHJL-250
817	Opposite side bracket	CAST IRON EN-GHJL-250
817-1	Opposite side bracket [1]	CAST IRON EN-GHJL-250
817-2	Opposite side bracket [1]	CAST IRON EN-GHJL-250
830	Shaft	AISI 420B
849-1	Ball bearing	-
849-2	Ball bearing	-
904	Lifting hanger [2]	CAST IRON EN-GHJL-250
907	Bearing cover	CAST IRON EN-GHJL-250

[1] - Except 32DMLVF from 0,5 kW, 50DMLVF (1,1÷1,8 kW), 65DMLVF (1,9 kW), 80DMLVF (4,6 kW)
 [2] - For models 80DMLVF (4,6 kW), 80DMLVF (18,2 kW), 100DMLVF (5,2 kW), 150DMLVF (11÷13,6 kW), 150DMLVF (25÷35,7 kW) the lifting hanger is in steel



SINGLE PHASE

THREE PHASE



Submersible sewage pumps with open impeller and grinder device inlet

APPLICATIONS

- Evacuation of civil and industrial waste waters
- Moving foul waste water with filamentary substances and paper
- Emptying cesspits
- Emptying seepage water

TECHNICAL DETAILS

- Open impeller and grinder device inlet

TECHNICAL DATA

- Maximum temperature of the liquid: 40°C
- Max solids size for passage: 6÷7mm
- Single and three phase asynchronous motor
- Versions available: 2 poles
- Insulation class: H
- Protection degree: IP68
- 230V ±10%, 50Hz single phase voltage
- 400V ±10%, 400/690±10%, 50Hz three phase voltage
- Flanges DN40
- Power up to 5 kW

MATERIALS

- Pump body, grinder impeller, motor pump body, volute base, upper cover in cast iron
- Shaft in AISI 420B
- Mechanical seal: SiC/SiC/NBR (pump side)
Carbon/Ceramic/NBR (motor side) (3,2kW and above)

ACCESSORIES (ON REQUEST)

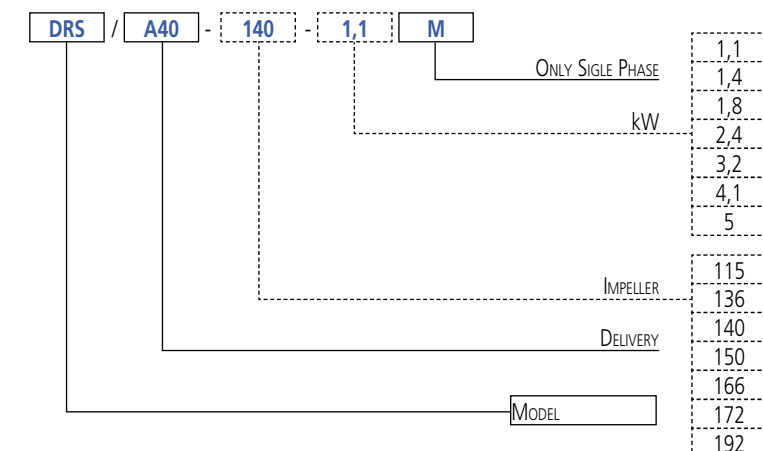
- See from page 134

DMLVF (0.5÷35.7 kW) MOTOR DATA

For electrical data of DMLV pumps see pages 80-81

[P2]	[kW]	0,5	1,1	1,8	1,9	4,6	5,2	11	13,6	18,2	25	35,7		
Resistance at 20°C	[Ω]	10,1/20,2	1,97/4,38	1,9/4,3	1,8/4,1	6,100	4,000	1,600	1,550	0,540	0,310	0,240		
GD ²	[kg•m ²]	0,000241	0,000520	0,000520	0,000520	0,006	0,016	0,140	0,140	0,016	0,120	0,130		
Voltage	[V]	230	230	230	230	400	400	400	400	400	400	400		
Load	0%	Current	[A]	1	2,31	2,5	2,52	3	6	24,9	26	12,9	19	
		Power	[W]	170	415	420	433	480	720	2200	2300	1950	1800	2100
		Efficiency	[%]	63	67	80	80	83	78	85	85	87,41	90	91
	75%	Current	[A]	2,8	5,4	7,6	7,6	7,1	9	16,4	20,1	25,6	36,3	49,7
		Power factor	[%]	0,95	0,96	0,98	0,98	0,85	0,81	0,86	0,86	0,87	0,82	0,85
		Speed	[min ⁻¹]	2831	2868	2795	2801	1440	942	959	956	2910	1434	1463
	100%	Current	[A]	4	7,5	10	10	9,5	12,5	23	27,5	34	48	65,5
		Efficiency	[%]	63	68	80,5	80,5	83	78	85	85	88,4	91	91,5
		Power factor	[%]	0,96	0,98	0,99	0,99	0,89	0,88	0,89	0,89	0,91	0,85	0,88
Speed	[min ⁻¹]	2815	2750	2710	2700	1430	935	950	950	2870	1430	1460		
Locked Rotor Torque	[%]	57	20	30	30	200	210	240	240	330	250	250		
Start Current	[A]	12,4	21	35	35	42,8	63,8	124,2	148,5	193,8	283,2	384,4		
Poles		2				4	6	6		2	4			
Phase		1				3								
No. starts per hour		15												
Model		M206M/M-264	M271M/M-2282-3028-3534-6437	M271M/L-3026-3536-5432-5372-6436	M271M/LR-846	M410T/Lp-2016	M611T/M-4980	M618T/S-300	M618T/M-299	M213T/Lp-6110-6429	M418T/M-296	M418T/L-295		

PUMP IDENTIFICATION CODE

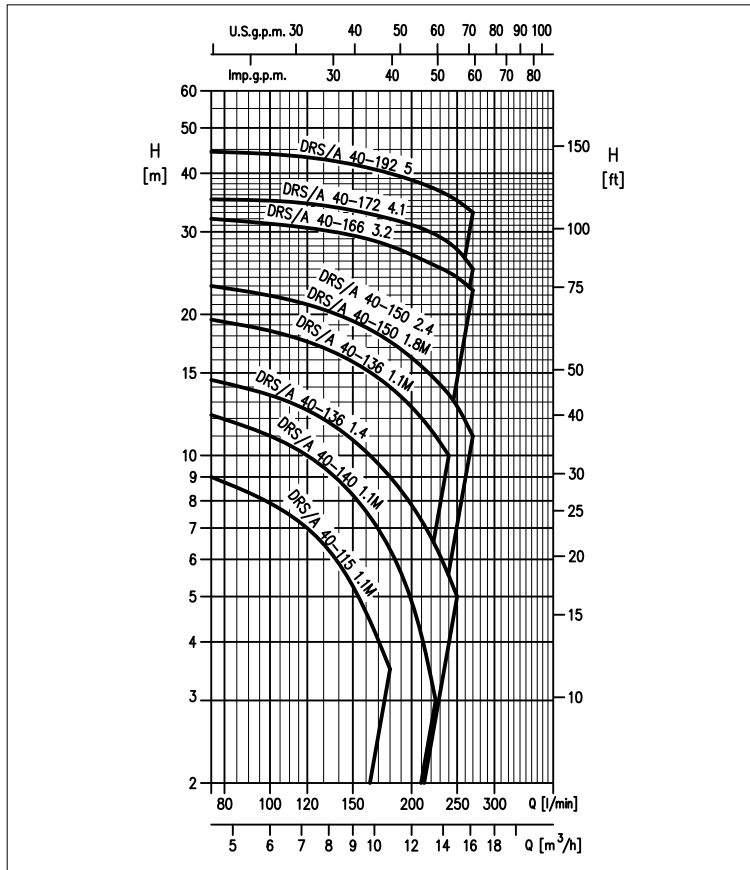




DRS

SUBMERSIBLE SEWAGE PUMPS (GRINDER) in cast iron

PERFORMANCE CHART



PERFORMANCE TABLE

Model	P ₂		Q=Flow rate						
	[HP]	[kW]	l/min m³/h	75 5	120 7	180 11	225 14	240 14	270 16
DRS/A40-115-1.1 M	1,5	1,1		9	7	3,5	-	-	-
DRS/A40-140-1.1 M	1,5	1,1		12,2	10	6,3	3	-	-
DRS/A40-136-1.1 M	1,5	1,1		19,5	17,5	14	11	10	-
DRS/A40-150-1.8 M	2,5	1,8		23	21	17,5	14,5	13,5	11
DRS/A40-136-1.4	2	1,4		14,5	12,5	9	6,3	5	-
DRS/A40-150-2.4	3,2	2,4		23	21	17,5	15	13,9	11,5
DRS/A40-166-3.2	4,5	3,2		32	30,6	28	25,4	24,4	22,5
DRS/A40-172-4.1	5,5	4,1		35,2	34,5	32	29,6	28,1	25
DRS/A40-192-5,0	7	5		44,5	43,5	40	37	35,9	33

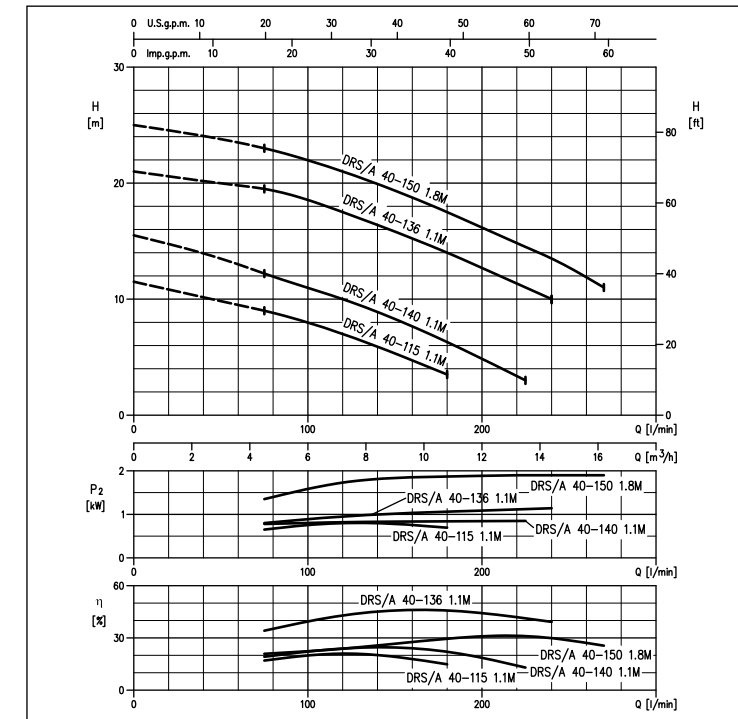


DRS

SUBMERSIBLE SEWAGE PUMPS (GRINDER) in cast iron

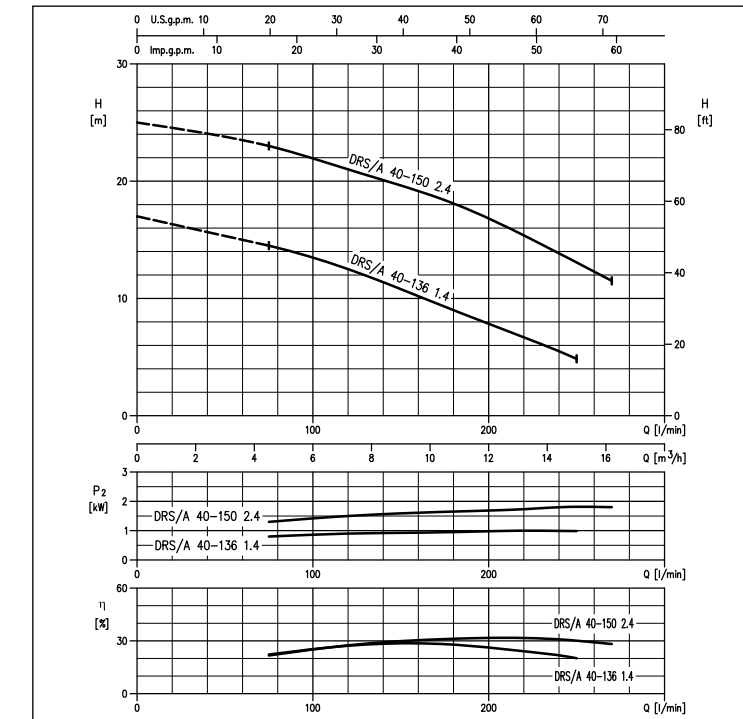
PERFORMANCE CURVES

DRS/A40-115-1.1M (1.1 kW) – Impeller Diameter = 115 mm
 DRS/A40-140-1.1M (1.1 kW) – Impeller Diameter = 140 mm
 DRS/A40-136-1.1M (1.1 kW) – Impeller Diameter = 136 mm
 DRS/A40-150-1.8M (1.8 kW) – Impeller Diameter = 150 mm



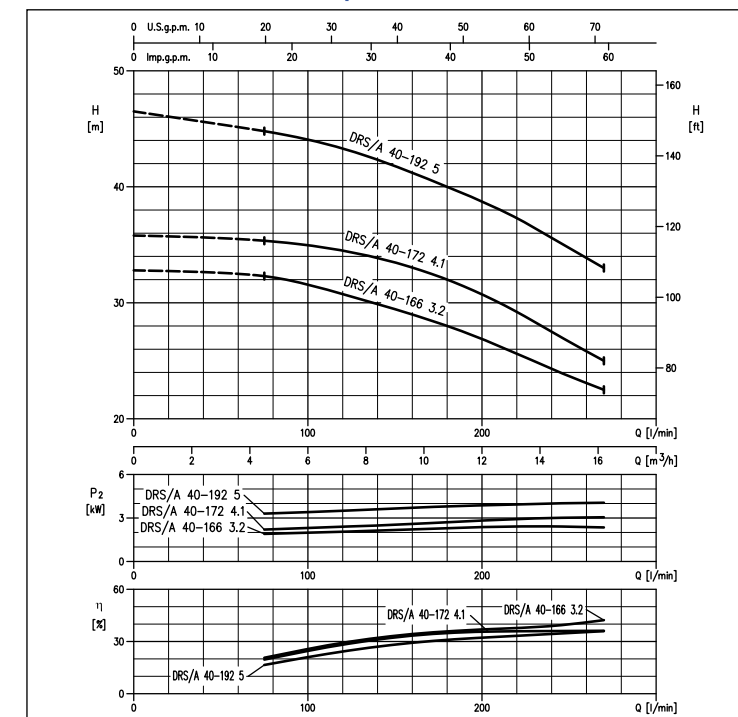
PERFORMANCE CURVES

DRS/A40-136-1.4 (1.4 kW) – Impeller Diameter = 136 mm
 DRS/A40-150-2.4 (2.4 kW) – Impeller Diameter = 150 mm



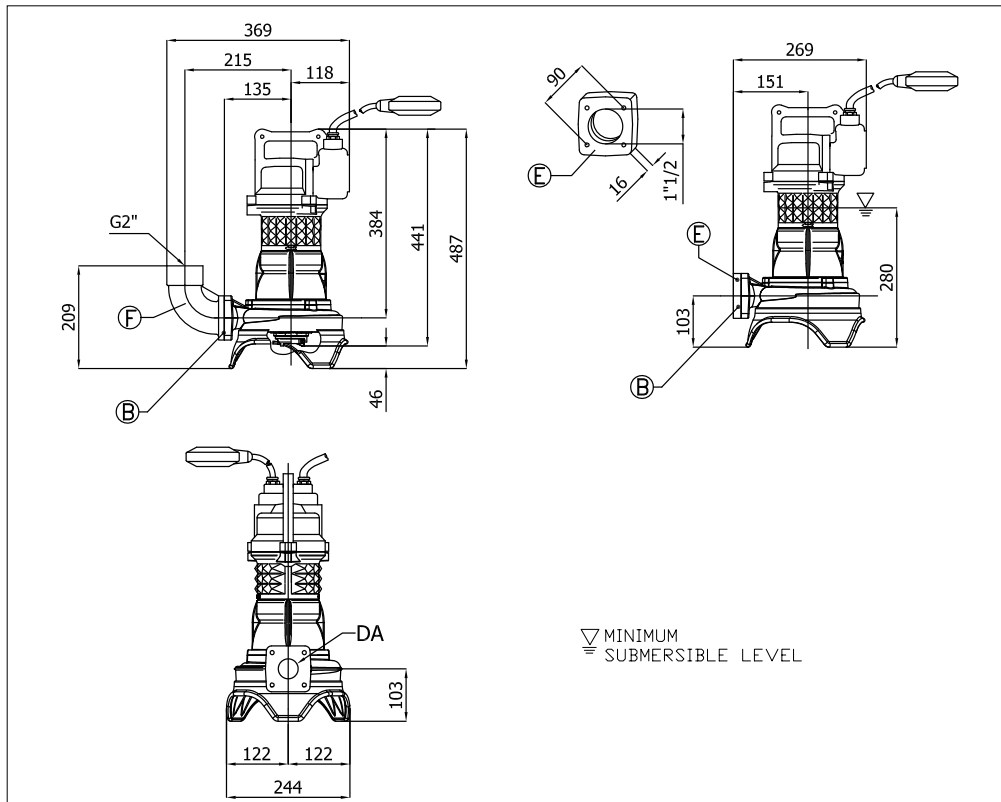
PERFORMANCE CURVES

DRS/A40-166-3.2 (3.2 kW) - Impeller Diameter = 166 mm
 DRS/A40-172-4.1 (4.1 kW) - Impeller Diameter = 172 mm
 DRS/A40-192-5 (5.0 kW) - Impeller Diameter = 192 mm



SUBMERSIBLE SEWAGE PUMPS (GRINDER) in cast iron

DIMENSIONS DRS/A 40 (1.1 kW)

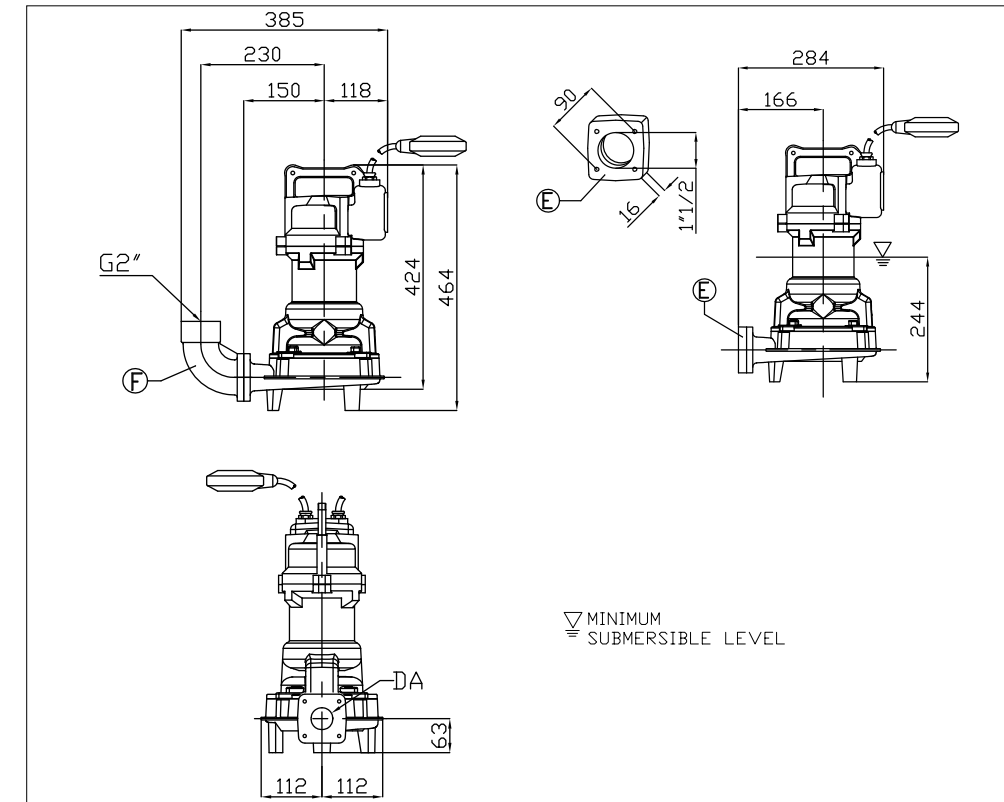


DIMENSIONS TABLE DRS/A 40 (1.1 kW)

DA	Model	[kW]	Weight [kg]
40	DRS/A40-140-1,1M	1.1	30
	DRS/A40-115-1,1M	1.1	30

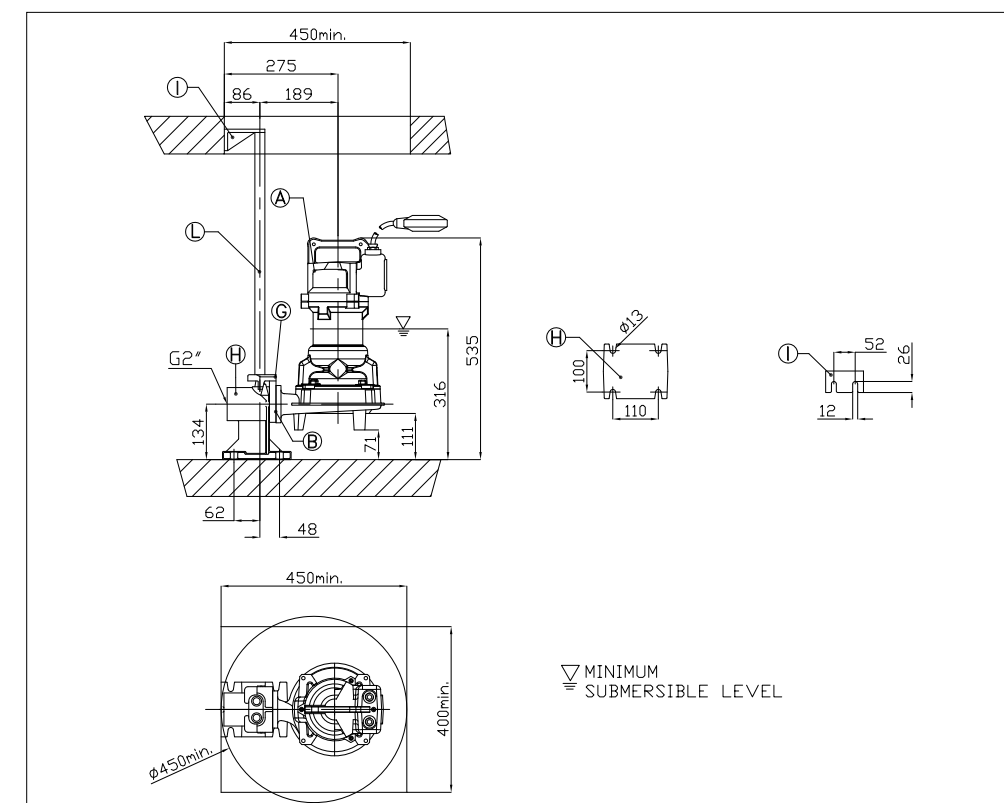
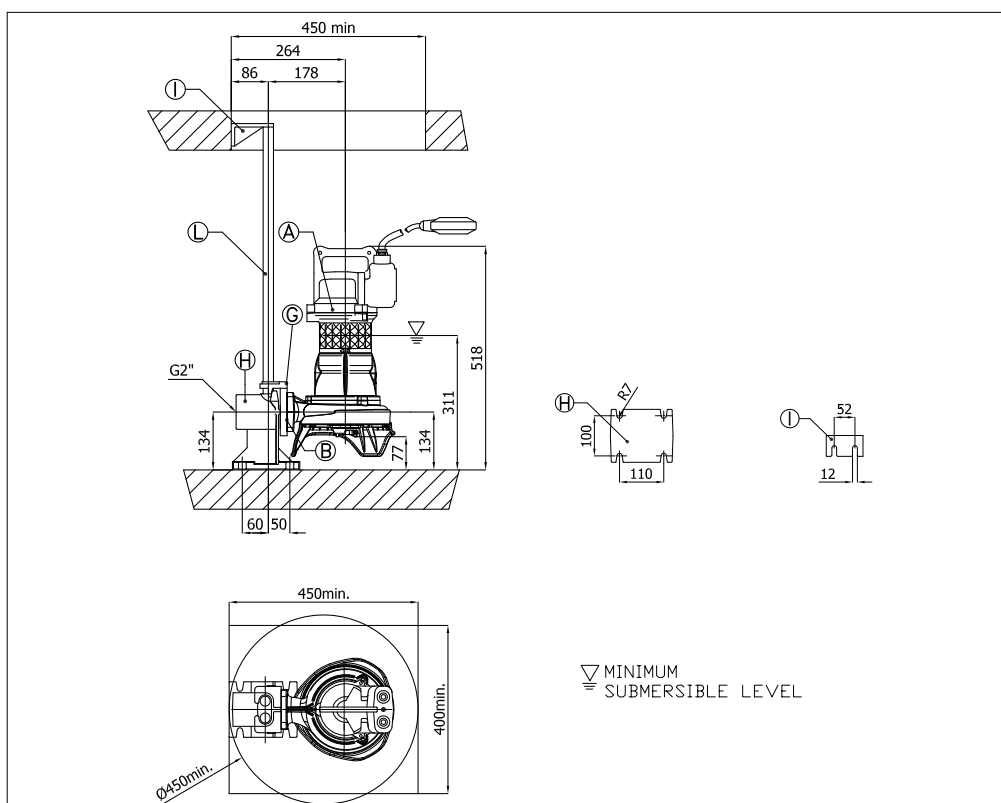
SUBMERSIBLE SEWAGE PUMPS (GRINDER) in cast iron

DIMENSIONS DRS/A 40 (1.1÷1.8 kW)



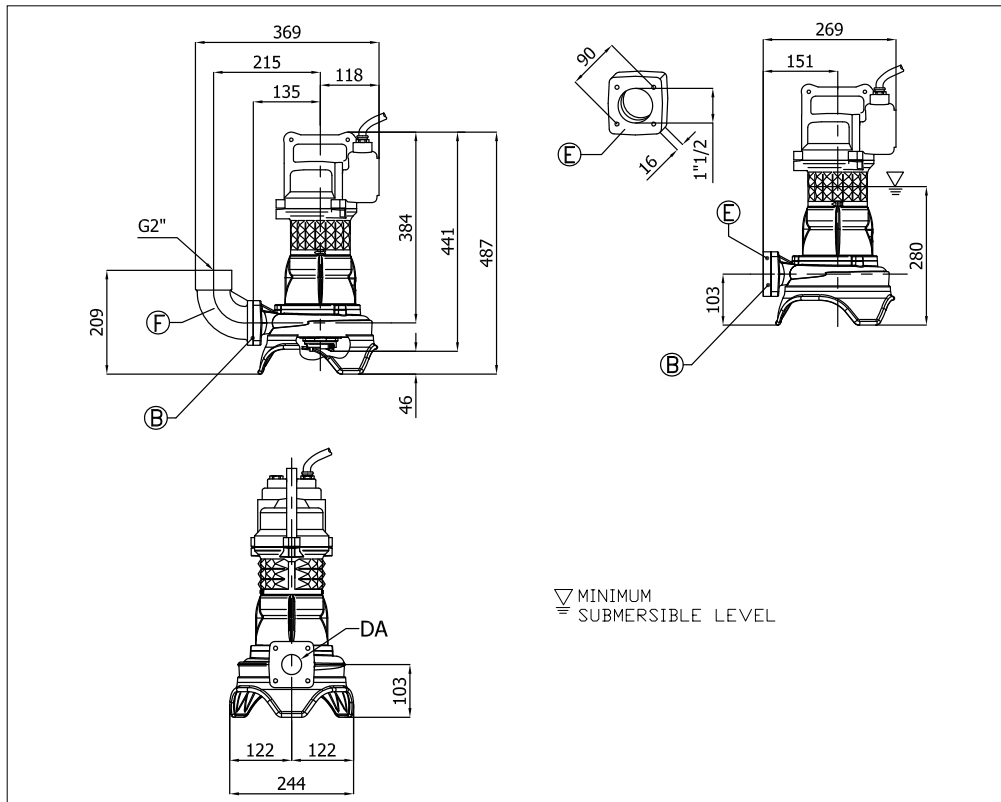
DIMENSIONS TABLE DRS/A 40 (1.1÷1.8 kW)

DA	Model	[kW]	Weight [kg]
40	DRS/A40-136-1,1M	1.1	40
	DRS/A40-150-1,8M	1.8	



SUBMERSIBLE SEWAGE PUMPS (GRINDER) in cast iron

DIMENSIONS DRS/A 40 (1.4 kW)

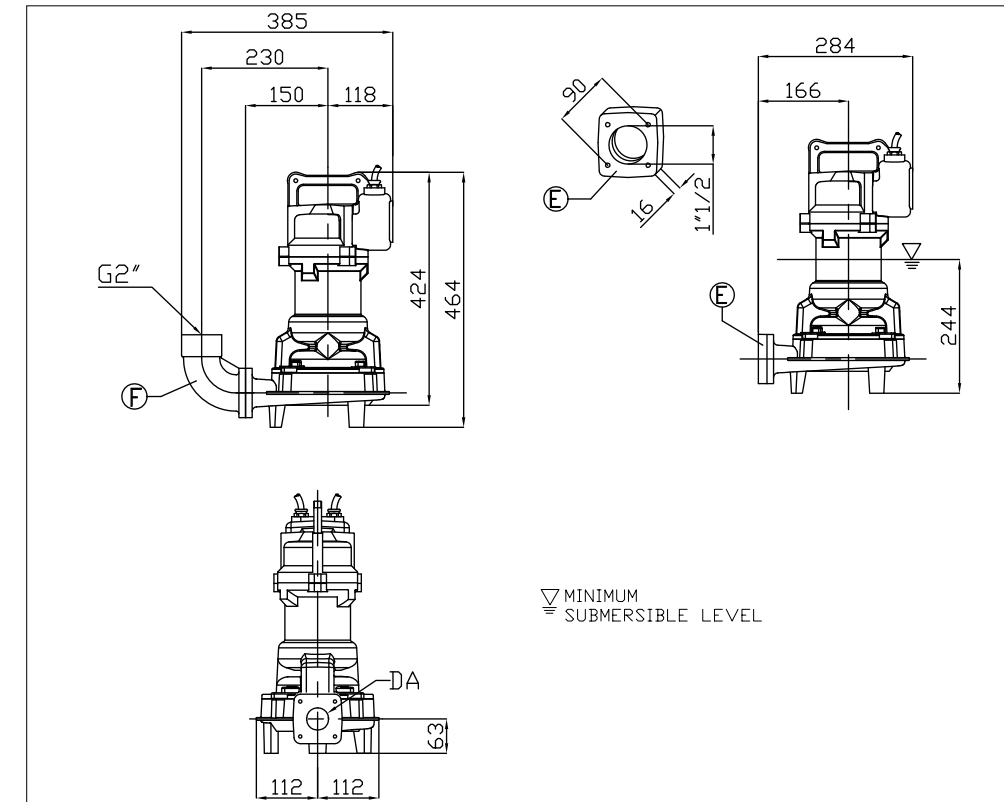


DIMENSIONS TABLE DRS/A 40 (1.4 kW)

DA	Model	[kW]	Weight [kg]
40	DRS/A40-136-1,4	1.4	40

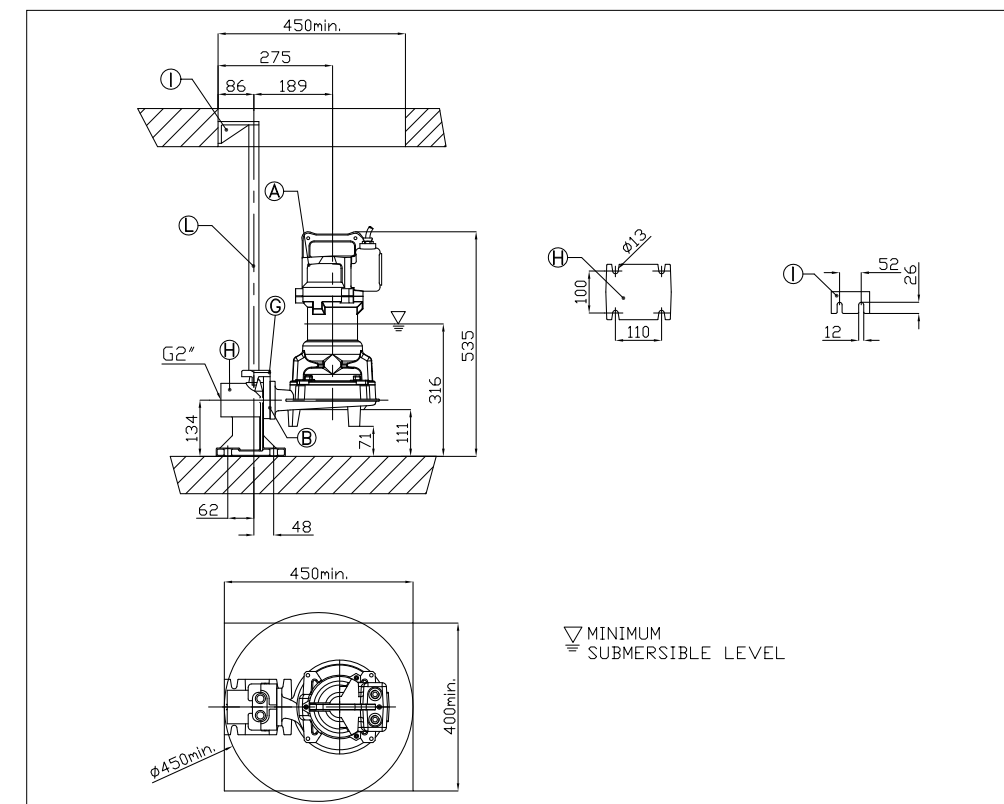
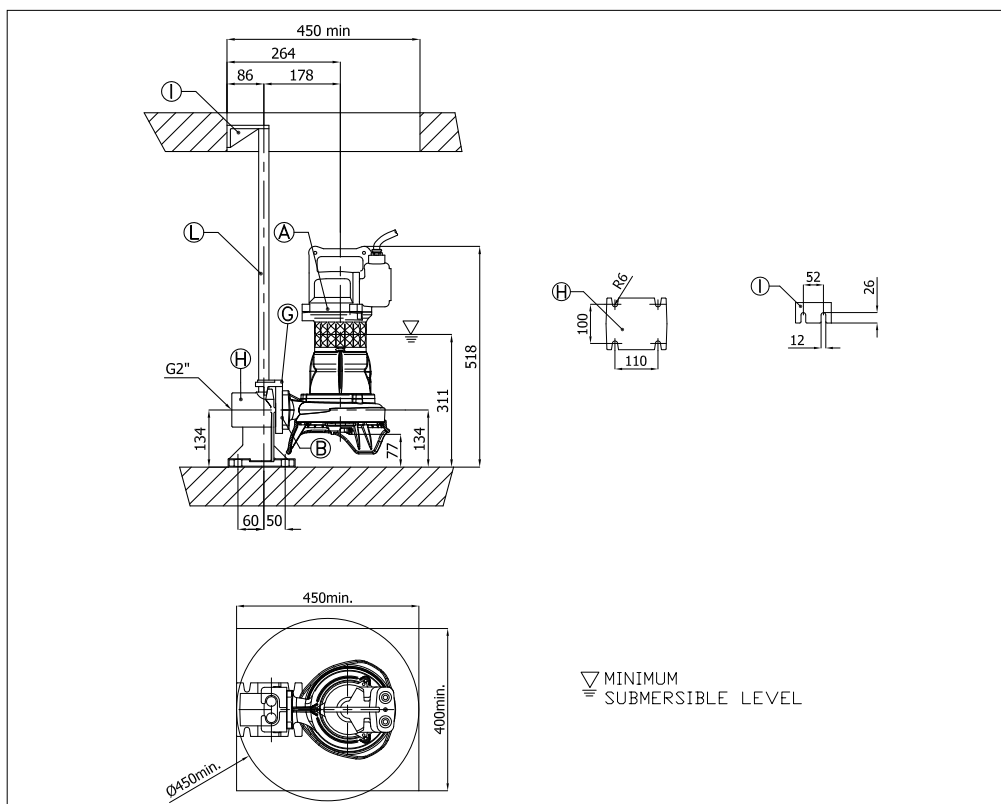
SUBMERSIBLE SEWAGE PUMPS (GRINDER) in cast iron

DIMENSIONS DRS/A 40 (2.4 kW)



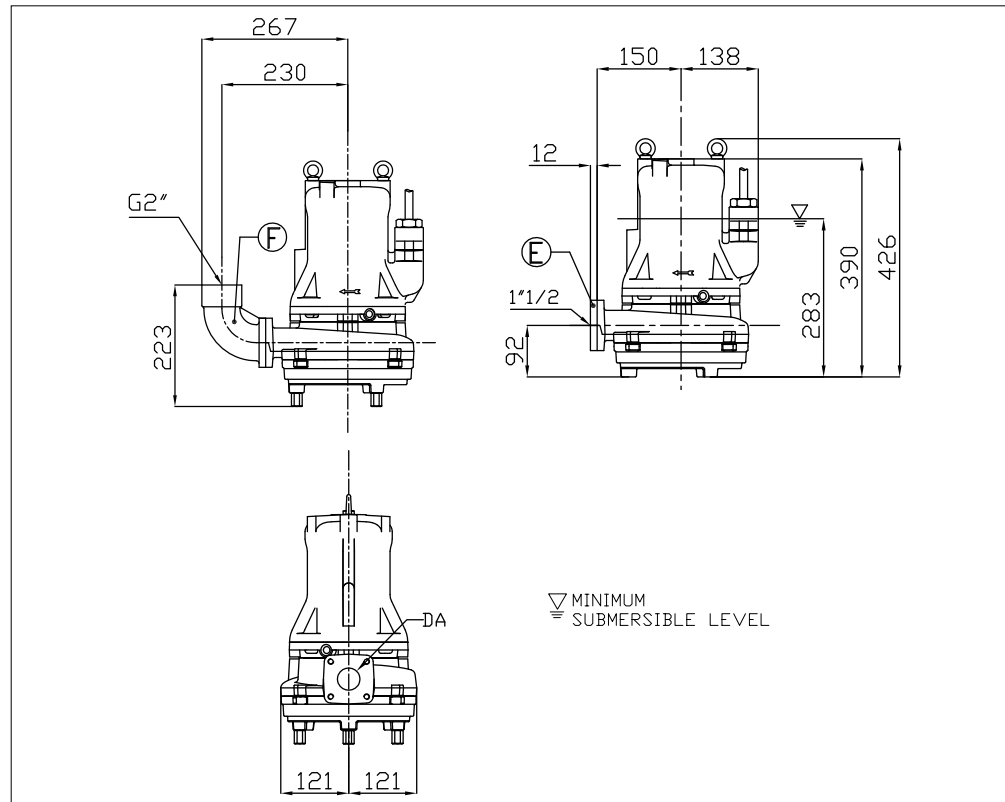
DIMENSIONS TABLE DRS/A 40 (2.4 kW)

DA	Model	[kW]	Weight [kg]
40	DRS/A40-150-2,4	2.4	40



SUBMERSIBLE SEWAGE PUMPS (GRINDER) in cast iron

DIMENSIONS DRS/A 40 (3.2 kW)

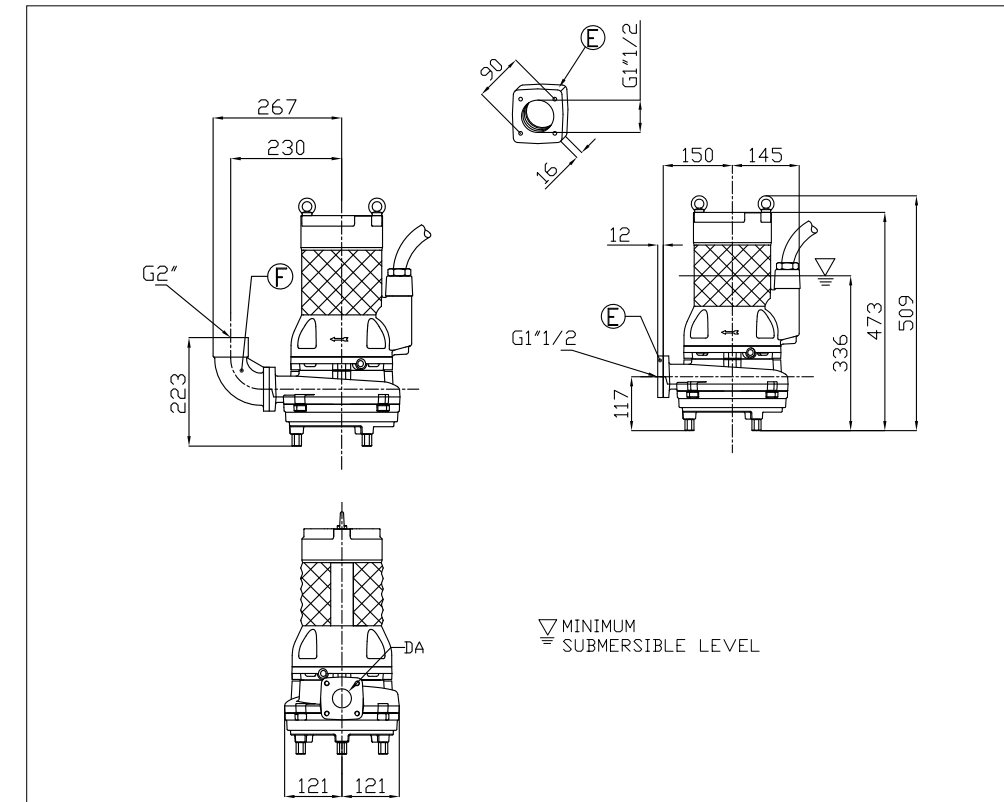


DIMENSIONS TABLE DRS/A 40 (3.2 kW)

DA	Model	[kW]	Weight [kg]
40	DRS/A40-166-3,2	3.2	52

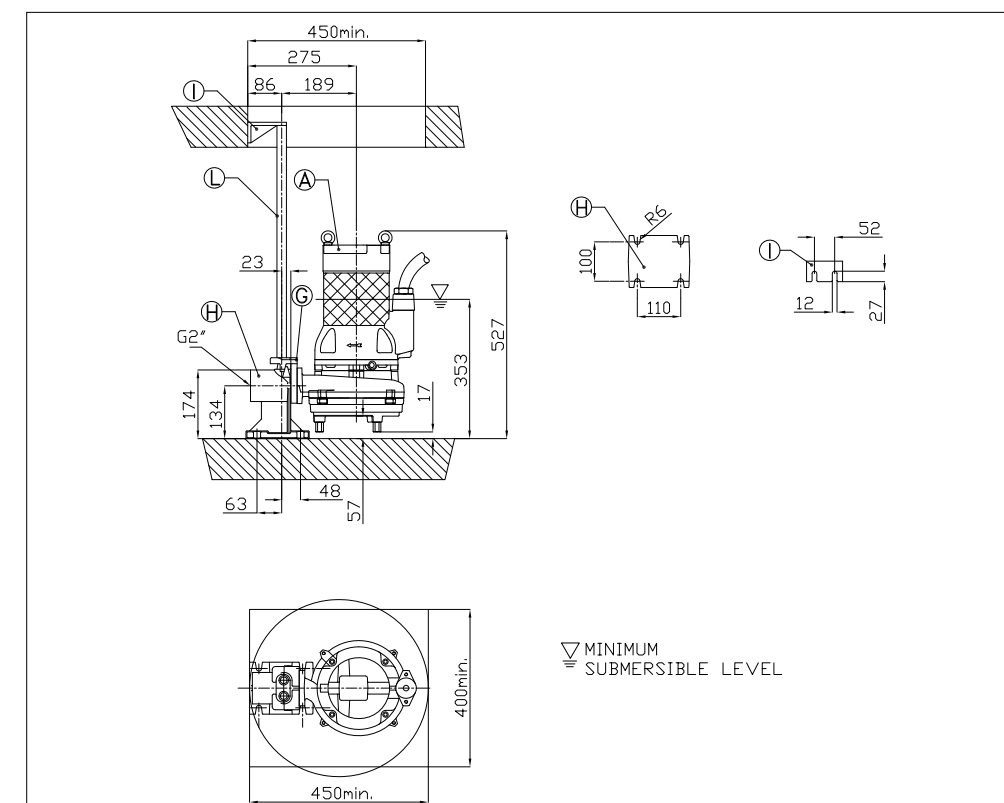
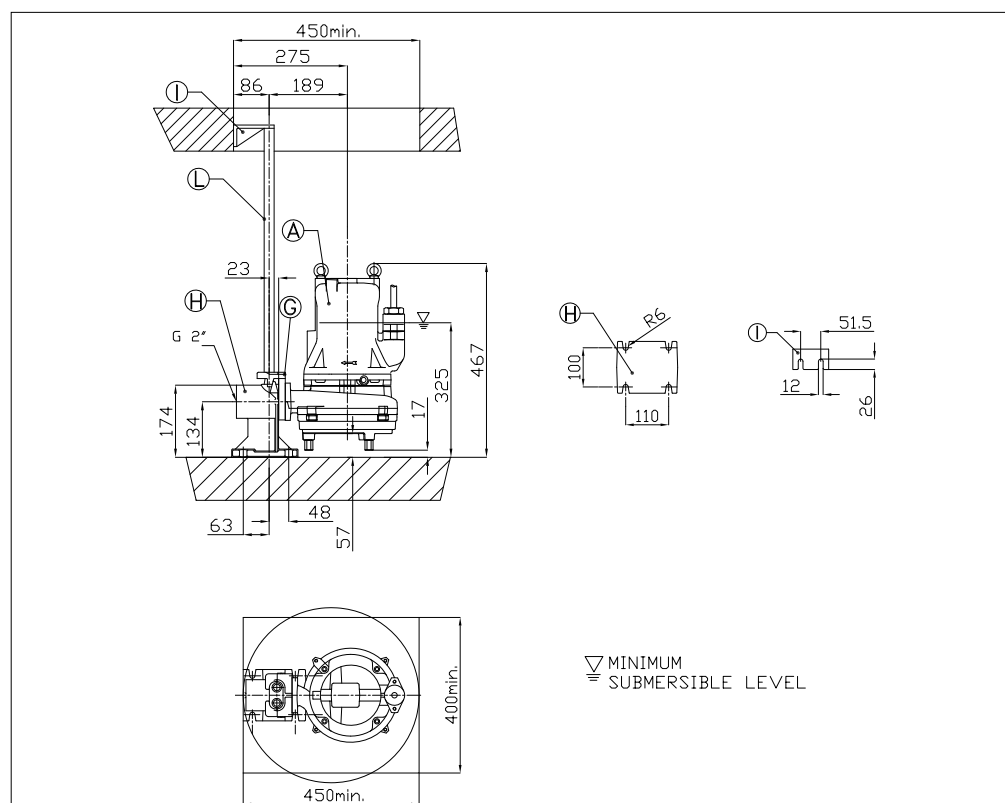
SUBMERSIBLE SEWAGE PUMPS (GRINDER) in cast iron

DIMENSIONS DRS/A 40 (4.1÷5 kW)



DIMENSIONS TABLE DRS/A 40 (4.1÷5 kW)

DA	Model	[kW]	Weight [kg]
40	DRS/A40-172-4,1	4.1	66
	DRS/A40-192-5	5	66



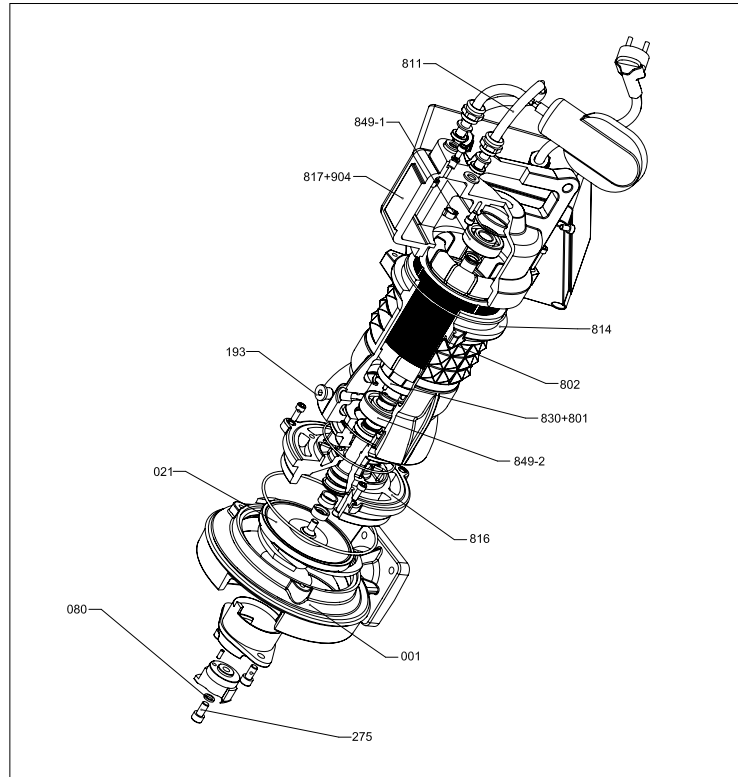
SUBMERSIBLE SEWAGE PUMPS (GRINDER)
in cast iron



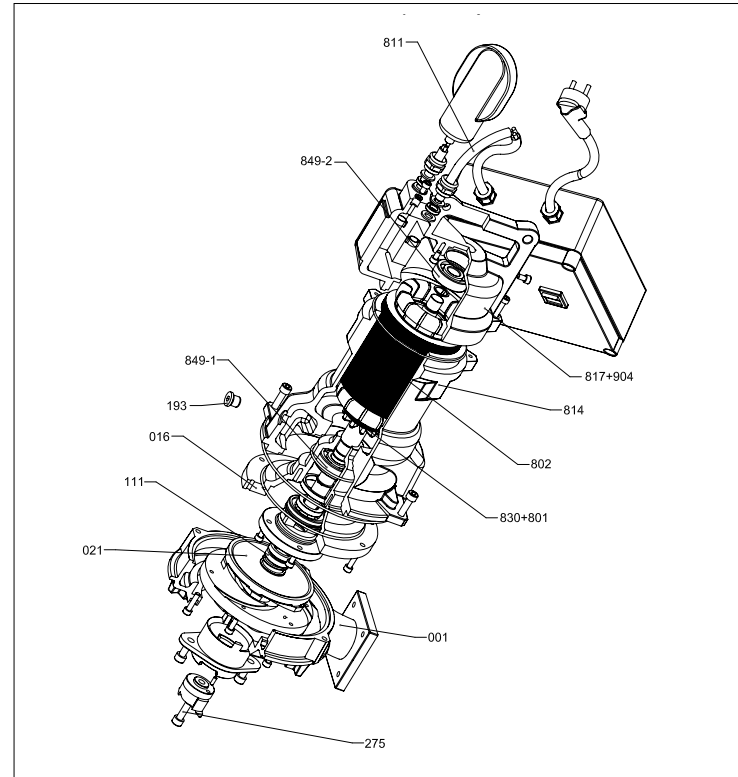
SUBMERSIBLE SEWAGE PUMPS (GRINDER)
in cast iron



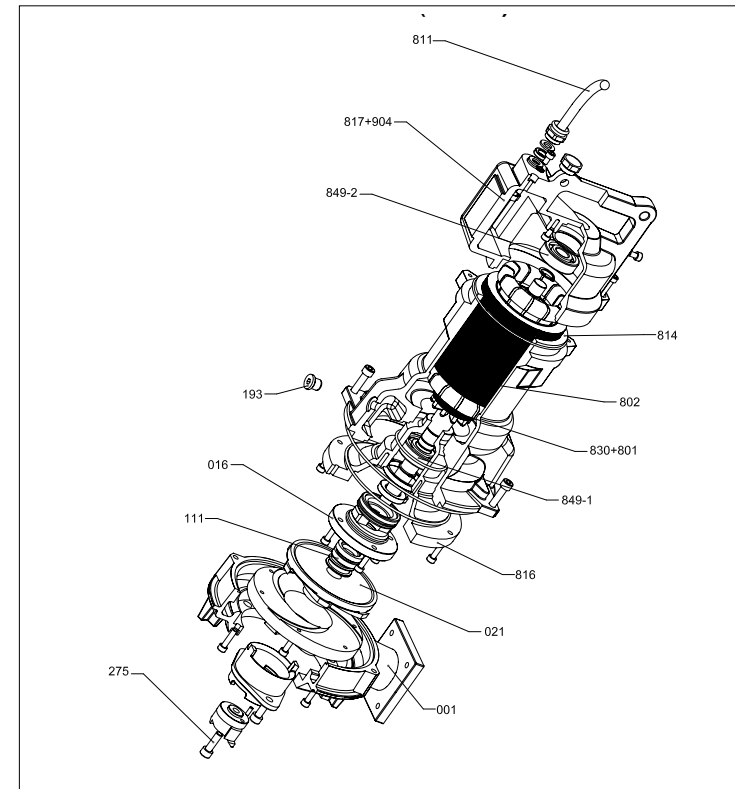
SECTIONAL VIEW DRS/A40-115M(1.1 kW)
DRS/A40-140M (1.1 kW)



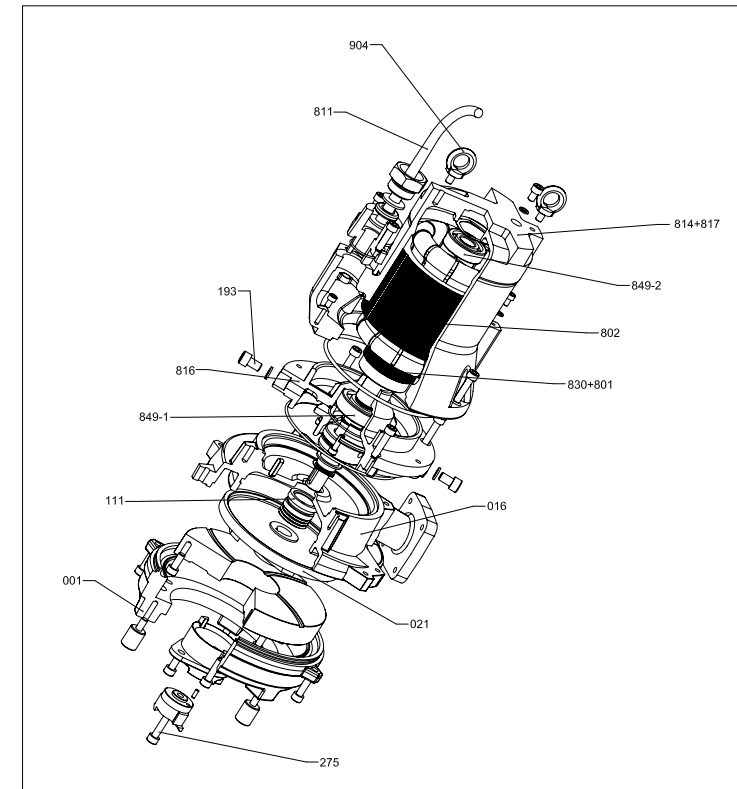
SECTIONAL VIEW DRS/A 40-136M (1.1 kW)



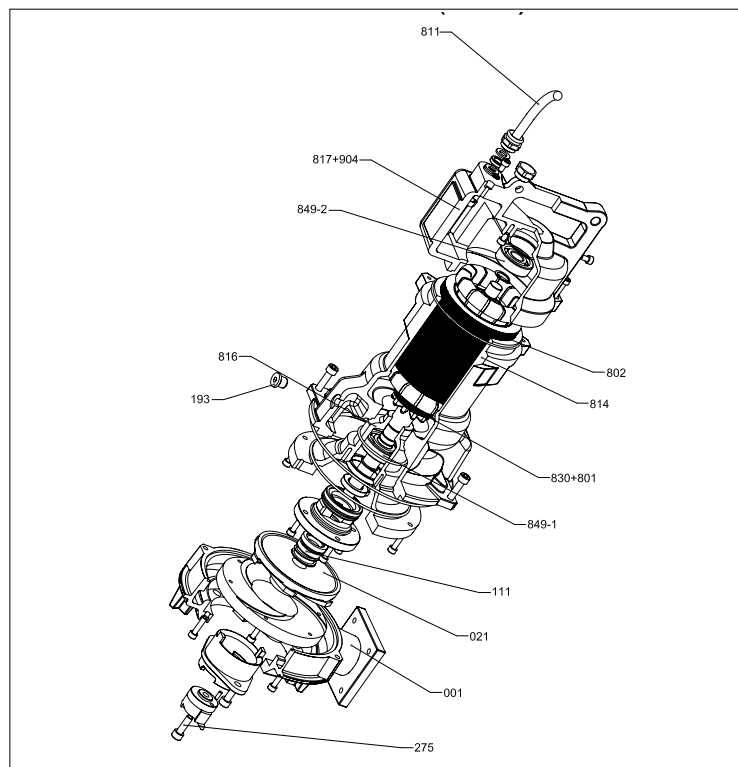
SECTIONAL VIEW DRS/A 40-150 (2.4 kW)



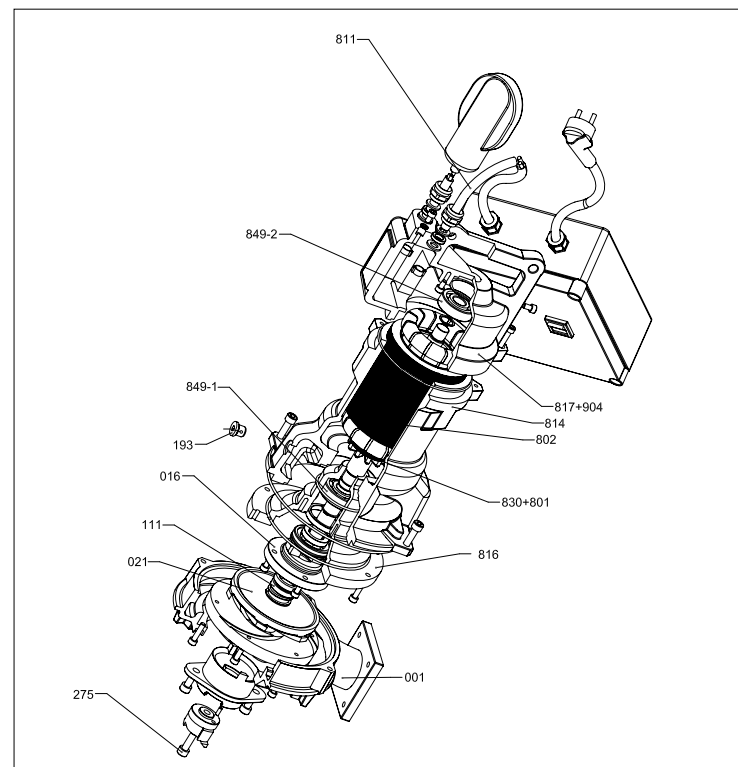
SECTIONAL VIEW DRS/A 40-166 (3.2 kW)



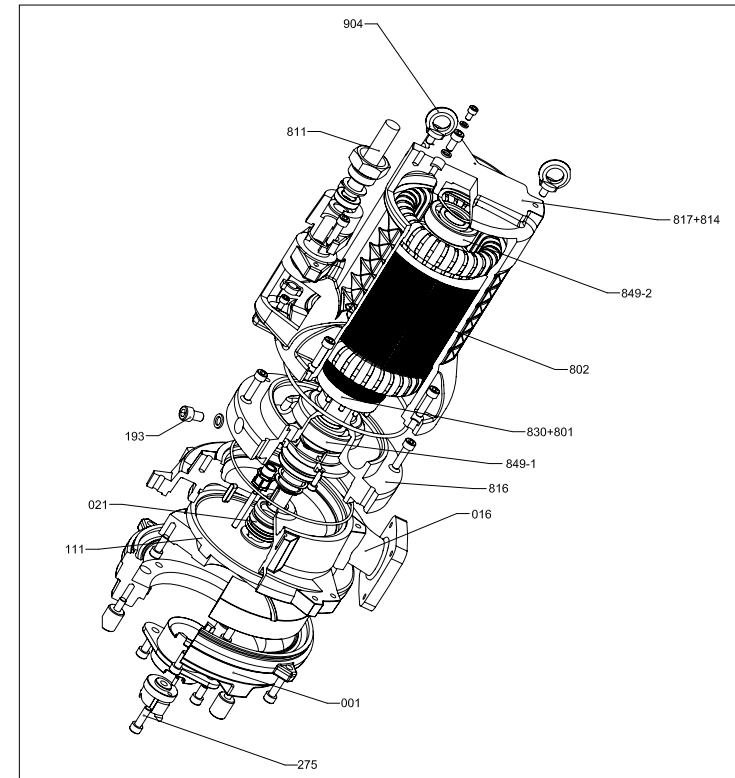
SECTIONAL VIEW DRS/A 40-136 (1.4 kW)



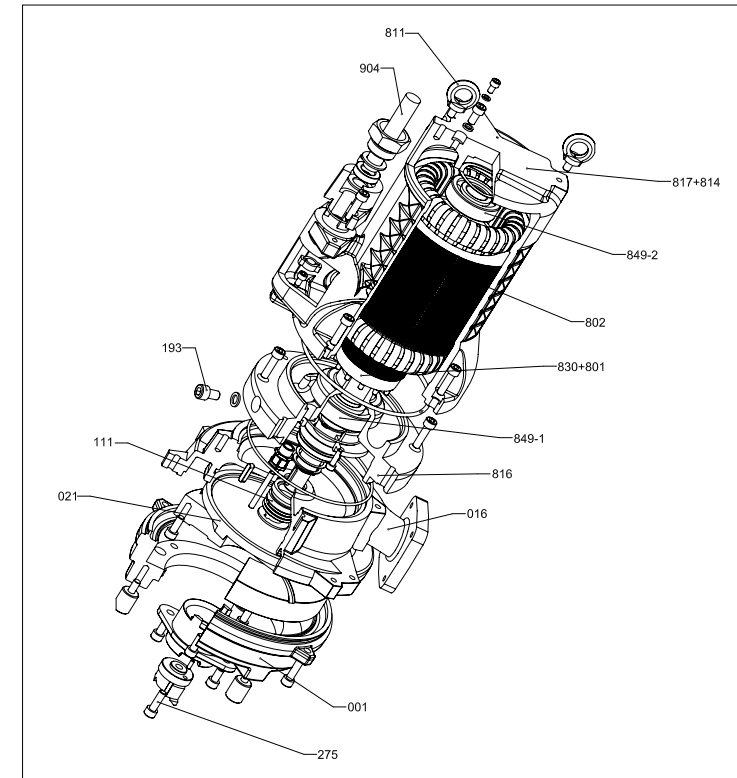
SECTIONAL VIEW DRS/A 40-150M (1.8 kW)



SECTIONAL VIEW DRS/A 40-172 (4.1 kW)



SECTIONAL VIEW DRS/A 40-192 (5.0 kW)



SUBMERSIBLE SEWAGE PUMPS (GRINDER) in cast iron

MATERIALS TABLE DRS

Ref.	Name	Material	Ref.	Name	Material
001	Pump body	CAST IRON	811	Cable	-
016	Mechanical seal cover	CAST IRON	814	Motor case	CAST IRON
021	Impeller	DUCTILE IRON	816	Power side bracket	CAST IRON
080	Bushing	STEEL	817	Opposite side bracket	CAST IRON
111	Mechanical seal	-	830	Shaft	AISI 420B
193	Oil plug	NBR/STAINLESS STEEL	849-1	Ball bearing	-
275	Impeller nut	AISI304 CLASSE A2	849-2	Ball bearing	-
801	Stator	-	904	Lifting hanger	CAST IRON [1]/STEEL [2]
802	Rotor	-			

[1] - DRS/A 40-115(1.1kW), DRS/A 40-140 (1.1.kW), DRS/A 40-136 (1.1 /1.4 kW), DRS/A 40-150 (1.8/2.4 kW)
[2] -DRS/A 40-166 (3.2 kW), DRS/A 40-172 (4 kW), DRS/A 40-192 (5.0 kW)

SUBMERSIBLE SEWAGE PUMPS (MULTI-CHANNEL) in cast iron

Submersible sewage pumps with multi-channel impeller

APPLICATIONS

- Moving sewage, foul liquids in general
- Emptying seepage water
- Emptying cesspits
- Draining excavations

TECHNICAL DATA

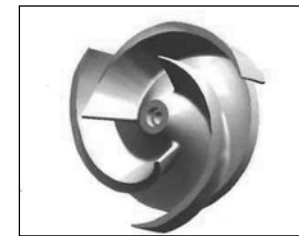
- Maximum temperature of the liquid: 40°C
- Max. solids size for passage: 30÷140mm
- Three phase asynchronous motor
- Versions available: 2, 4 6, 8 poles
- Insulation class H
- Protection degree IP 68
- 400V ,50Hz three phase voltage
- Flanges DN65, DN80, DN100, DN150, DN200, DN250, DN300
- Power up to 79,5 kW

MATERIALS

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

ACCESSORIES (ON REQUEST)

- See from page 134



DRS MOTOR DATA

[P2]	[kW]	1,1 (DRS 40-115) (DRS 40-140)	1,1 (DRS 40-136)	1,8	1,4	2,4	3,2	4,1	5		
Resistance at 20°C	[Ω]	2,83/6,48	1,97/4,38	1,9/4,3	3,100	3,000	2,060	2,920	2,870		
GD ²	[kg·m ²]	0,000430	0,000520	0,000520	0,001	0,001	0,002	0,003	0,003		
Voltage	[V]	230	230	230	400	400	400	400	400		
Load	0%	Current	[A]	3,3	2,31	2,5	2,6	2,8	2,6	4,3	4,6
		Power	[W]	560	415	420	420	440	480	720	745
	75%	Current	[A]	5,5	5,4	7,6	2,6	3,8	4,88	7,3	7,8
		Efficiency	[%]	67	67	80	77	79	86	83	83
		Power factor	[%]	0,95	0,96	0,98	0,74	0,85	0,82	0,75	0,83
	100%	Speed	[min ⁻¹]	2820	2868	2795	2908	2820	2838	2918	2898
		Current	[A]	7,5	7,5	10	3,5	5	6,5	8,8	11
		Efficiency	[%]	68	68	80,5	77	79	86	83	83
		Power factor	[%]	0,98	0,98	0,99	0,83	0,9	0,85	0,82	0,88
Speed	[min ⁻¹]	2750	2750	2710	2810	2720	2770	2850	2850		
Locked Rotor Torque	[%]	20	20	30	300	300	240	260	260		
Start Current	[A]	21	21	35	14	21	31,9	51,9	64,9		
Fase		1			3						
No. starts per hour		15									
Model		M272M/L 9108-394 9756	M271M/M 2282 - 3028 3534-6437	M271M/L 3026-3536 5432-5372 6436	M271T/M-2051	M271T/L-2050	M209T/LLR-1042	M210T/S-1924	M210T/M-1600		



DRD

SUBMERSIBLE SEWAGE PUMPS (MULTI-CHANNEL)

in cast iron

DRD PUMPS WITH MULTI-CHANNEL IMPELLER

Three phase 400/690V - 50 Hz

Model	Speed	kW	Absorbed Curr. [A]		Discharge DN	Passage [mm]	Weight [kg]	Performance	
			400V	690V				Q [m³/h]	H [m]
DRD/A 65-106-3,2 (*)	2850	3,2	6,5	-	65	30	61,0	10,0±50,0±80,0	14,0±10,0±4,0
DRD/A 65-115-3,2 (*)	2850	3,2	6,5	-	65	30	61,0	12,0±40,0±72,0	17,0±14,0±9,0
DRD/A 80-123-5,7 (*)	2850	5,7	-	12,5	80	30	77,0	17,0±68,0±104,0	21,0±16,0±7,0
DRD/A 80-132-5,7 (*)	2850	5,7	-	12,5	80	30	77,0	18,0±70,0±100,0	24,0±18,0±11,0
DRD/A 80-160-8,2 (*)	2850	8,2	-	15,5	80	30	150,0	20,0±80,0±125,0	29,0±20,0±7,0
DRD/A 100-240-2,3 (*)	950	2,3	6	-	100	80	96,0	28,0±92,0±140,0	7,0±5,0±2,5
DRD/A 100-240-2,8 (*)	950	2,8	-	6,6	100	80	111,0	29,0±100,0±180,0	7,8±5,0±2,0
DRD/A 100-185-3,8 (*)	1450	3,8	-	8	100	80	110,0	30,0±110,0±210,0	9,5±7,0±2,0
DRD/A 100-200-4,6 (*)	1450	4,6	-	9,5	100	80	110,0	29,0±108,0±108,0	12,0±8,0±3,0
DRD/A 100-230-7,1 (*)	1450	7,1	-	13,5	100	60	160,0	30,0±108,0±180,0	16,0±11,0±5,0
DRD/A 100-231-7,1 (*)	1450	7,1	-	13,5	100	80	160,0	25,0±130,0±230,0	17,0±12,0±5,0
DRD/A 100-240-7,1 (*)	1450	7,1	-	13,5	100	60	160,0	24,0±110,0±200,0	16,5±11,0±4,0
DRD/A 100-230-10,1 (*)	1450	10,1	-	22	100	80	200,0	29,0±144,0±252,0	18,5±13,0±5,0
DRD/A 100-240-12,1 (*)	1450	12,1	-	27	100	80	200,0	32,0±150,0±270,0	20,0±13,0±4,0
DRD/A 100-165-13,8 (*)	2850	13,8	-	29,5	100	40	200,0	30,0±107,0±165,0	33,0±23,0±12,0
DRD/A 100-175-13,8 (*)	2850	13,8	-	29,5	100	40	200,0	29,0±126,0±200,0	37,0±25,0±8,0
DRD/A 100-185-18,2 (*)	2850	18,2	-	34	100	40	200,0	32,0±137,0±216,0	41,0±26,0±12,0
DRD/A 100-195-18,2 (*)	2850	18,2	-	34	100	40	200,0	30,0±60,0±82,0	46,0±43,0±40,0
DRD/A 100-200-22,4 (*)	2850	22,4	-	40,1	100	40	340,0	30,0±140,0±220,0	47,0±32,0±11,0
DRD/A 150-275-5,2 (*)	950	5,2	-	12,5	150	80	186,0	65,0±170,0±300,0	11,0±7,0±3,0
DRD/A 150-285-6,4 (*)	950	6,4	-	16	150	80	215,0	64,0±187,0±324,0	11,0±7,5±3,0
DRD/A 150-380-79,5 (*)	1450	79,5	-	135	150	60	900,0	70,0±290,0±480,0	51,0±46,0±35,0
DRD/A 150-300-16 (*)	950	16	-	34,2	150	100	450,0	61,0±210,0±360,0	13,5±10,0±4,0
DRD/A 150-320-16 (*)	950	16	-	34,2	150	100	450,0	61,0±200,0±410,0	16,0±12,0±4,5
DRD/A 150-260-21 (*)	1450	21	-	43,1	150	100	450,0	70,0±260,0±420,0	22,0±15,0±5,0
DRD/A 150-275-27 (*)	1450	27	-	52,2	150	100	450,0	70,0±270,0±440,0	24,0±17,0±7,0
DRD/A 150-290-27 (*)	1450	27	-	52,2	150	100	450,0	50,0±270,0±430,0	27,0±21,0±11,0
DRD/A 150-300-27 (*)	1450	27	-	52,2	150	80	450,0	70,0±290,0±440,0	28,0±20,0±10,0
DRD/A 150-290-35,7 (*)	1450	35,7	-	65,5	150	100	515,0	72,0±288,0±504,0	30,0±22,0±7,0
DRD/A 150-305-35,7 (*)	1450	35,7	-	65,5	150	100	515,0	60,0±288,0±500,0	32,0±25,0±12,0
DRD/A 150-310-35,7 (*)	1450	35,7	-	65,5	150	80	515,0	100,0±300,0±500,0	29,0±22,0±6,0
DRD/A 150-320-35,7 (*)	1450	35,7	-	65,5	150	80	515,0	70,0±200,0±300,0	34,0±28,0±23,0
DRD/A 150-210-48,2 (*)	2850	48,2	-	86,5	150	50	495,0	60,0±160,0±230,0	47,0±40,0±32,0
DRD/A 150-345-52,1 (*)	1450	52,1	-	92,5	150	60	745,0	65,0±250,0±360,0	42,0±37,0±31,0
DRD/A 150-360-79,5 (*)	1450	79,5	-	135	150	60	900,0	72,0±360,0±576,0	44,0±36,0±15,0
DRD/A 150-380-79,5 (*)	1450	79,5	-	135	150	60	900,0	70,0±290,0±480,0	51,0±46,0±35,0
DRD/A 150-400-79,5 (*)	1450	79,5	-	135	150	60	900,0	70,0±216,0±380,0	57,0±54,0±47,0
DRD/A 200-341-8,6 (*)	750	8,6	-	22	200	102	414,0	108,0±252,0±396,0	8,0±6,0±3,0
DRD/A 200-335-13,7 (*)	750	13,7	-	29,5	200	102	460,0	108,0±324,0±504,0	8,3±5,6±3,2
DRD/A 200-345-13,7 (*)	750	13,7	-	29,5	200	102	460,0	108,0±324,0±576,0	9,0±6,8±2,8
DRD/A 200-300-16 (*)	950	16	-	34,2	200	102	460,0	120,0±320,0±500,0	13,0±7,0±2,5
DRD/A 200-305-16 (*)	950	16	-	34,2	200	102	460,0	110,0±400,0±660,0	12,0±8,5±3,0
DRD/A 200-320-16 (*)	950	16	-	34,2	200	102	460,0	100,0±340,0±500,0	12,5±8,5±4,0
DRD/A 200-341-16 (*)	950	16	-	34,2	200	102	460,0	100,0±360,0±520,0	14,5±9,0±5,0
DRD/A 200-320-19,8 (*)	950	19,8	-	37	200	102	460,0	108,0±414,0±720,0	14,0±10,0±3,0
DRD/A 200-341-23,4 (*)	950	23,4	-	43	200	102	460,0	108,0±432,0±792,0	16,0±11,0±3,0
DRD/A 200-315-46 (*)	1450	46	-	83,5	200	102	665,0	108,0±468,0±720,0	27,0±17,0±7,0
DRD/A 200-330-52,1 (*)	1450	52,1	-	92,5	200	102	665,0	120,0±525,0±840,0	32,0±20,0±6,0
DRD/A 200-341-52,1 (*)	1450	52,1	-	92,5	200	102	665,0	100,0±540,0±900,0	35,0±21,0±7,0

(*) Tripod or lowering device necessary



DRD

SUBMERSIBLE SEWAGE PUMPS (MULTI-CHANNEL)

in cast iron

DRD PUMPS WITH MULTI-CHANNEL IMPELLER

Three phase 400/690V - 50 Hz

Model	Speed	kW	Absorbed Curr. [A]		Discharge DN	Passage [mm]	Weight [kg]	Performance	
			400V	690V				Q [m³/h]	H [m]
DRD/A 250-325-13,7 (*)	750	13,7	-	29,5	250	105	530,0	180,0±396,0±648,0	7,5±5,5±2,8
DRD/A 250-370-17,1 (*)	750	17,1	-	34	250	105	530,0	180,0±450,0±756,0	10,0±7,8±3,0
DRD/A 250-238-21 (*)	1450	21	-	43,1	250	73	440,0	180,0±540,0±820,0	11,0±6,0±2,0
DRD/A 250-390-21,8 (*)	750	21,8	-	47,5	250	105	550,0	180,0±540,0±900,0	12,0±6,8±3,0
DRD/A 250-325-23,4 (*)	950	23,4	-	43	250	105	510,0	180,0±540,0±900,0	14,0±10,0±3,0
DRD/A 250-350-29 (*)	950	29	-	57	250	105	590,0	180,0±594,0±972,0	16,5±12,0±4,0
DRD/A 250-375-40 (*)	950	40	-	80	250	105	750,0	180,0±648,0±1.080,0	18,5±13,0±4,0
DRD/A 250-390-40 (*)	950	40	-	80	250	105	750,0	180,0±648,0±1.152,0	20,0±14,0±5,0
DRD/A 250-345-77,2 (*)	1450	77,2	-	135	250	105	914,0	180,0±684,0±1.080,0	34,0±22,0±7,0
DRD/A 250-360-77,2 (*)	1450	77,2	-	135	250	105	914,0	180,0±720,0±1.260,0	37,0±25,0±5,0
DRD/A 250-375-79,5 (*)	1450	79,5	-	135	250	105	914,0	180,0±756,0±1.200,0	40,0±26,0±10,0
DRD/A 250-390-79,5 (*)	1450	79,5	-	135	250	105	914,0	180,0±810,0±1.260,0	44,0±27,0±10,0
DRD/A 300-386-21,7 (*)	750	21,7	-	50	300	50X140	1024,0	252,0±756,0±1.260,0	10,5±6,5±2,7
DRD/A 300-412-26,7 (*)	750	26,7	-	59	300	50X140	1024,0	252,0±900,0±1.440,0	12,5±7,5±3,0
DRD/A 300-350-32 (*)	950	32	-	60,5	300	50X140	1042,0	252,0±900,0±1.368,0	14,5±8,0±3,0
DRD/A 300-376-40 (*)	950	40	-	80	300	50X140	1042,0	252,0±972,0±1.512,0	17,0±9,0±3,8
DRD/A 300-403-55,8 (*)	950	55,8	-	108	300	50X140	1230,0	234,0±990,0±1.800,0	20,5±12,5±4,5
DRD/A 300-412-55,8 (*)	950	55,8	-	108	300	50X140	1230,0	252,0±1.152,0±1.656,0	23,0±14,0±7,5

(*) Tripod or lowering device necessary

SUBMERSIBLE MIXERS



Submersible mixers used for removal of sedimentary deposits, for homogenisation of heavy sludge or liquids with high solids contents.

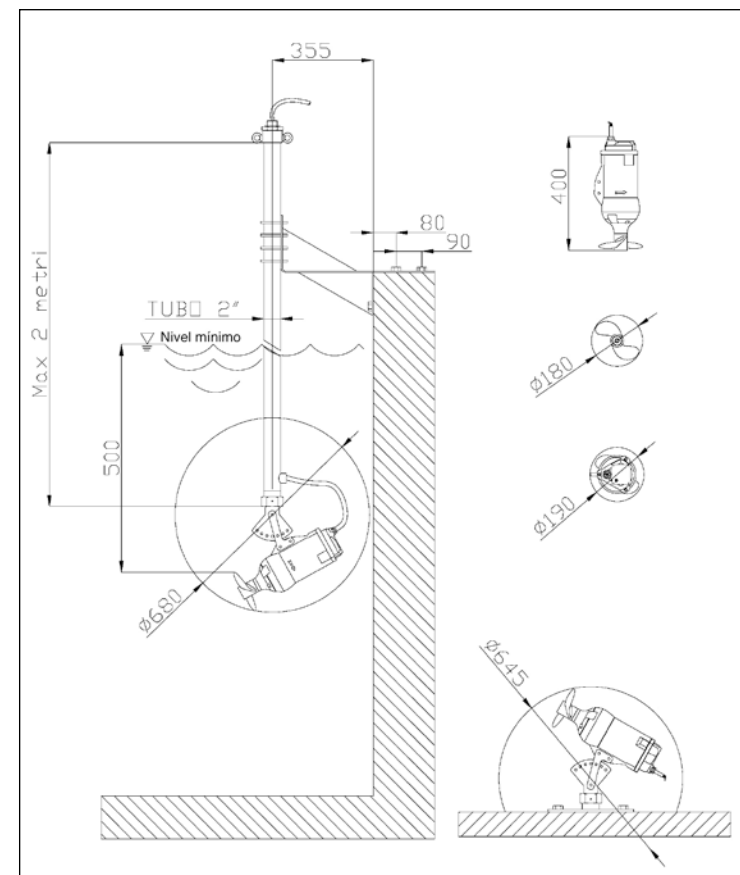
TECHNICAL DATA

- Maximum temperature of the liquid: 40°C
- Asynchronous motor
- Insulation class H
- Protection degree IP 68
- 400/690V±10% ,50Hz three phase voltage

MATERIALS

- Pump body available in cast iron and steel
- Propeller in AISI 316
- Shaft in AISI 420
- Mechanical seal: Silicon Carbide/Silicon Carbide and Silicon Carbide/Carbide/ITON
- Cable: Neoprene H07RN/F

For additional information please contact our sales network.



LIFT STATIONS

Garage, Wash basin, Shower

Strong prefabricated lift stations.

APPLICATIONS

- **Best Box G (Garage Model)**
Lifting rainwater, from washing areas, garage ramps etc.
- **Best Box L (Wash basin Model)**
Lifting water for domestic and bathroom use, (sink, dishwasher, washing machine)
- **Best Box D (Shower Model)**
Especially suitable for shower water, does not have to be buried thanks to the tank inlet positioned at 90 mm from the bottom and a non-return device

TECHNICAL DETAILS

- Easy and quick installation
- Strong and compact construction
- Version available with or without electric pump

TECHNICAL DATA

Reservoir

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

Electric pump (in models prepared)

- The BEST BOX G model can be equipped with BEST ONE VOX electric pump (vortex impeller) equipped with float for automatic functioning
- The BEST BOX L and BEST BOX D models can be set-up with the BEST ONE electric pump, equipped with float for automatic functioning. The BEST BOX L model is set-up to receive waters from above, while the BEST BOX D model is set-up to receive waters from below
- 5 metres of cable + standard socket
- 2800 min⁻¹
- Single-phase voltage: 230V +/- 10%
- Class of insulation F
- IP68 Protection rating
- Maximum temperature of the liquid pumped: 50°C
- Max. solids size for passage: 10 mm BEST ONE
20 mm BEST ONE VOX

MATERIALS

Reservoir

- High density polyethylene

Electric pump (in models prepared)

- Completely in AISI 304 stainless steel
- Equipped with mechanical seal as per standard

For technical data regarding BEST ONE/ BEST ONE VOX electric pumps (see page 7)



BEST BOX G



BEST ONE VOX

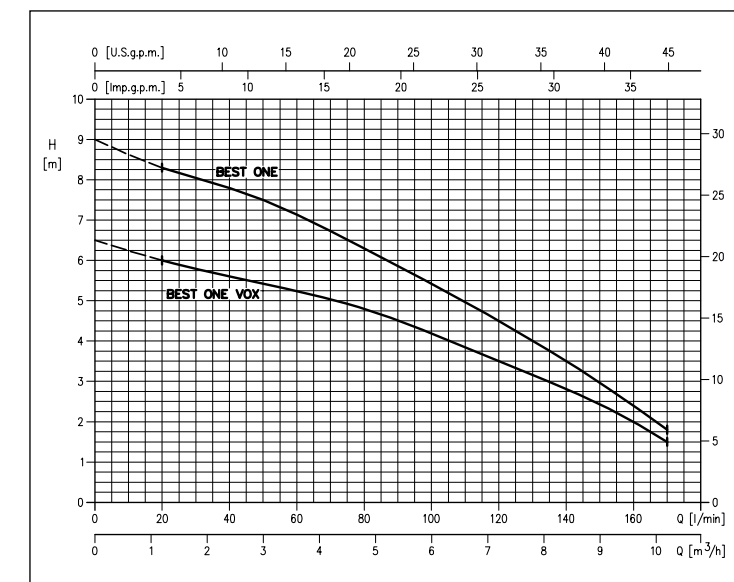


BEST BOX D



BEST ONE

PERFORMANCE CURVES (according to ISO 9906 Attachment A)





BEST BOX

LIFT STATIONS
Garage, Wash basin, Shower

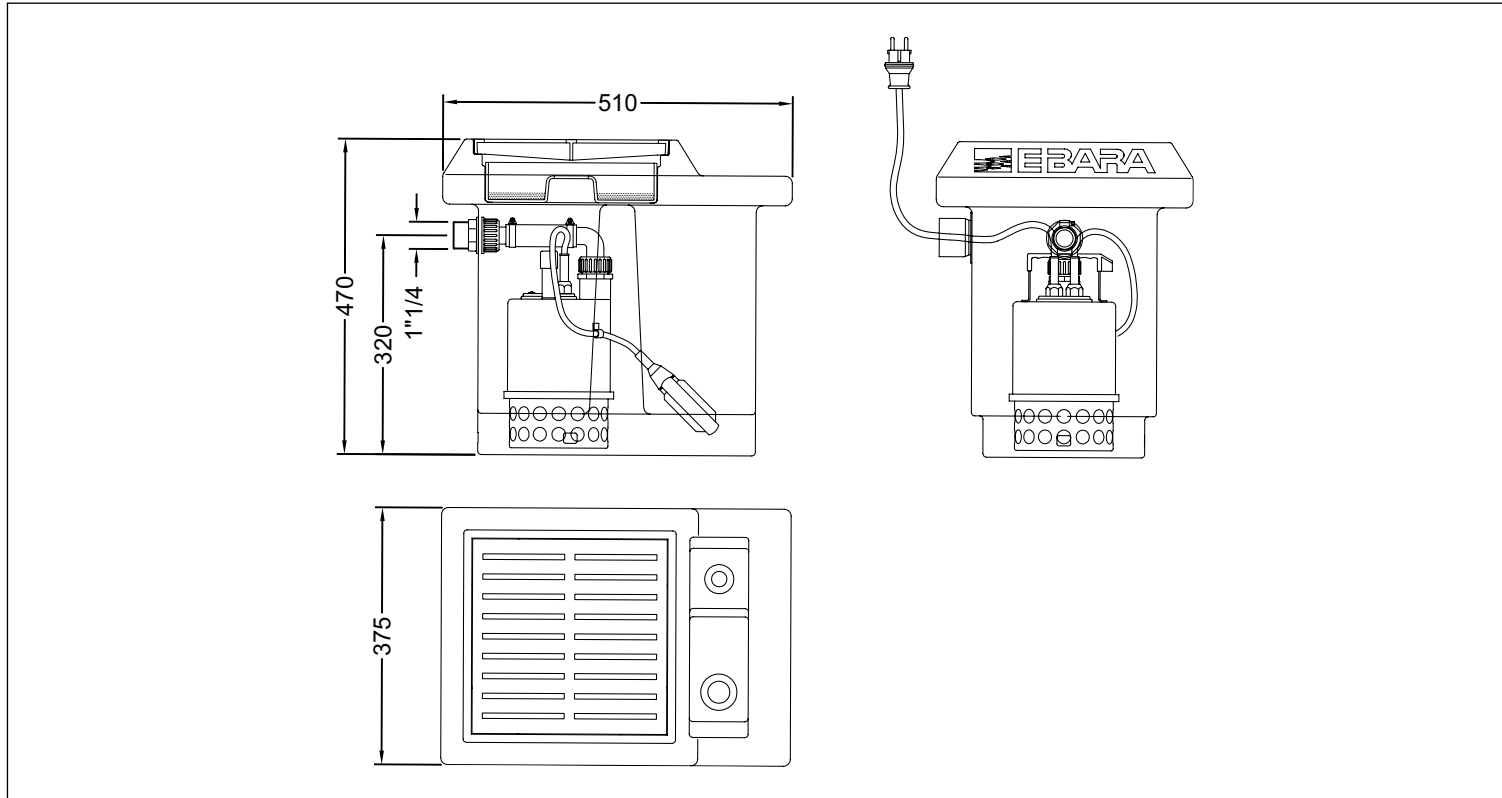


BEST BOX

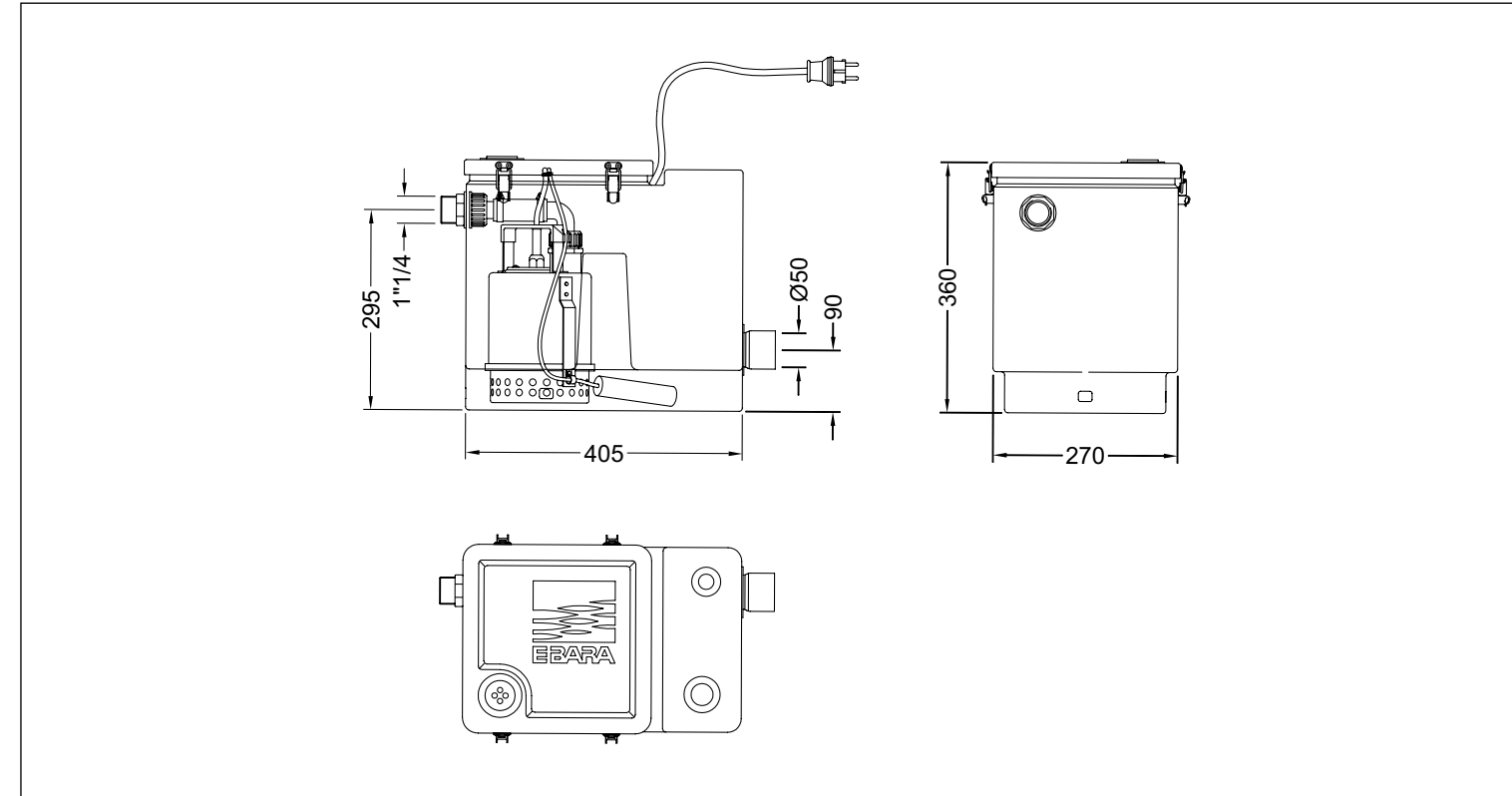
LIFT STATIONS
Garage, Wash basin, Shower



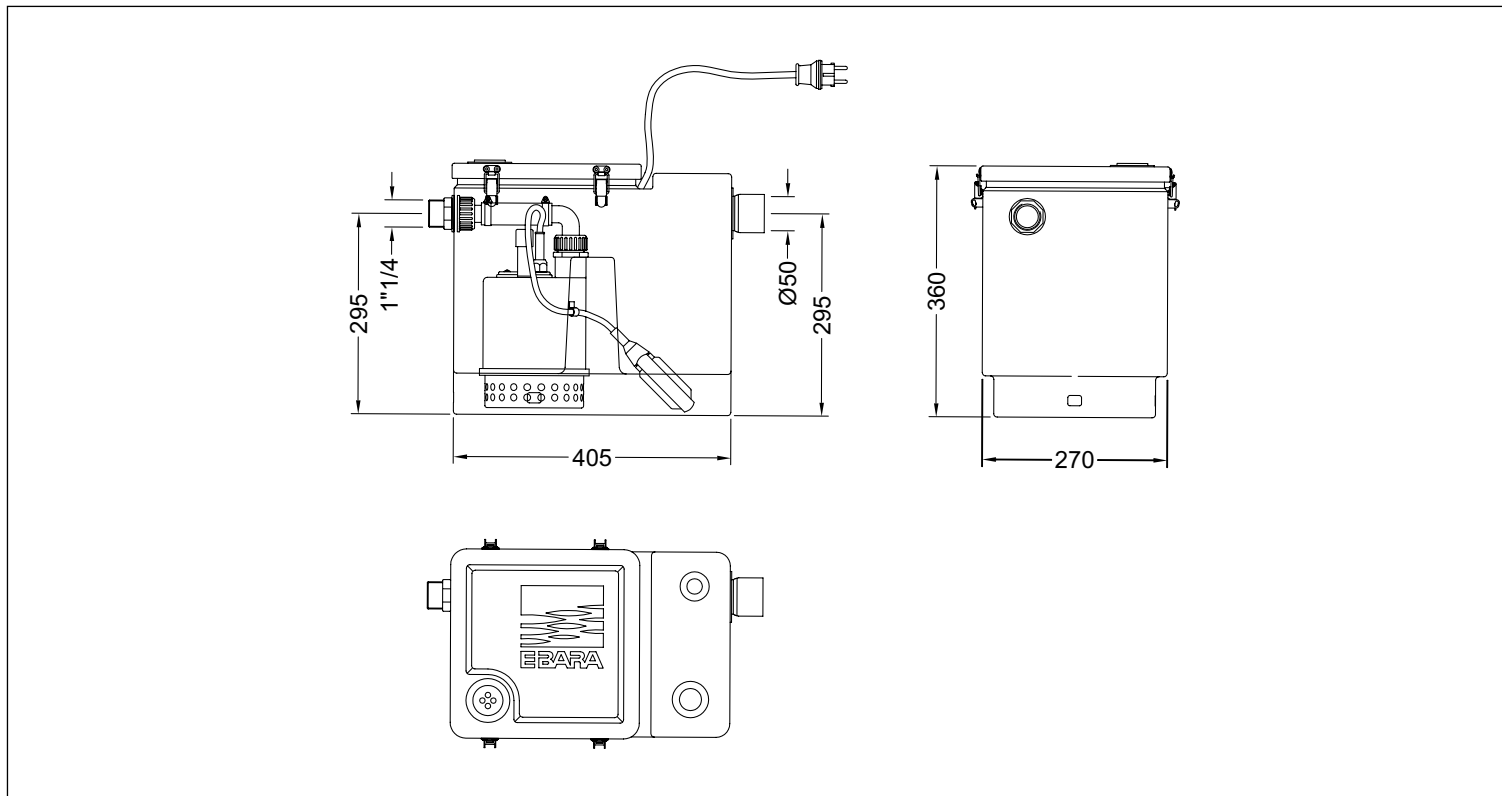
BEST BOX G DIMENSIONS



BEST BOX D DIMENSIONS



BEST BOX L DIMENSIONS



BEST BOX

LIFT STATIONS
Garage, Wash basin, Shower

MINIRIGHT

LIFT STATIONS

Strong, prefabricated lift stations.

APPLICATIONS

- Lifting sewage for taverns, laundries, small households, etc. (from 4 to 6 persons)

TECHNICAL DETAILS

- Easy and quick installation
- Strong and compact construction
- Version available with or without electric pump
- Underground or surface positioning

TECHNICAL DATA

Reservoir

- Twist-open cover system for access without disassembly
- Reservoir capacity: 100 litres
- Reservoir weight: 20.3 kg
- DN 100 inlet
- F 50/63 outlet
- Equipped with ventilation orifice F 50 mm
- Input for optional alarm float

Electric pump (in models prepared)

- RIGHT 100 M electric pump with float
- Regulation with float incorporated with the pump
- 5 metres of H07 RN-F cable + standard socket
- Vibration damping sleeve coupling
- 2875 min⁻¹
- Single-phase voltage: 230V +/- 10%
- Class of insulation F
- IPX8 Protection rating
- Maximum temperature of the liquid pumped: 50°C
- Max. solids size for passage: 35 mm

MATERIALS

Reservoir

- Polyethylene

Electric pump (in models prepared)

- Completely in AISI 304 stainless steel
- Equipped with twin mechanical seal: SiC/SiC/NBR (pump side) Carbon/Ceramic/NBR (motor side) with interposed oil chamber

For technical data regarding the RIGHT 100 M electric pumps (see page 13)

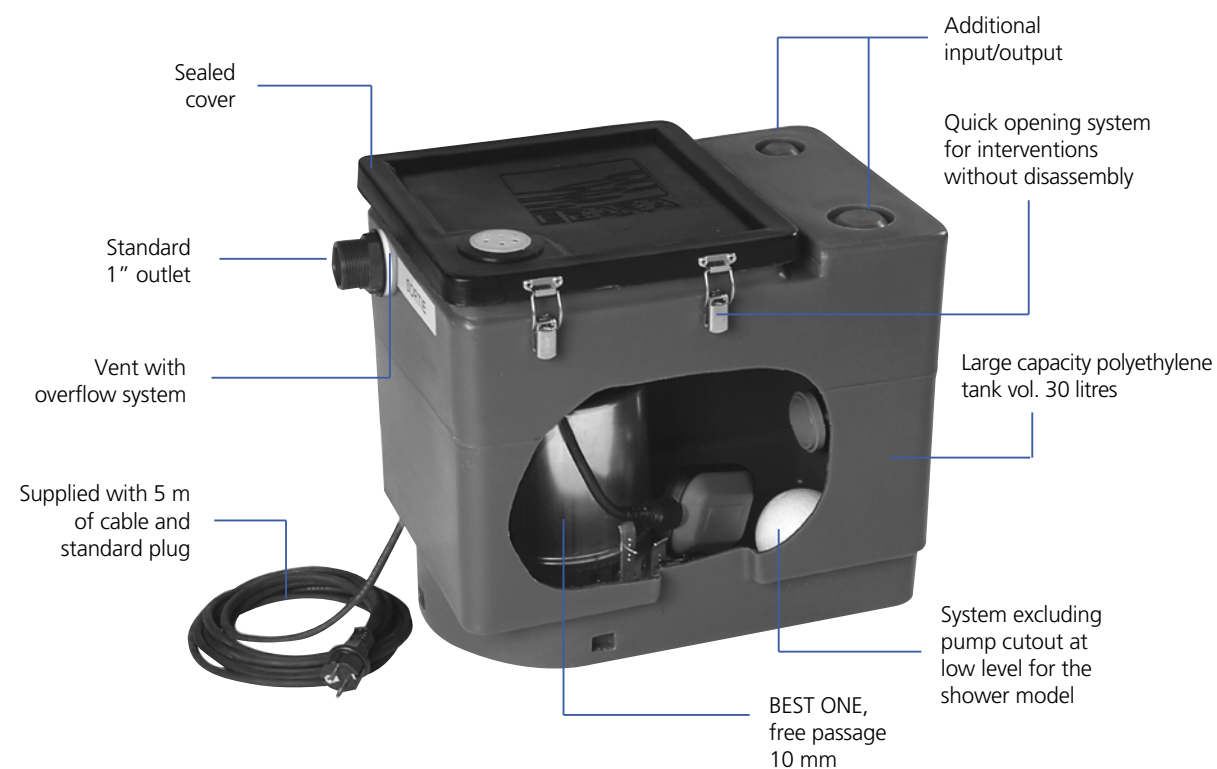
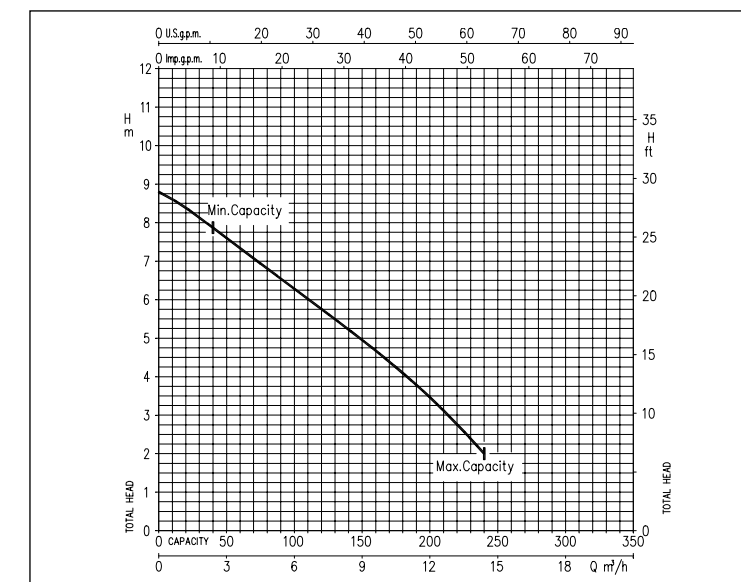
ACCESSORIES (on request)

- Kit for MINIRIGHT including 1 shut-off valve, 1 non-return ball valve and 2 fittings

For other accessories see from page 134

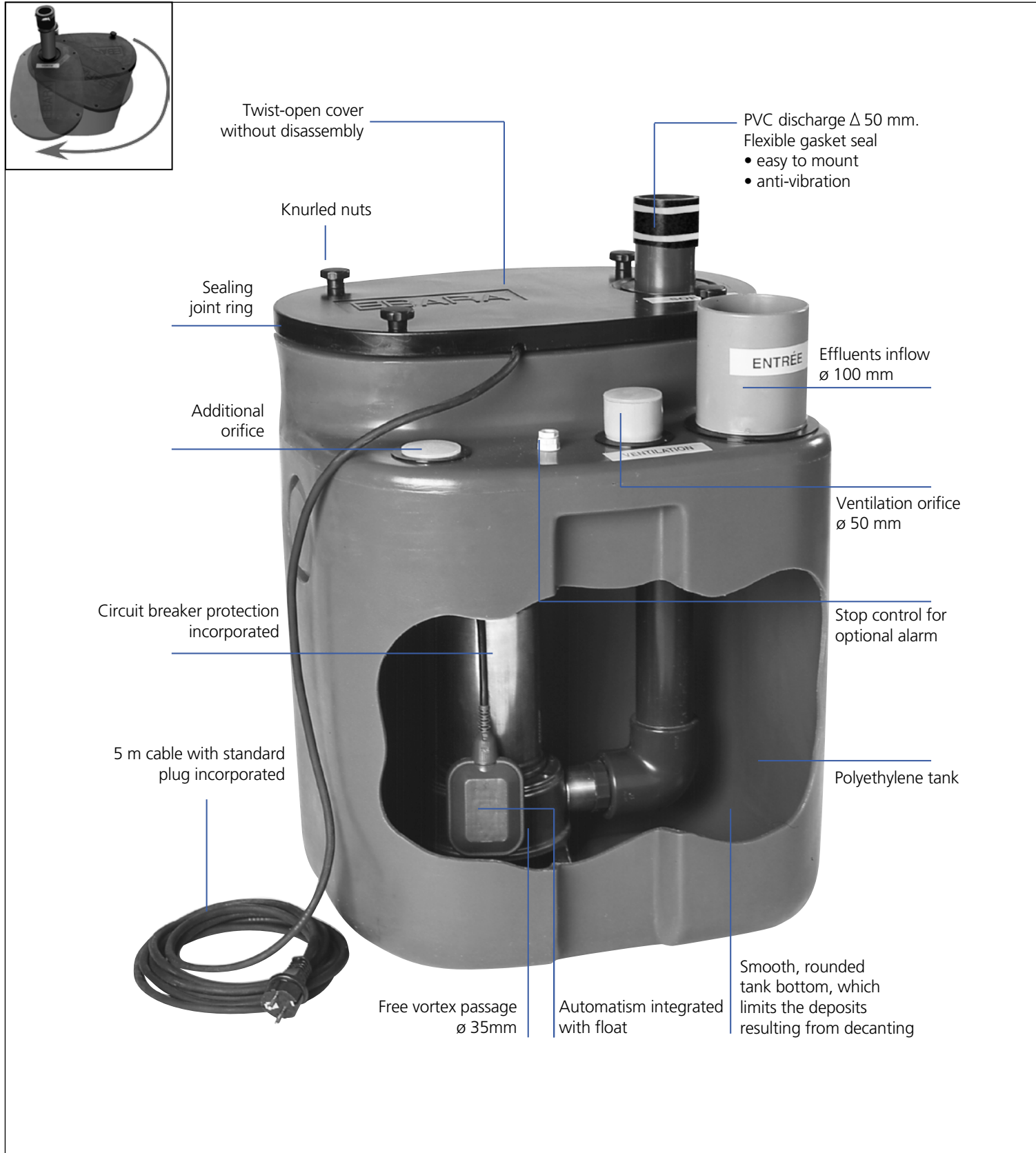


PERFORMANCE CURVES RIGHT 100 M (according to ISO 9906 Attachment A)

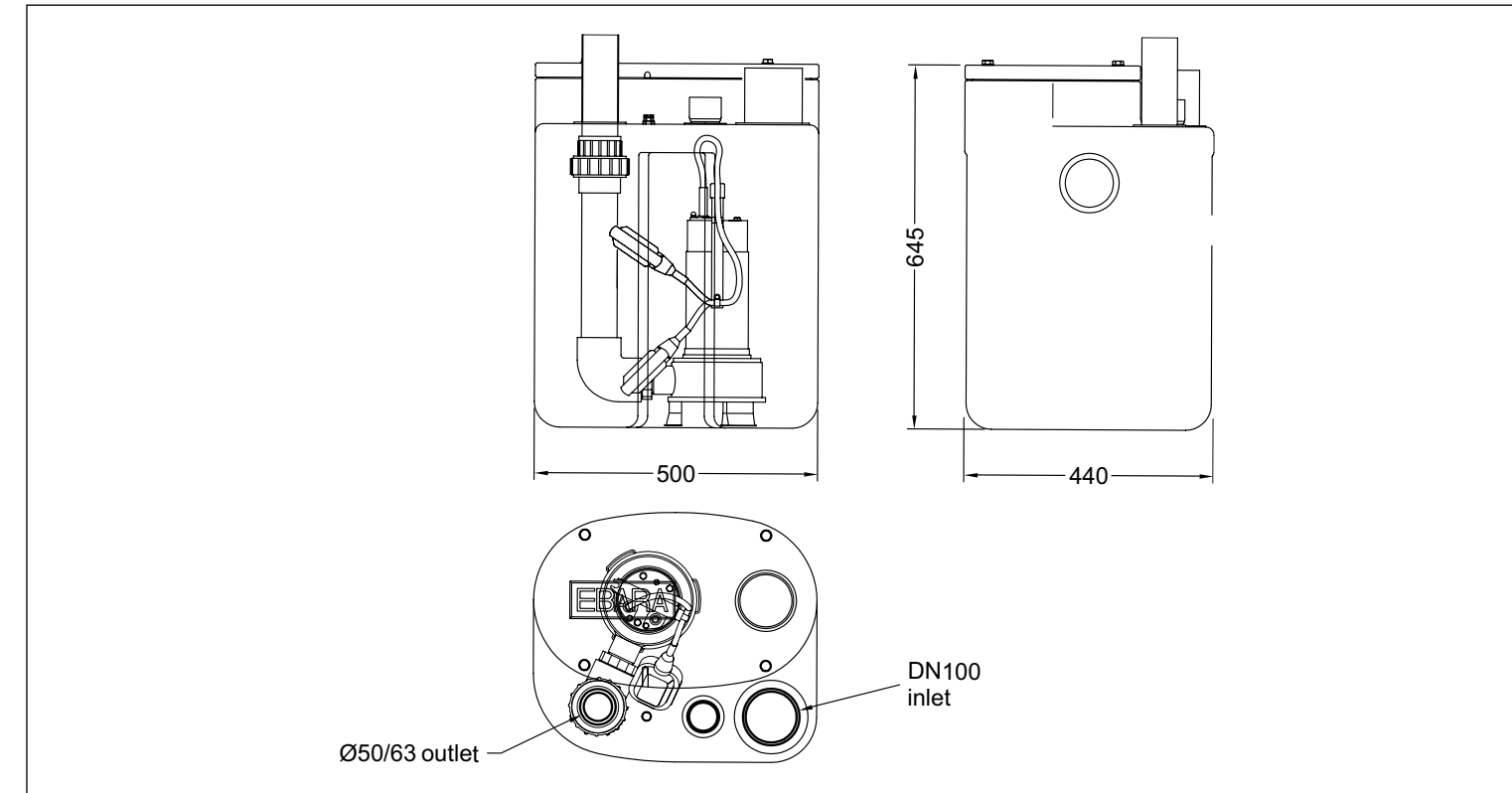




TECHNICAL SPECIFICATIONS



DIMENSIONS MINIRIGHT



SANIRELEV 11 AND 22

LIFT STATIONS



SANIRELEV 11



SANIRELEV 22



Stazioni di sollevamento acque di scarico per uso domestico in tre versioni:

• **SANIRELEV 11 SR 10T**

Lift stations for foul waters for domestic use and sewage in three versions:

• **SANIRELEV 11 SR 10T**

Tank set-up for a DW range electric pump (with single channel impeller) and DW VOX (with vortex impeller), with 2" discharge pipe, without coupling foot and lowering device

• **SANIRELEV 11 SR 10 PT**

Tank set-up for a DW range electric pump (with single channel impeller) and DW VOX (with vortex impeller), with 2" discharge pipe, coupling foot and lowering device

• **SANIRELEV 22 SR 20 PT**

Tank set-up for two DW range electric pumps (with single channel impeller) and DW VOX (with vortex impeller), with 2" discharge pipe, with coupling feet and lowering devices

TECHNICAL DETAILS

- Strong construction
- Easy installation

TECHNICAL DATA

Reservoir

- Large watertight cover with gasket for easy intervention
- Reservoir capacity: 360 litres (SANIRELEV 11 SR 10T and SANIRELEV 11 SR 10 PT), 540 litres (SANIRELEV 22 SR 20 PT)
- Reservoir weight: 30 kg (SANIRELEV 11 SR 10T and SANIRELEV 11 SR 10 PT), 44 kg (SANIRELEV 22 SR 20 PT)
- DN 100 inlet
- DN 50/63 outlet
- Can be buried

Electric pump (to be inserted in the three models prepared)

- DW electric pump (with single channel impeller) or DW VOX (with vortex impeller) completely in AISI 304 stainless steel
- 2800 min⁻¹
- 230V +/- 10% single phase voltage; 400V +/- 10% three-phase voltage
- Class of insulation F
- IPX8 Protection rating
- Maximum temperature of the liquid pumped: 40°C
- Max. solids size for passage: 50 mm

MATERIALS

Reservoir

- Polyethylene reservoir
- PVC inlet and outlet pipes

Electric pump (to be inserted in the three models prepared)

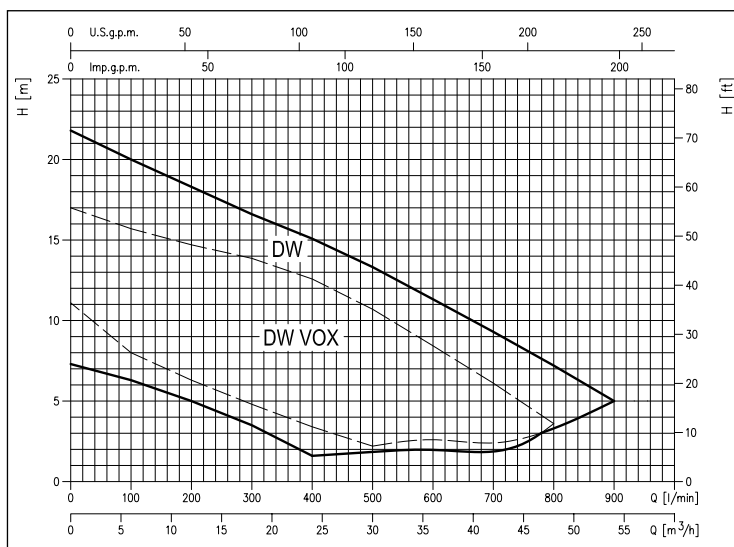
- Completely in AISI 304 stainless steel
- Equipped with twin mechanical seal: SiC/SiC/NBR (pump side) Carbon/Ceramic/NBR (motor side) with interposed oil chamber

For technical data regarding the DW electric pumps (with single channel impeller) or DW VOX (with vortex impeller) see page 16

ACCESSORIES (on request)

- Kit for SANIRELEV SR 11-22 including 1 shut-off valve, 1 non-return ball valve and 2 fittings

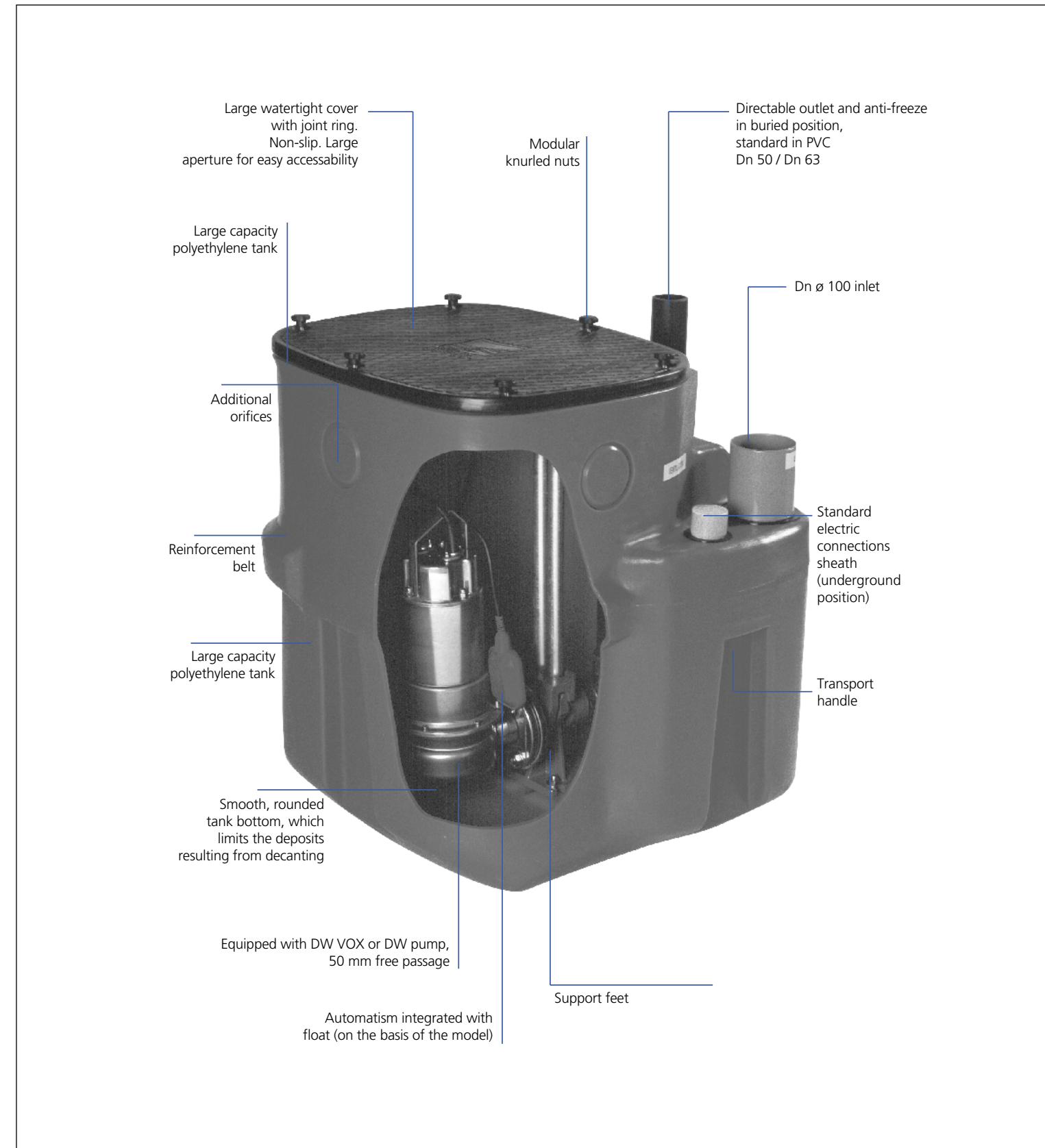
For other accessories see from page 134



SANIRELEV 11

LIFT STATIONS

TECHNICAL SPECIFICATIONS



SANIRELEV 22

LIFT STATIONS



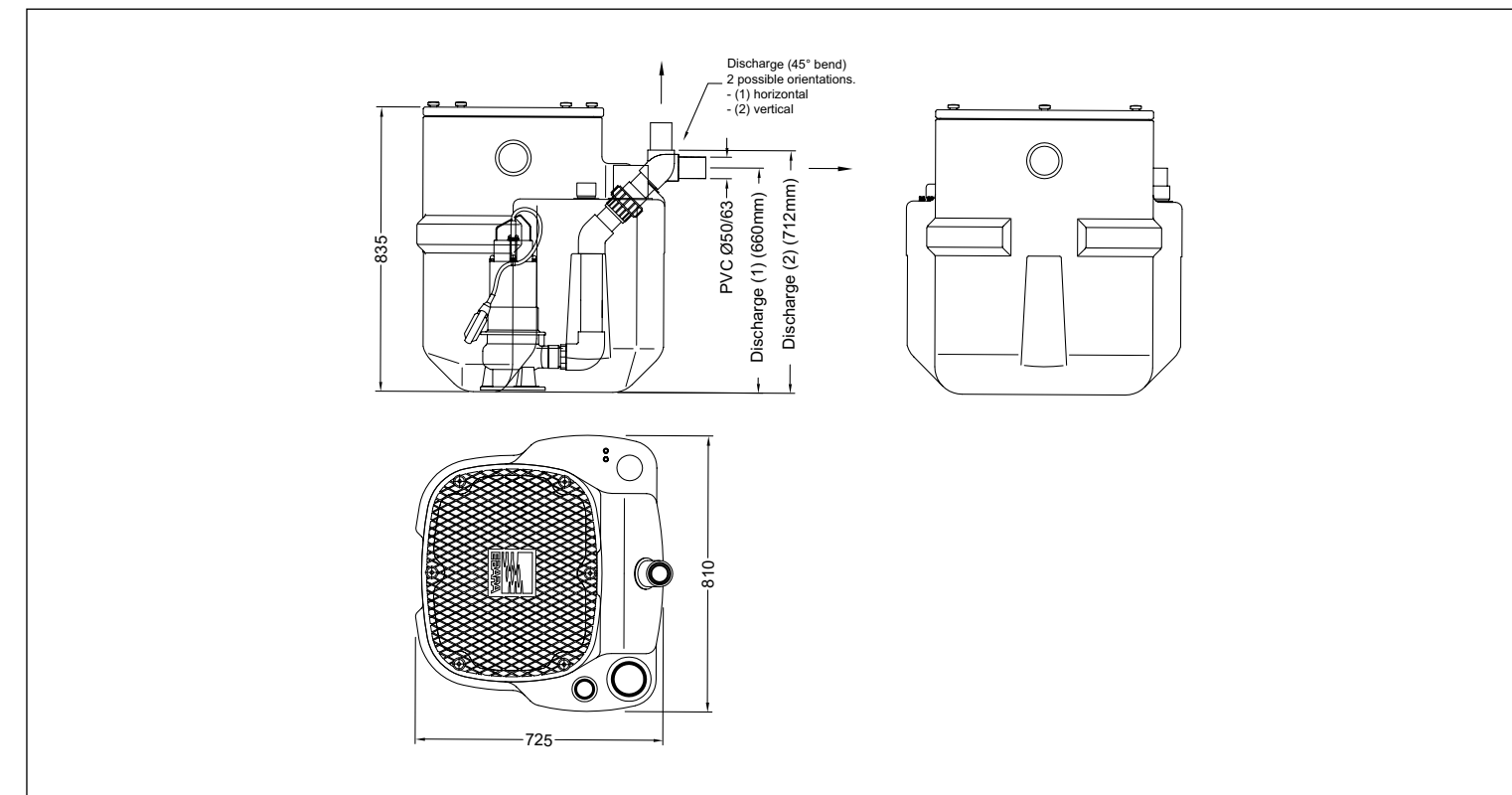
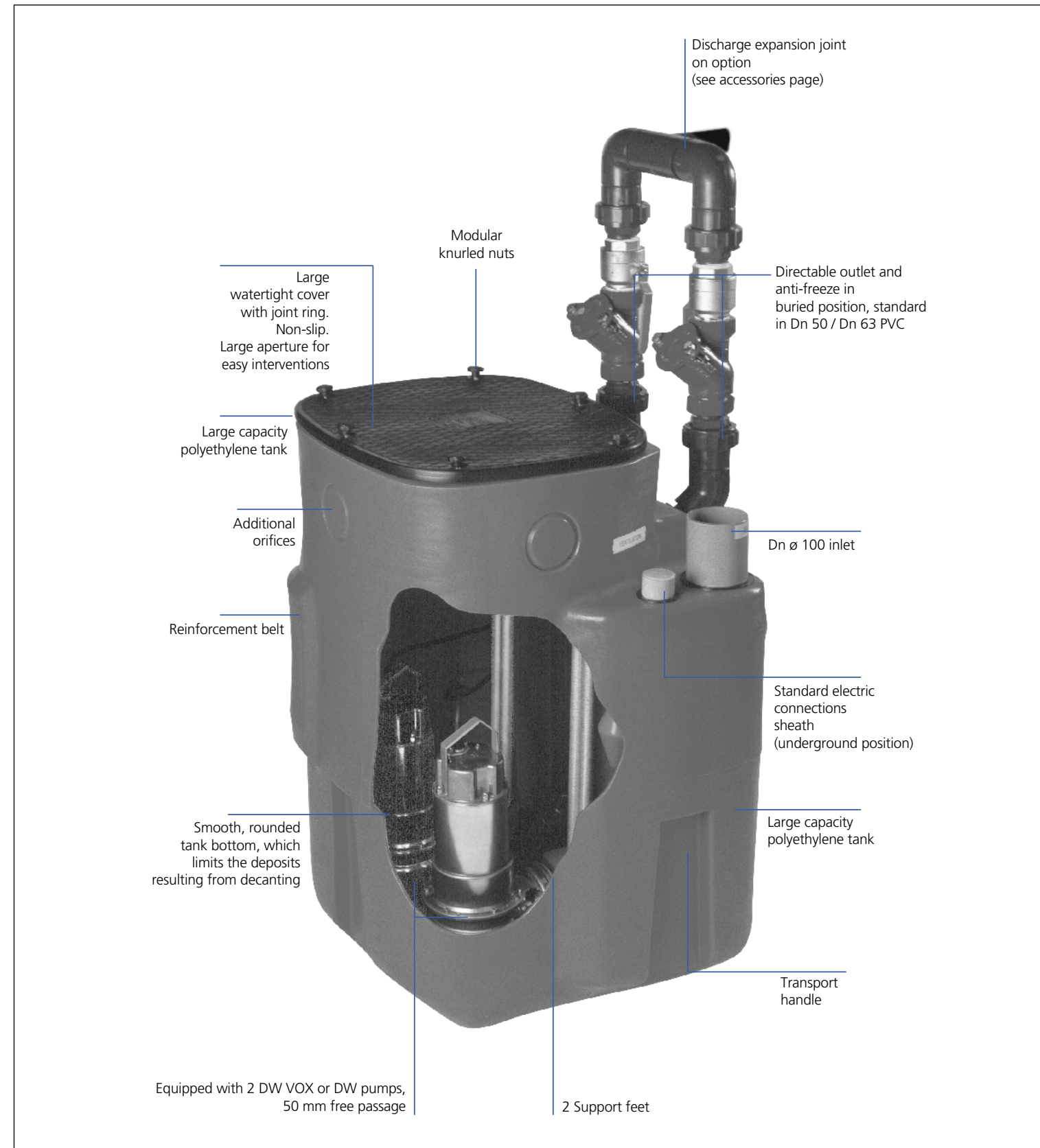
SANIRELEV 11 AND 22

LIFT STATIONS

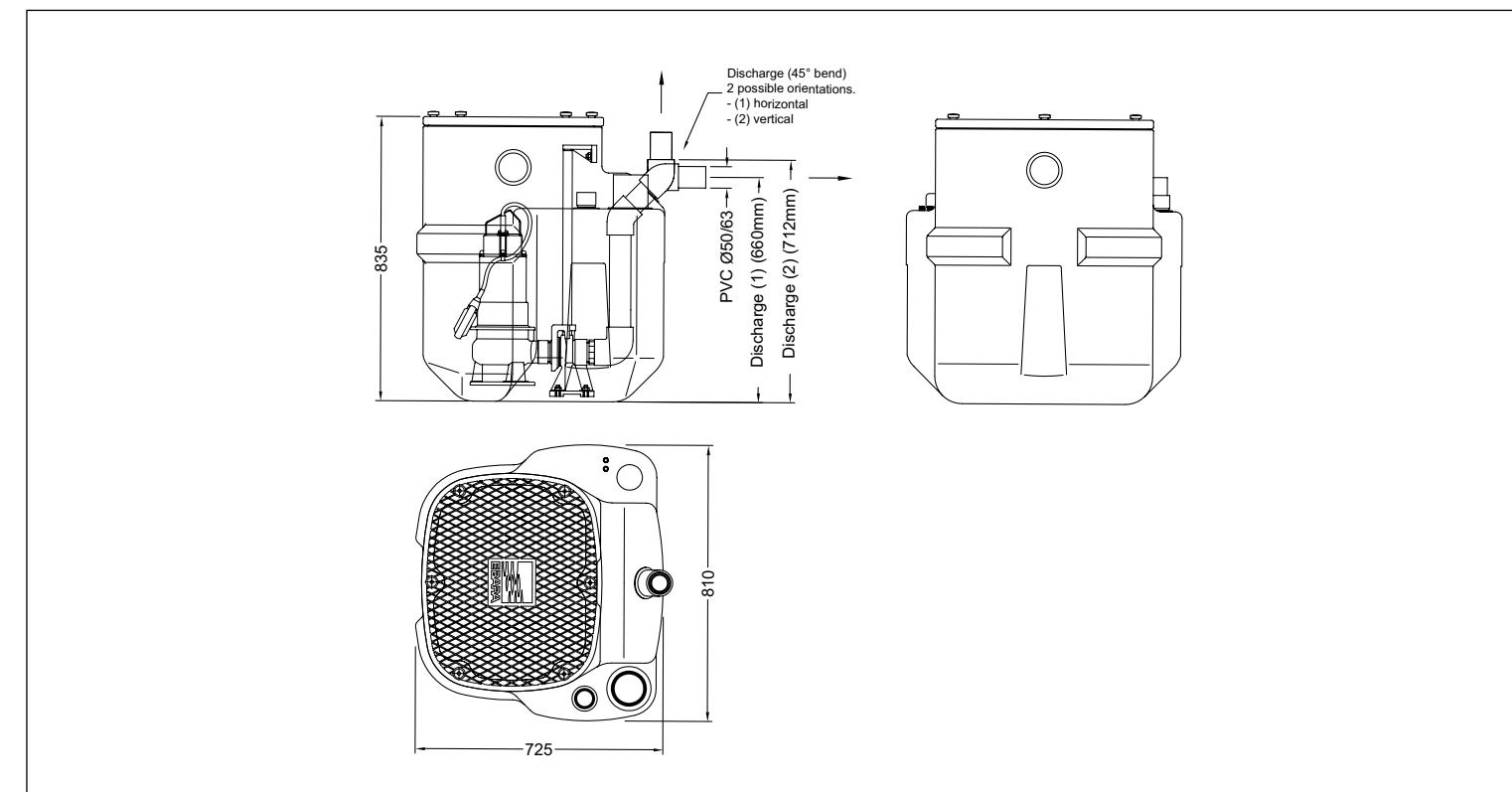


TECHNICAL SPECIFICATIONS

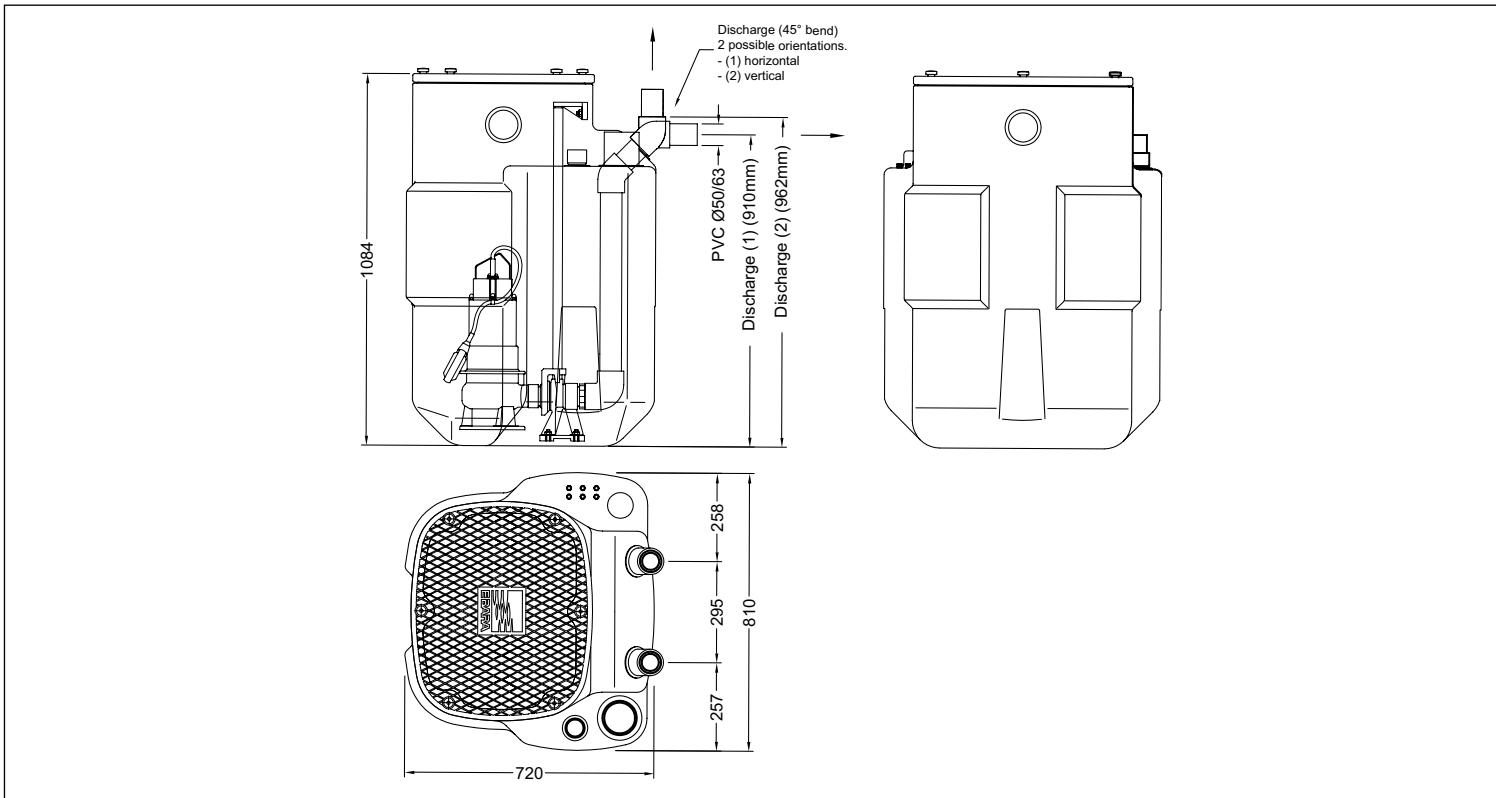
SANIRELEV 11 SR 10T DIMENSIONS WITHOUT COUPLING FOOT



SANIRELEV 11 SR 10 PT DIMENSIONS WITH COUPLING FOOT



SANIRELEV 22 SR 20 PT DIMENSIONS WITH 2 COUPLING FEET



SOME ADVICE FOR INSTALLATION

Installation of the tank

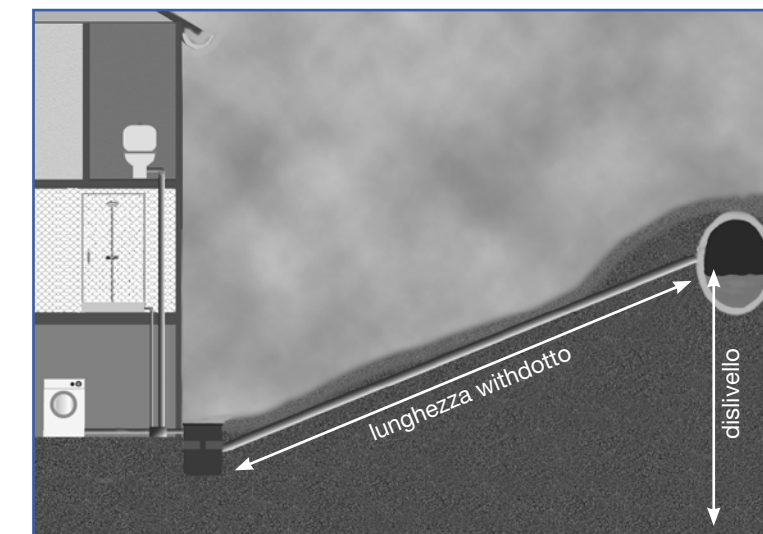
- Underground: find an accessible place. Nor being subject to corrosion, the EBARA pumps can be placed without any particular precautionary measures.
- Underground tanks: (SR 11, SR 22)

- The tank must rest on a bed of sand.
- The cover can be easily accessed for maintenance.
- Filling must be performed with sand and in no case with stones or gravel.

Important: the tank must not be positioned in a passage place. Do not walk or circulate over the cover. The warranty does not cover the damage consequent to the failure to comply with this rule. If the tank must be buried deeply, it is recommended to use reinforced cement walls. In this case, manholes can be placed on the wall, as used on carriageways or footpaths.

TAPS AND FITTINGS: VALVES

They are envisioned as options. The valve prevents the return of effluent into the tank when the pump stops. Consequently, this valve must be used beyond 4-5m of discharge. The valve allows isolation of the station if necessary. The stations with 2 SR 22 pumps can be mounted with 2 separate flow columns or with expansion JOINT with valves. In the case of underground stations with elevation, an independent valve opening can be supplied, in order to make the entire discharge pipe freeze-proof.



The EBARA lift stations and pumps are selected depending on 3 essential criteria:

- The nature of the waters to lift (irrigation waters, domestic sewage, small-scale water collection, restaurant waters, clinical, laboratory, public WC, etc.)
- The flow rate calculated on the basis of 200 l/user and per day, considering a coincidence coefficient.
- The manometric head HMT (Difference in level + pressure drop in the pipe, different valves and bends).

Pump flow rate calculation:

Q_p (peak time flow rate in m³/h): $Q_p \text{ m}^3/\text{h} = N^\circ \text{ users} \times 0,2 \times 3$

$$Q_p \text{ m}^3/\text{h} = \frac{N_{\text{usag.}} \times 0,2 \times 3}{8}$$

Pressure drop in the pipes (50 or 65 internal (PVC) and selection of recommended discharge pipe. Considering that the smallest pump will have a flow rate of more or less 5 m³/h to make things easier we have considered 4 flow rates: 5, 10, 20 and 30 m³/h corresponding to 65, 130, 260 and 390 users and 5 pipe lengths 25, 50, 100 and 200 m. Over 200, we must be consulted.

CALCULATION EXAMPLE

Installation for 10 persons. Waters to lift. all types of water (WC, kitchen...)
 Difference in level: 4 m (from the bottom of the tank to the highest flow point) Discharge length: 180 m
 Current: single-phase 230 V
 Station positioning: underground

$$Q_p [\text{m}^3/\text{h}] = \frac{10 \times 0,2 \times 3}{8} = 0,75 [\text{m}^3/\text{h}]$$

Loss of load: about 1.5 m (in a pipe-50)
 Considering a lift length of 4 m + 1,5 m = 5,5 m

Model recommended:

- Pump station:
- Sanirelev 11 SR 10 PT
 - Sanirelev 11 SR 10 T
- NB: the pump supplied with this station is a DW VOX Mono, motor power: 0.75 kW

Number of users	Equivalent power in m ³ /h	Pressure drop in m, on the basis of the length of the pipe and its diameter. in a long pipe:			
		25 m	50 m	100 m	200 m
from 0 to 65	5	0,2	0,4	0,8	1,5
from 66 to 130	10	1,3	2,5 o 1,0	5,0 o 2,0	4,0
from 131 to 260	20	5,0 o 1,5	3,0	6,0	12,0
from 261 to 390	30	6,0	6,0	12,0	consult us

Pressure drop in a pipe: in blue Ø 50 mm inside • in black Ø 65 mm inside



Protection and control panels for a submersed or surface electric pump with direct start-up. The control panel can manually and automatically control an electric pump. In the automatic function the electric pump is controlled by the pressure switch, the float or signals from the electric probes or from the floats.

TECHNICAL DETAILS

- Protection against dry running (control using an electric probe) with automatic reset and water return.
- Reservoir filling level control with two electric probes or floats
- Reservoir emptying level control with two electric probes or floats
- Cos module, optional for controlling against dry running without the use of the electric probes
- Motor protection against overloads and no automatic restore phase for three interventions, manual at the fourth
- Pump protection against excessive start-ups
- Overload and electronic board protection against short circuit, with fuses
- Remote displaying with NC-NO potential free contact of the present fault or alarm float
- Clamps for connecting any single phase motor starter capacitor
- Clamps for connecting a pressure switch
- Clamps for connecting an alarm float

TECHNICAL DATA

- 230V +10-15% 50/60 Hz power supply (single phase)
- 400V +10-15% 50/60 Hz (three phase + N)
- Temperature of the liquid: from -10°C to +40°C
- IP55 Protection rating
- Reference Standards: EN 60204-1, EN 60439-1, EN 61000-6-3, EN 61000-6-1 (for civil environments)

MOTOR DATA

Model Single phase 230V +10-15% - 50Hz	[HP]	[kW]	[A] max	Recommended capacitor	
				[μF]	[V]
1EPBH 0,37 M	0,5	0,37	4	16/20	450
1EPBH 0,55 M	0,75	0,55	6	20/25	450
1EPBH 0,75 M	1	0,75	8	35	450
1EPBH 1,1 M	1,5	1,1	10	40	450
1EPBH 1,5 M	2	1,5	12	50/60	450
1EPBH 2,2 M	3	2,2	20	70/80	450

Control panels without capacitor

MOTOR DATA

Model Three phase 400V +10-15% - 50Hz	[HP]	[kW]	[A] max
1EPBH 1,5 T	2	1,5	4
1EPBH 2,2 T	3	2,2	6
1EPBH 3 T	4	3	10
1EPBH 4 T	5,5	4	12
1EPBH 5 T	7,5	5,5	16

1 EP M AR MF RANGE

1 EP T AR MF RANGE

Protection and control panels for 1 electric pump for emptying waste water with module for detecting power cuts.

The control panel is set-up to individually control the electric pump in automatic and manual modes.

The start command is given by the external float.

The control panel protects the motor in the case of overloads and power cut with manual reset.

The alarms that have tripped are indicated on the panel and remotely.

FUNCTIONS

- FL-ALARM = Automatic start and stop control using an ALARM float with local and remote signalling of the command
- FL1 = Pump start and stop command
- FL.MIN. = Automatic stop control on a lower level
- MF= Remote signalling of power cut or auxiliary circuit fuses tripped
- Motor protection against overloads with manual reset
- Overload protection against short circuits, with fuses for motor start-up
- Protection of the transformer and auxiliary circuits with fuses
- Remote displaying with NC-NO potential free contact of the present fault and max. H2O

TECHNICAL DATA

- Power supply: 230V +10-15% single phase
- 400V +10-15% - 50/60 Hz three phase

Temperature limits: -10°C + 40°C

IP55 protection rating

Reference Standards: EN 60204-1, EN 60439-1

EN 61000-6-3, EN 61000-6-1 (for civil environments)

2EP M AR MF RANGE

2EP T AR MF RANGE

2EP SD AR MF RANGE

Protection and control panel for 2 single phase electric pumps (M range), three phase with direct start-up (T range) and three phase with star delta start-up (SD range).

The typical use is coupled to electric pumps for emptying waste waters, it includes the module for detecting power cuts.

The control panel is set-up to individually control the two electric pumps in automatic and manual modes.

The start command is given by the external float.

The control panel protects the motors in the case of overloads and power cut with manual reset.

The alarms that have tripped are indicated on the panel and remotely.

FUNCTIONS

- FL-MAX = Float signalling H2O level too high (stop and start control with a pump float and remote alarm signalling)
- FL1 = start and stop command float for the first pump
- FL2 = start and stop command float for the second pump
- FL.MIN.=Pump stop float on a minimum level
- Automatic change of the pumps starting order
- Motor protection against overloads with manual reset
- Overload protection against short circuits, with fuses for motor start-up
- Protection of the transformer and auxiliary circuits with fuses
- Remote displaying with NC-NO potential free contact of the present fault and max. H2O

TECHNICAL DATA

- Power supply: 230V +10-15% - 50/60 Hz single phase
- 400V +10-15% - 50/60 Hz three phase

Temperature limits: -10°C + 40°C

IP55 protection rating

Reference Standards: EN 60204-1, EN 60439-1

EN 61000-6-3, EN 61000-6-1 (for civil environments)

3EP AR MF RANGE

3EP SD AR MF RANGE

Protection and control panel for 3 pumps, three phase with direct start-up (T range) and three phase with star delta start-up (SD range).

The typical use is coupled to electric pumps for emptying waste waters, it includes the module for detecting power cuts.

The control panel is set-up to individually control the three electric pumps in automatic and manual modes.

The start command is given by the external float.

The control panel protects the motors in the case of overloads and power cut with manual reset.

The alarms that have tripped are indicated on the panel and remotely.

FUNCTIONS

- FL-MAX = Float signalling H2O level too high (stop and start control with a pump float and remote alarm signalling)
- FL1 = start and stop command float for the first pump
- FL2 = start and stop command float for the second pump
- FL3 = start and stop command float for the third pump
- FL.MIN.=Pump stop float on a minimum level
- Automatic change of the pumps starting order
- Motor protection against overloads with manual reset
- Overload protection against short circuits, with fuses for motor start-up
- Protection of the transformer and auxiliary circuits with fuses
- Remote displaying with NC-NO potential free contact of the present fault and max. H2O

TECHNICAL DATA

- Power supply: 400V +10-15% - 50/60 Hz three phase voltage

Temperature limits: -10°C + 40°C

IP55 protection rating

Reference Standards: EN 60204-1, EN 60439-1

EN 61000-6-3, EN 61000-6-1 (for civil environments)



ACCESSORIES



ACCESSORIES



INDICATORS
SA/1 acoustic indicator
SLA/2 acoustic and luminous indicator

1EPBH ELECTRIC CONTROL PANELS (1 SINGLE PHASE 230V+10-15%-50Hz PUMP) see page 132
1EPBH 0.55 M* (0.75 HP)
1EPBH 0.75 M* (1 HP)
1EPBH 1.1 M* (1.5 HP)

* Control panels without capacitor

1EPBH ELECTRIC CONTROL PANELS (1 THREE PHASE 400V+10-15%-50Hz PUMP) see page 132
1EPBH 0.37÷1.1 T (0.5÷1.5 HP)
1EPBH 1.5 T (2 HP)
1EPBH 2.2 (3 HP)



1EP ELECTRIC CONTROL PANELS (1 SINGLE PHASE 230V+10-15%-50Hz PUMP) see page 133
1EP 0.75 M AR MF (1 HP) (*)
1EP 1.1 M AR MF (1.5 HP) (*)
1EP 1.5 M AR MF (2 HP) (*)
1EP 2.2 M AR MF (3 HP) (*)

* Control panels without capacitor

1EP ELECTRIC CONTROL PANELS (1 THREE PHASE 400V+10-15%-50Hz PUMP) see page 133
1EP 0,75 T AR MF (1 HP)
1EP 1,1 T AR MF (1,5 HP)
1EP 1,5 T AR MF (2 HP)
1EP 2,2 T AR MF (3 HP)
1EP 3 T AR MF* (4 HP)
1EP 4 T AR MF* (5,5 HP)
1EP 5,5 T AR MF* (7,5 HP)
1EP 7,5 T AR MF* (10 HP)
1EP 11 SD AR MF** (15 HP)
1EP 15 SD AR MF** (20 HP)
1EP 18,5 SD AR MF** (22 HP)
1EP 22 SD AR MF** (30 HP)

* Models including the tool kit
** Delta/triangle start-up and complete with tool kit

2EP ELECTRIC CONTROL PANELS (2 SINGLE PHASE 230V+10-15%-50Hz PUMPS) see page 133
2EP 0,75 M AR MF* (1+1 HP)
2EP 1,1 M AR MF* (1,5+1,5 HP)
2EP 1,5 M AR MF* (2+2 HP)
2EP 2,2 M AR MF* (3+3 HP)

* Control panels without capacitor

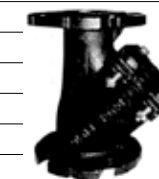
2EP ELECTRIC CONTROL PANELS (2 THREE PHASE 400V+10-15%-50Hz PUMPS) see page 133
2EP 0,75 T AR MF (1+1 HP)
2EP 1,1 T AR MF (1,5+1,5 HP)
2EP 1,5 T AR MF (2+2 HP)
2EP 2,2 T AR MF (3+3 HP)
2EP 4 T AR MF* (5,5+5,5 HP)
2EP 5,5 T AR MF* (7,5+7,5 HP)
2EP 7,5 T AR MF* (10+10 HP)
2EP 11 SD AR MF** (15+15 HP)
2EP 15 SD AR MF** (20+20 HP)
2EP 18,5 SD AR MF** (25+25 HP)
2EP 22 SD AR MF** (30+30 HP)

* Models including the tool kit
** Delta/triangle start-up and complete with tool kit

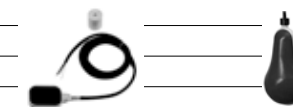
3EP ELECTRIC CONTROL PANELS (3 THREE PHASE 400V+10-15%-50Hz PUMPS) see page 133
3EP 0,75 T AR MF (1+1 HP)
3EP 1,1 T AR MF (1,5+1,5 HP)
3EP 1,5 T AR MF (2+2 HP)
3EP 2,2 T AR MF (3+3 HP)
3EP 4 T AR MF* (5,5+5,5 HP)
3EP 5,5 T AR MF* (7,5+7,5 HP)
3EP 7,5 T AR MF* (10+10 HP)
3EP 11 SD AR MF** (15+15 HP)
3EP 15 SD AR MF** (20+20 HP)
3EP 18,5 SD AR MF** (25+25 HP)
3EP 22 SD AR MF** (30+30 HP)

* Models including the tool kit
** Delta/triangle start-up and complete with tool kit

VALVES FOR SUBMERSIBLE PUMPS
Threaded non-return ball valve DN 1"¼ PN10
Threaded non-return ball valve DN 1"½ PN10
Threaded non-return ball valve DN 2" PN10
Flanged non-return ball valve DN 65 PN10
Flanged non-return ball valve DN 80 PN10
Flanged non-return ball valve DN 100 PN10
Flanged non-return ball valve DN 125 PN10
Flanged non-return ball valve DN 150 PN10



FLOATS
PVC 5m key float with counter-weight
PVC 10 m key float with counter-weight
PVC 20 m key float with counter-weight
Float for foul waste water in 20 m



ACCESSORIES

**SELECTION TABLE QDC (QUICK DISCHARGE CONNECTOR)
(DS, DVS, DL-DL W/C, DML-DMLV)**

LS Combined Type	QDC Model	Dimensions				Applicable Models				
		Discharge Flanges ∅	Discharge elbow ∅	QDC Body ∅	Volute Flanges ∅	DS	DVS	DL W/C	DL	DML (V)
	LS50	50	-	50	50	50DS 1.5 kW	50DVS 1.5 kW			
	LM50	50	50x50	50	50	50DS 2.2÷3.7 kW				
LM Separate Type	LM65	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	LM80	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	80	80x80	80	80				80DLC 5.5÷7.5 kW	
		100	80x100	80	80				100DLC 5.5÷7.5 kW	
LL100	LL100	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	LL125	150	125x150	125	125				150DL 5.5÷22 kW	
LL150	LL150	150	150x150	150	150				150DL 30÷45 kW	
		200	150x200	150	150				200DL 5.5÷45 kW	
LL Combined Type	LL250	250	-	200x250	200				250DL 7.5÷22 kW	
	LL300	250	(reducer) 300x250	250x300	250				250DL 30÷45 kW	
		300	-	250x300	250				300DL 11÷45 kW	

Note: The discharge elbow & companion flanges are not supplied with the QDC. These items are standard accessories supplied with the pump (except for DS and DVS 1.5 kW and DL 30÷45 kW), and they are used with the QDC. With LS50 and LL300 the discharge elbow is not necessary, because it is included in the QDC body.

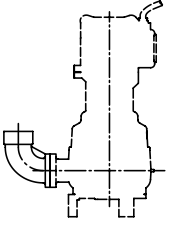
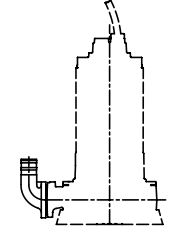
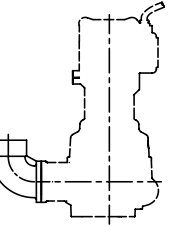
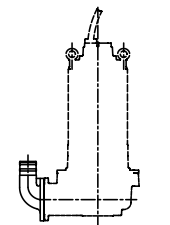
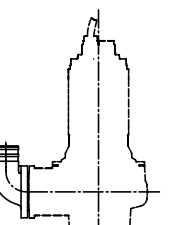
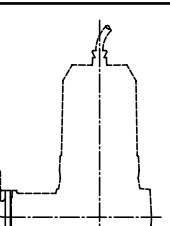
ACCESSORIES

**SELECTION TABLE QDC (QUICK DISCHARGE CONNECTOR)
(DS, DVS, DL-DL W/C, DML-DMLV)**

	QDC Model	Applicable Models				
		DSF	DMLF	DMLVF	DRS	DRD
	PA DN50	40DSF51,1M (125) 40DSF51,8M (150) 40DSF55,7 (192)	50DMLF51,1M (120)	50DMLVF51,1M (130) 50DMLVF51,8M (140) 50DMLVF51,8M (155)	ALL MODELS	
	PA DN65/8		65DMLF51,1M (135) 65DMLF51,8M (125)	65DMLVF51,9M (109)		
	PA DN65/15	65DSF515,9 (230)				
	PA DN65L					DRD/A 65 see page 116
	PA DN80			80DMLVF54,6 (206) 80DMLVF518,2 (188) 80DMLVF518,2 (225)		DRD/A 80 see page 116
	PA DN100			100DMLVF55,2 (260)		DRD/A 100 see page 116
	PA DN150			150DMLVF511 (360) 150DMLVF513,5 (400) 150DMLVF525 (340) 150DMLVF535,7 (360)		DRD/A 150 see page 116
	PA DN200					DRD/A 200 see page 116
	PA DN250					DRD/A 250 see page 117
	PA DN300					DRD/A 300 see page 117

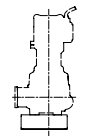
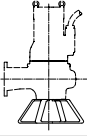
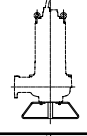
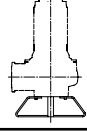
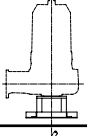
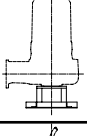
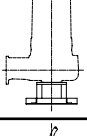
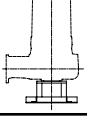



ACCESSORIES

SELECTION TABLE QDC (QUICK DISCHARGE CONNECTOR),
ELBOW, TRIPOD AND FLANGES (DSF, DMLF, DMLVF, DRS, DRD)

	Elbow	Applicable Models				
		DSF	DMLF	DMLVF	DRS	DRD
	CUF 2"	40DSF51,1M(125) 40DSF51,8M (150) 40DSF 55,7(192)	50DMLF51,1M (120)	50DMLVF51,1M (130) 50DMLVF51,8M (140) 50DMLVF51,8M (155)	ALL MODELS	
	CU DN65 with hose union	65DSF515,9 (230)				DRD/A 65 see page 116
	CU 2"1/2		65DMLF51,1M (135) 65DMLF51,8M (125)	65DMLVF51,9M (109)		
	CU DN80 with hose union			80DMLVF518,2 (188)		DRD/A 80 see page 116
	CU DN100 with hose union			100DMLVF55,2 (260)		DRD/A 100 see page 116
	CU DN150 with hose union			150DMLVF511 (360) 150DMLVF513,5 (400) 150DMLVF525 (340) 150DMLVF535,7 (360)		DRD/A 150 see page 116

ACCESSORIES

SELECTION TABLE QDC (QUICK DISCHARGE CONNECTOR),
ELBOW, TRIPOD AND FLANGES (DSF, DMLF, DMLVF, DRS, DRD)

	Tripod	Applicable Models				
		DSF	DMLF	DMLVF	DRS	DRD
	TP 65			65DMLVF51,9M (109)		
	TP 80			80DMLVF54,6 (206) 80DMLVF518,2 (188)		DRD/A 65 and 80 see page 116
	TP 100			80DMLVF518,2 (225)		DRD/A 100 see page 116
	TP 125			100DMLVF55,2 (260)		ON SOME MODELS: PLEASE CONTACT OUR SALES NETWORK
	TP150			150DMLVF511 (360) 150DMLVF513,5 (400) 150DMLVF525 (340) 150DMLVF535,7 (360)		DRD/A 150 see page 116
	TP200					DRD/A 200 see page 116
	TP250					DRD/A 250 see page 117
	TP300					DRD/A300 see page 117
	Counterflanges					
	FL 1" 1/2 T	40DSF51,1M(125) 40DSF51,8M (150) 40DSF 55,7(192)			ALL MODELS	
	FL 2"		50DMLF51,1M (120)	50DMLVF51,1M (130) 50DMLVF51,8M (140) 50DMLVF51,8M (155)		
	FL 2" 1/2		65DMLF51,1M (135) 65DMLF51,8M (125)	65DMLVF51,9M (109)		

SPECIFIC PERFORMANCE

The specifications given refer to the curves illustrated in our catalogues and Data Book (see www.ebara.eu). All of the performance curves are calculated according to ISO 9906 Attachment A.

Tolerance according to ISO 9906 Annex A.

The curves refer to an effective speed of the 50 Hz asynchronous motors.

The measurements are made with water temperature of 20°C and cinematic viscosity of = 1 mm²/s (1 cSt).

In order to prevent the risk of overheating, the pumps must not be used at a flow rate below 10% of the maximum efficiency flow rate. During selection of the pumps, there is a safety margin of at least 1 m.

- Symbols:
- Q = Flow rate [m³/h]
 - H = Head [m]
 - P1 = Power absorbed by the electric line
 - P2 = Power yielded to the motor axis (power absorbed by the pump)

