

DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)

in cast iron



Submersible electric pumps for foul waste water, cast iron.

APPLICATIONS

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

TECHNICAL FEATURES

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

TECHNICAL DATA

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

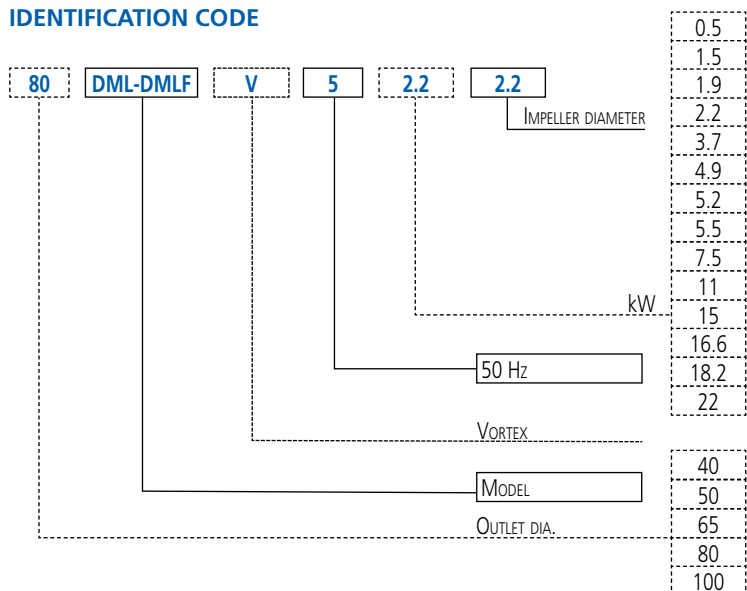
MATERIALS

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

ACCESSORIES (on request)

For accessories, see page 151 onwards

IDENTIFICATION CODE

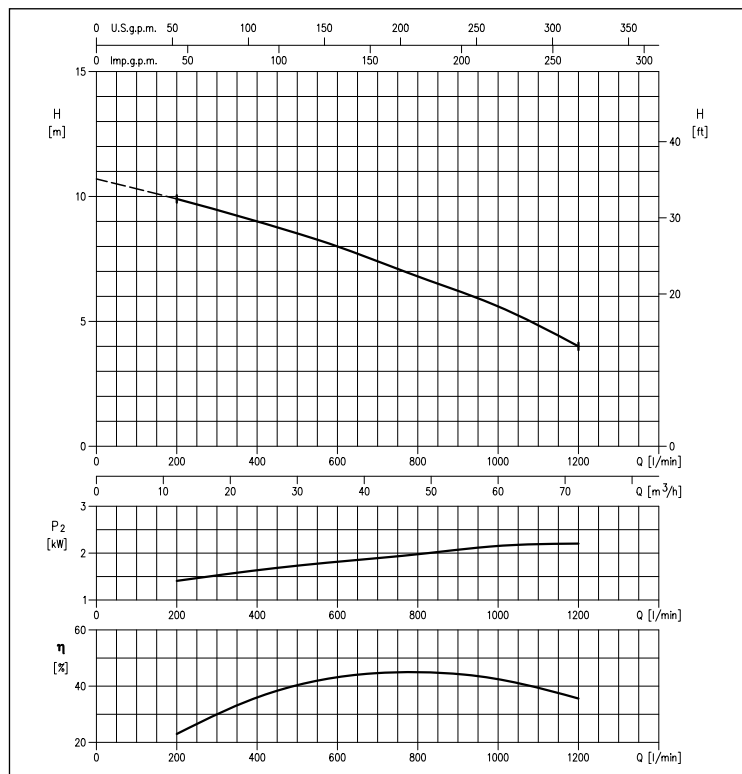


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SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX) in cast iron

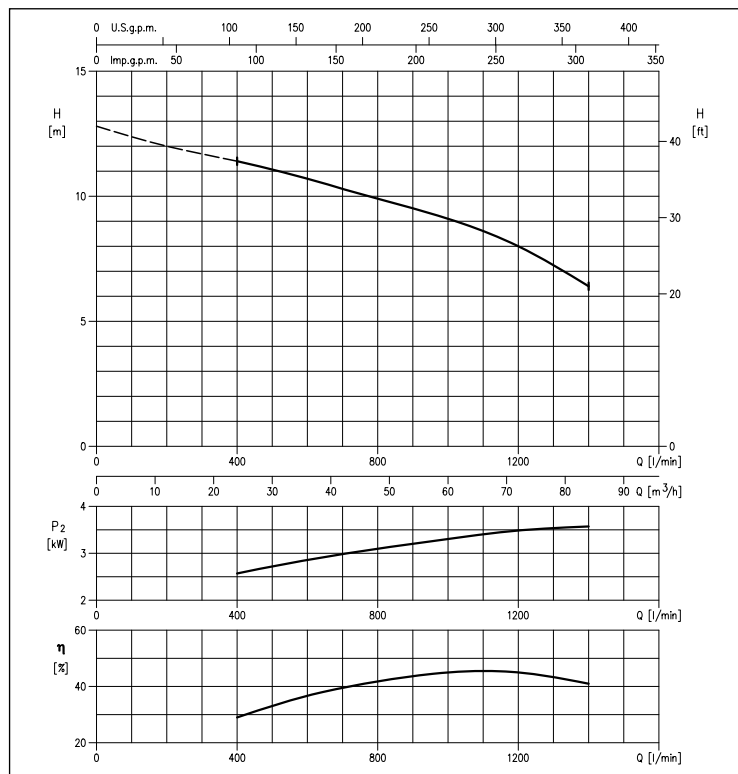
PERFORMANCE CURVES series 80DMLV 52.2

(per ISO 9906 Annex A) IMPELLER DIA.: 185 mm



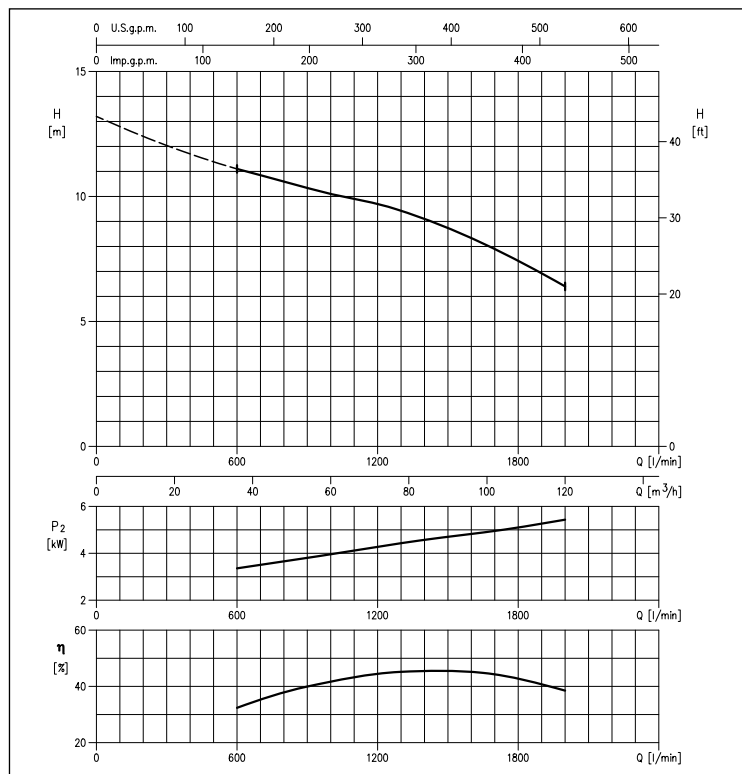
PERFORMANCE CURVES series 80DMLV 53.7

(per ISO 9906 Annex A) IMPELLER DIA.: 204 mm



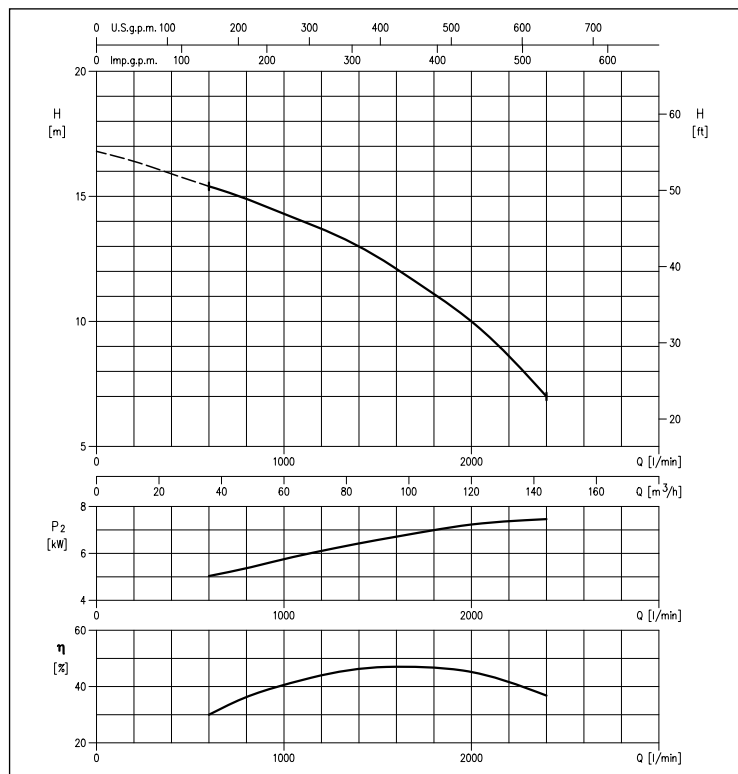
PERFORMANCE CURVES series 100DMLV 55.5

(per ISO 9906 Annex A) IMPELLER DIA.: 211 mm



PERFORMANCE CURVES series 100DMLV 57.5

(per ISO 9906 Annex A) IMPELLER DIA.: 231 mm

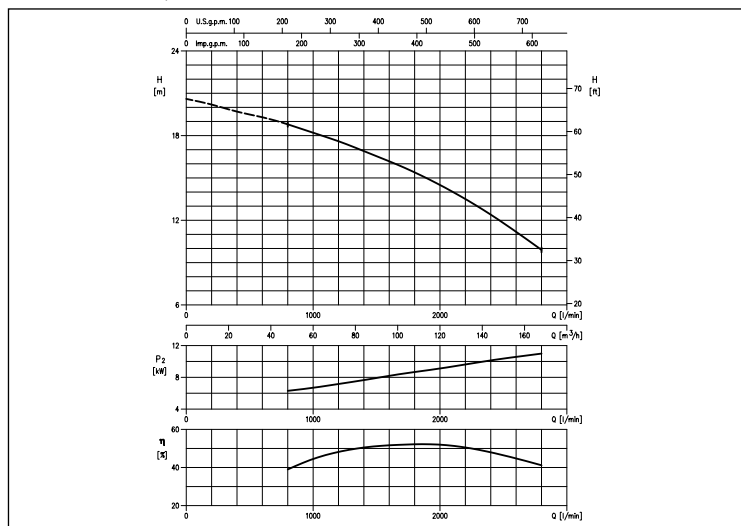


DMLV - DMLVF

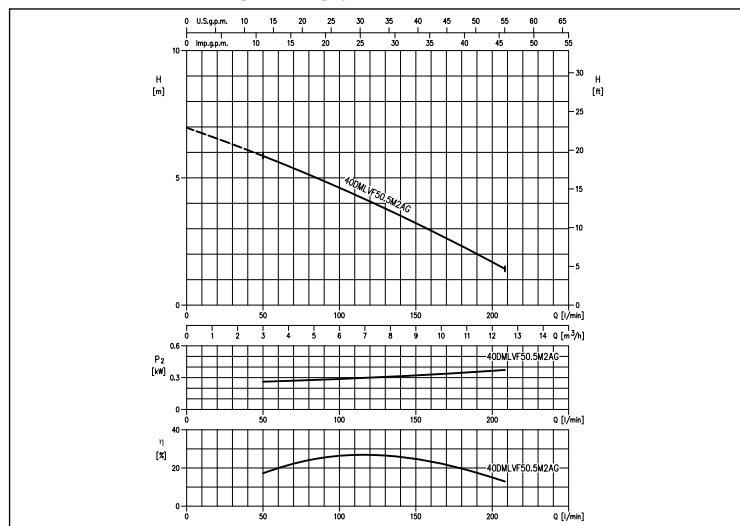
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX) in cast iron

PERFORMANCE CURVES

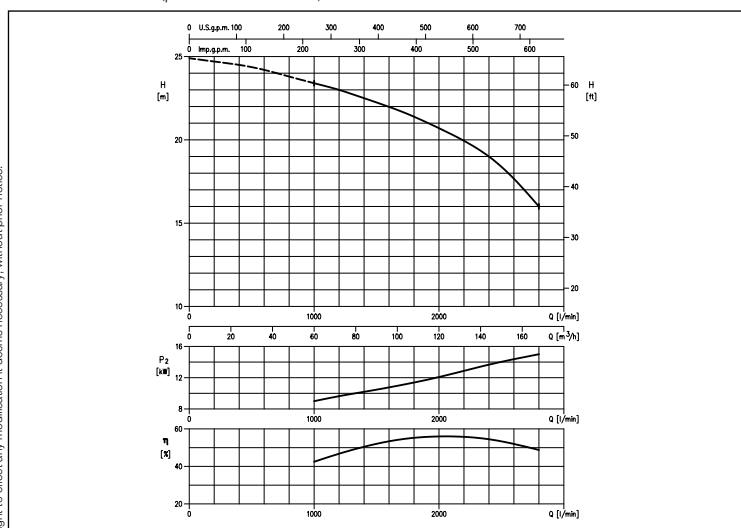
100DMLV511 (per ISO 9906 Annex A)



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



100DMLV515 (per ISO 9906 Annex A)

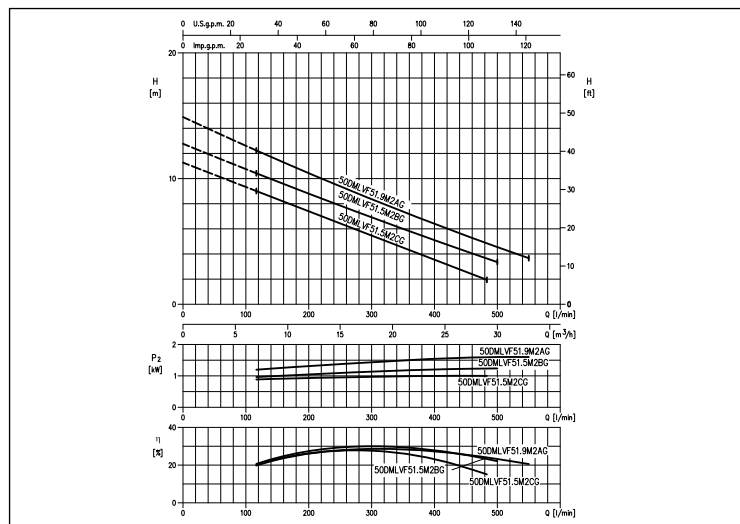


50DMLVF51.5M2CG (1.5 kW)

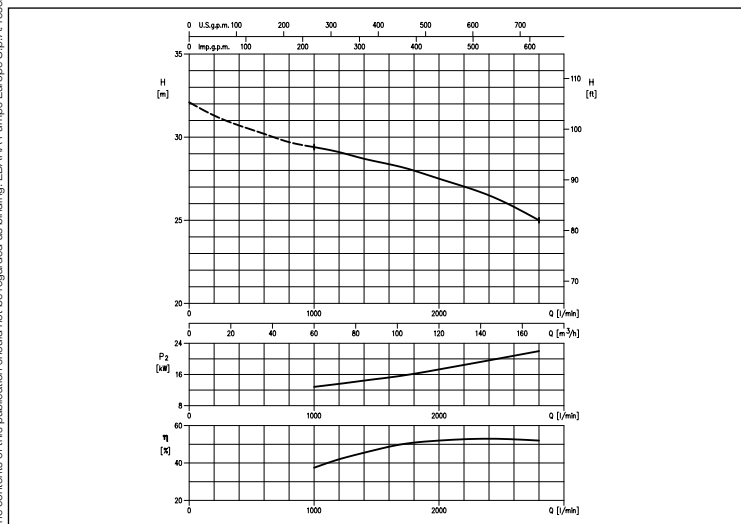
50DMLVF51.5M2BG (1.5 kW)

50DMLVF51.9M2AG (1.9 kW)

(per ISO 9906 Annex A)



100DMLV522 (per ISO 9906 Annex A)

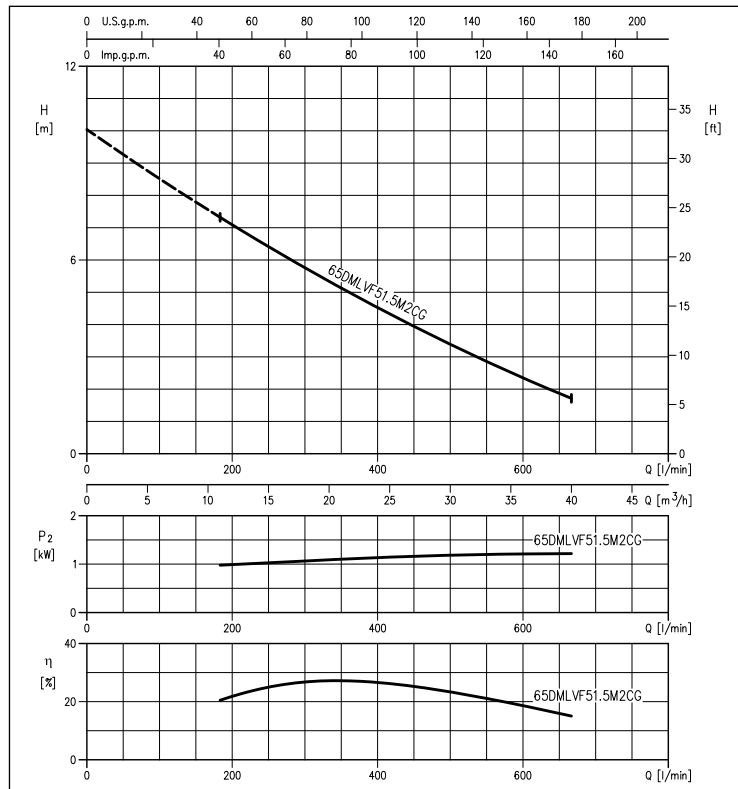


DMLV - DMLVF

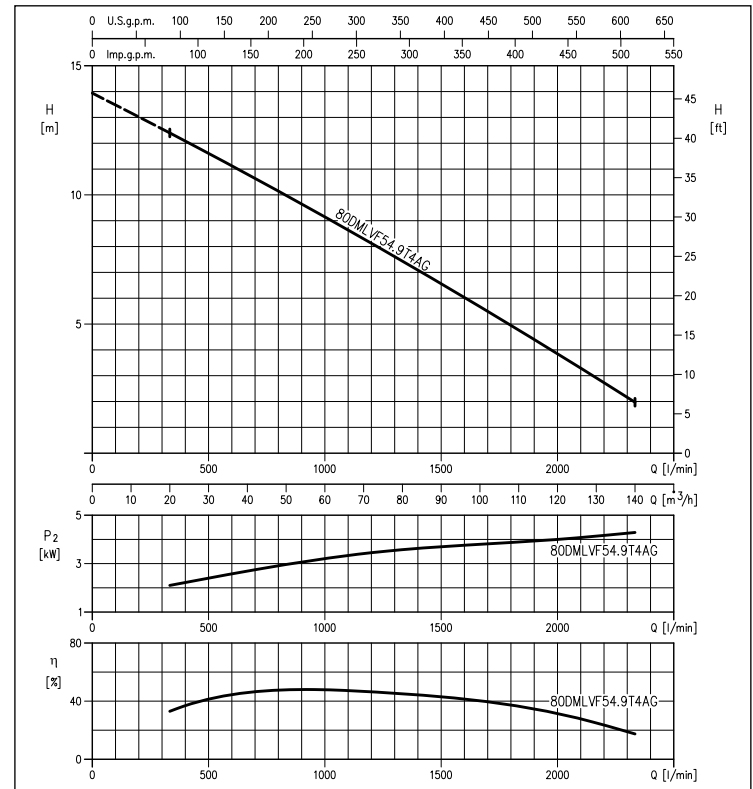
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX) in cast iron

PERFORMANCE CURVES

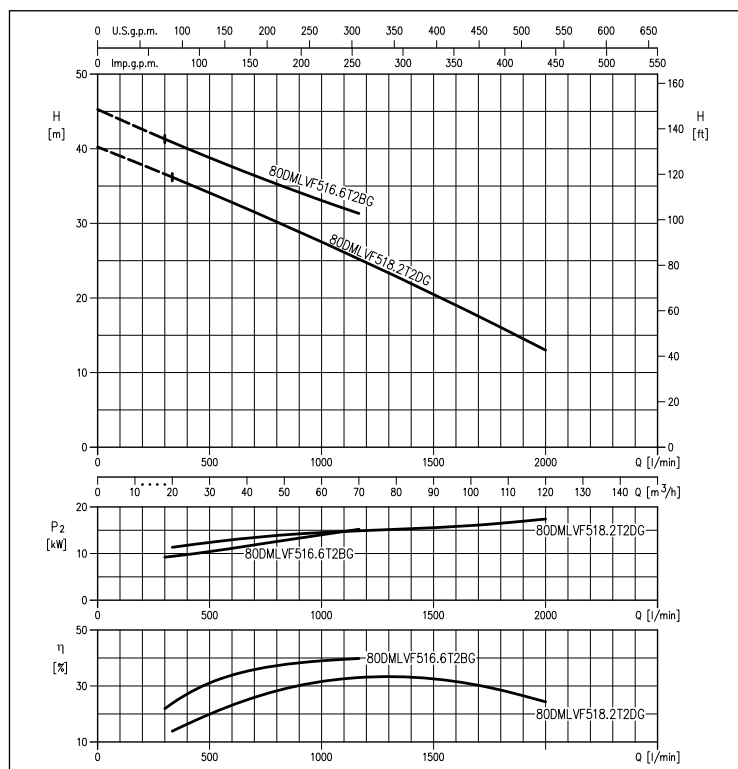
65DMLVF51.5M2CG (1.5 kW) (per ISO 9906 Annex A)



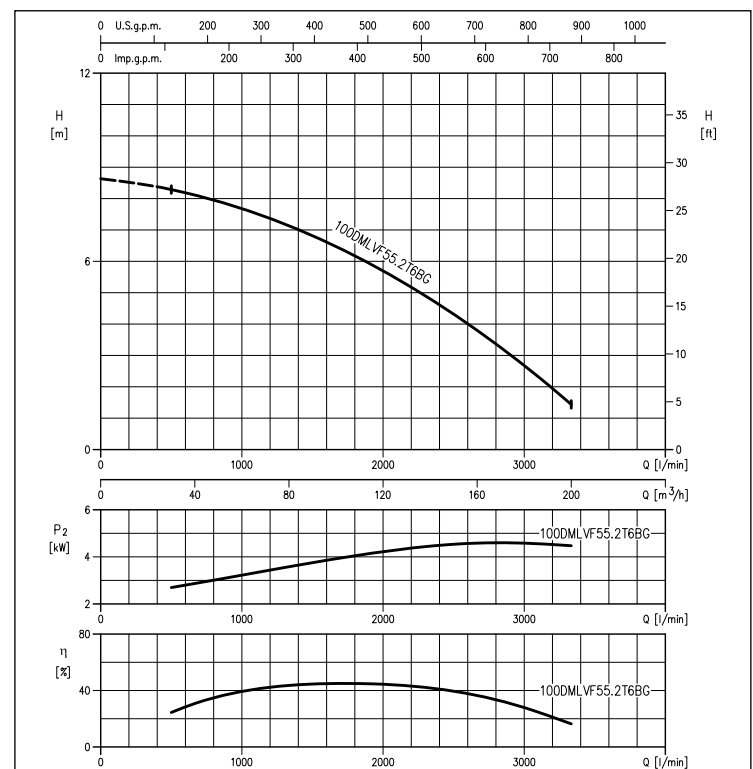
80DMLVF54.9T4AG (4.9 kW) (per ISO 9906 Annex A)



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



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



DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)

in cast iron

PERFORMANCE TABLE 40-50-65 DMLVF

Model	P ₂		Q=Flow rate											667 40
	[HP]	[kW]	I/min 50	117	183	208	250	300	350	400	483	500	550	
			m³/h 3	7	11	12.5	15	18	21	24	29	30	33	
H=Head [m]														
40DMLVF50.5M2AG	0.7	0.5	5.9	4.2	2.2	1.4	-	-	-	-	-	-	-	-
50DMLVF51.5M2CG	2	1.5	-	9	7.7	7.2	6.4	5.5	4.5	3.5	1.9	-	-	-
50DMLVF51.5M2BG	2	1.5	-	10.4	9.1	8.6	7.8	6.9	6.0	5.1	3.6	3.4	-	-
50DMLVF51.9M2AG	2.5	1.9	-	12.2	10.8	10.3	9.4	8.4	7.4	6.4	4.8	4.5	3.7	-
65DMLVF51.5M2CG	2	1.5	-	-	7.3	7.0	6.4	5.8	5.1	4.5	3.6	3.4	2.9	1.7

PERFORMANCE TABLE 80DMLV - 80DMLVF

Model	P ₂		Q=Flow rate												
	[HP]	[kW]	I/min 200	300	333	400	600	900	1167	1200	1320	1400	2000	2100	2333
			m³/h 12	18	20	24	36	54	70	72	79	84	120	126	140
			H=Head [m]												
80DMLV52.2	3	2.2	9.9	9.5	9.3	9.0	8	6.4	4.1	4	-	-	-	-	-
80DMLV53.7	5	3.7	-	-	-	11.5	10.7	9.4	9.1	7.9	7.2	6.4	-	-	-
80DMLVF54.9T4AG	6.6	4.9	-	-	12.4	12.1	11.1	9.6	8.3	8.1	7.5	7.1	3.8	3	2
80DMLVF516.6T2BG	22.3	16.6	-	41.3	40.9	40.0	37.6	34.2	31.3	-	-	-	-	-	-
80DMLVF518.2T2DG	24.4	18.2	-	-	36.2	35.4	32.8	28.2	25.2	24.8	23.1	21.9	13.0	-	-

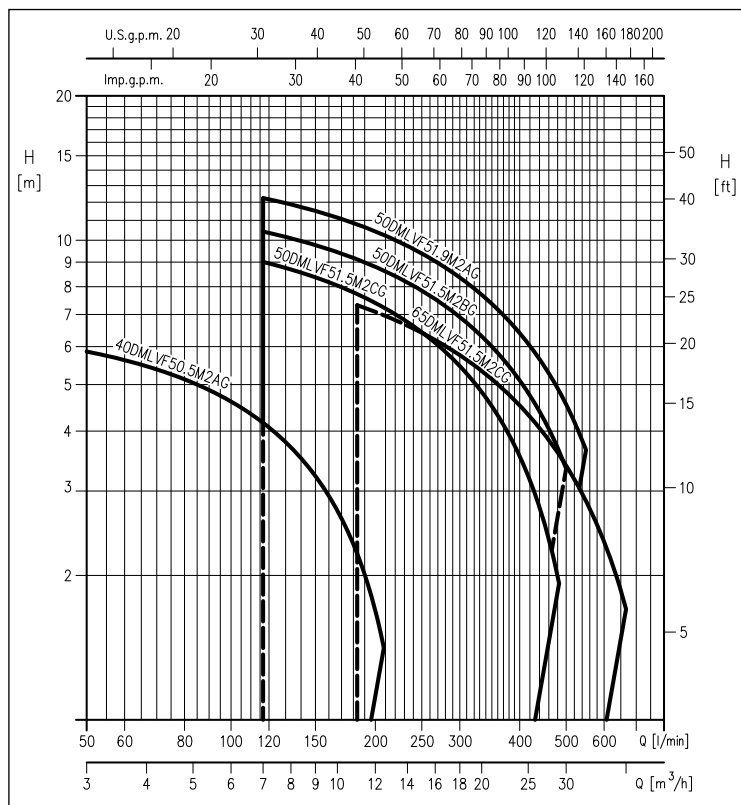
PERFORMANCE TABLE 100DMLV - 100DMLVF

Model	P:		Q=Flow rate									
	[HP]	[kW]	I/min 500	600	800	1000	1200	1700	2000	2400	2800	3333
			m³/h 30	36	48	60	72	102	120	144	168	200
			H=Head [m]									
100DMLVF55.2T6BG	7	5.2	8.3	8.2	8	7.7	7.4	6.4	5.7	4.6	3.4	1.4
100DMLV5.5	7.5	5.5	-	11.1	10.6	10.1	9.7	7.9	6.4	-	-	-
100DMLV57.5	10	7.5	-	15.4	14.9	14.3	13.7	11.6	10	7	-	-
100DMLV511	15	11	-	-	18.8	18.2	17.6	15.8	14.5	12.4	9.9	-
100DMLV515	20	15	-	-	-	23.4	23	21.7	20.7	19	16	-
100DMLV522	30	22	-	-	-	29.4	29.1	28.2	27.5	26.5	25	-

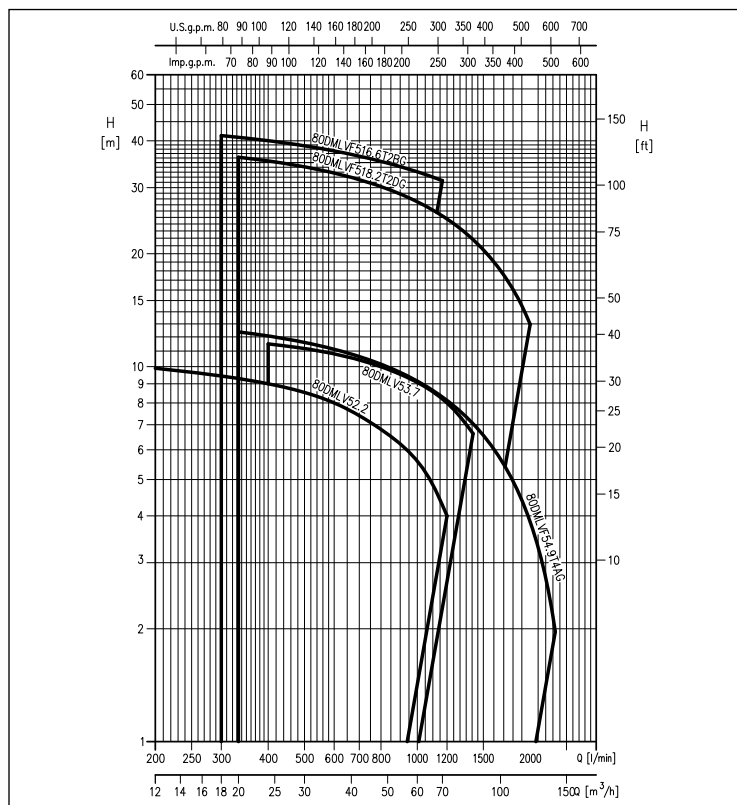
DMLV - DMLVF

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

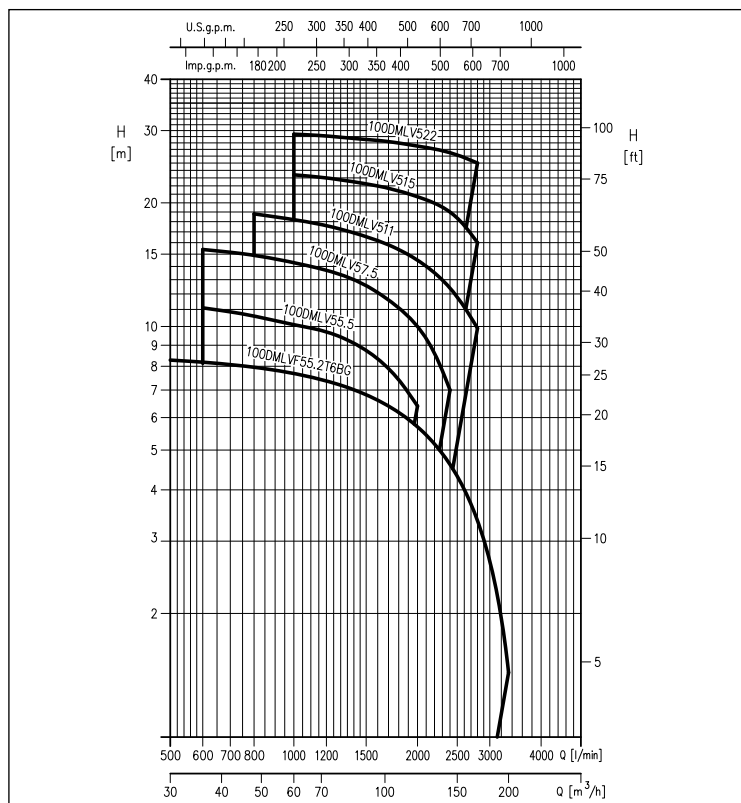
PERFORMANCE CURVES for series 40-50-65 DMLVF (per ISO 9906 Annex A)



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



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



DMLV - DMLVF

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

DIMENSIONS DMLV

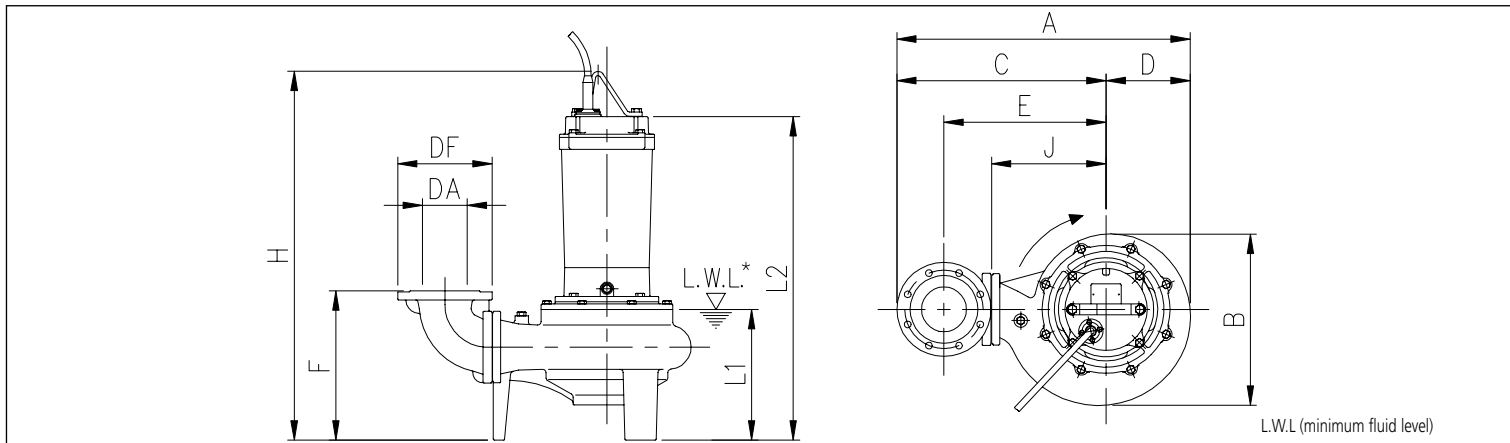
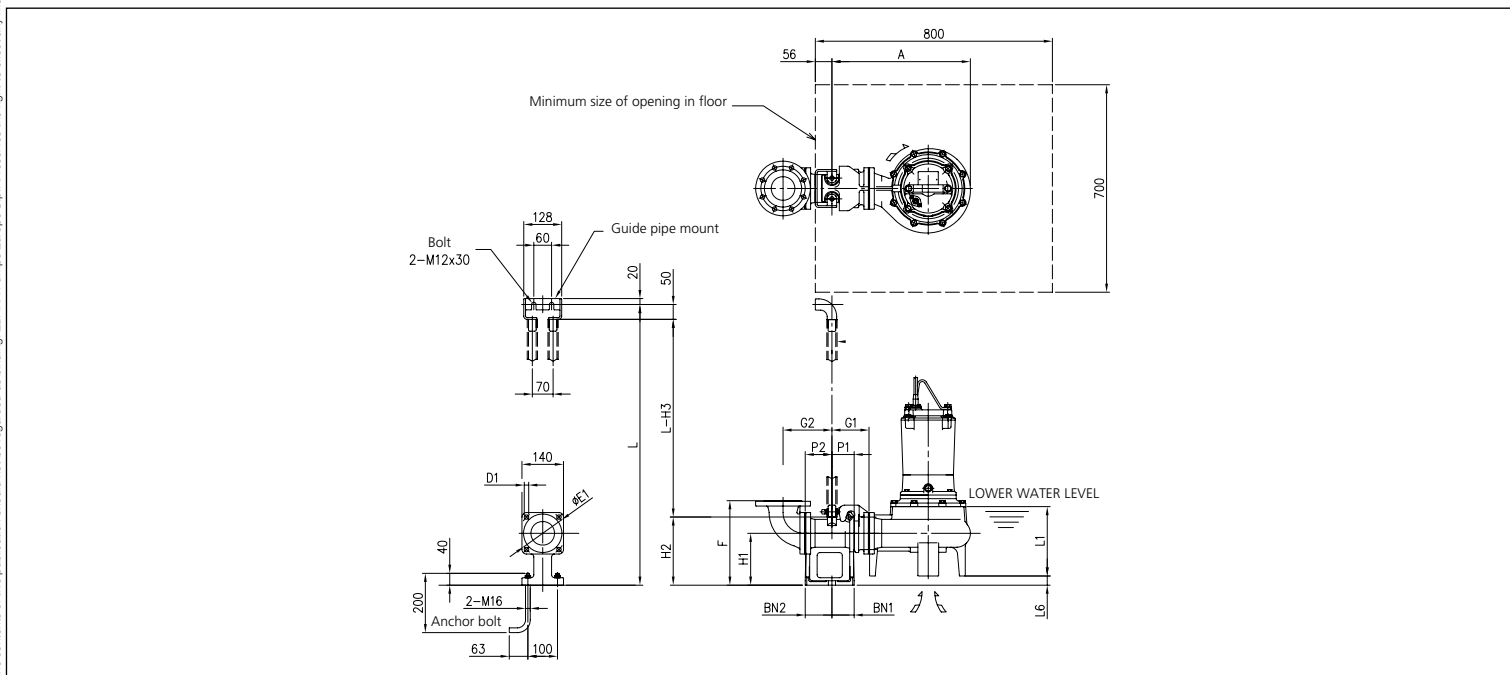


TABLE OF DIMENSIONS DMLV

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 (lowering device kit) LM 80 (for models 80 DMLV 52.2 - 80 DMLV 53.7)



DMLV - DMLVF

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

DIMENSIONS FLANGES PN 10 (PER EN 1092-2)

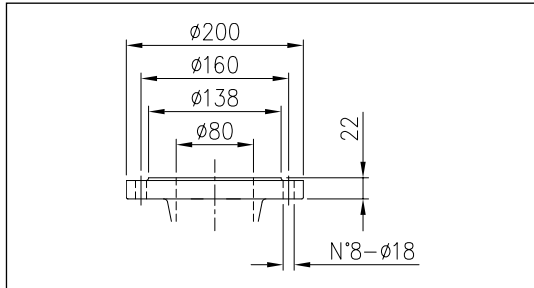
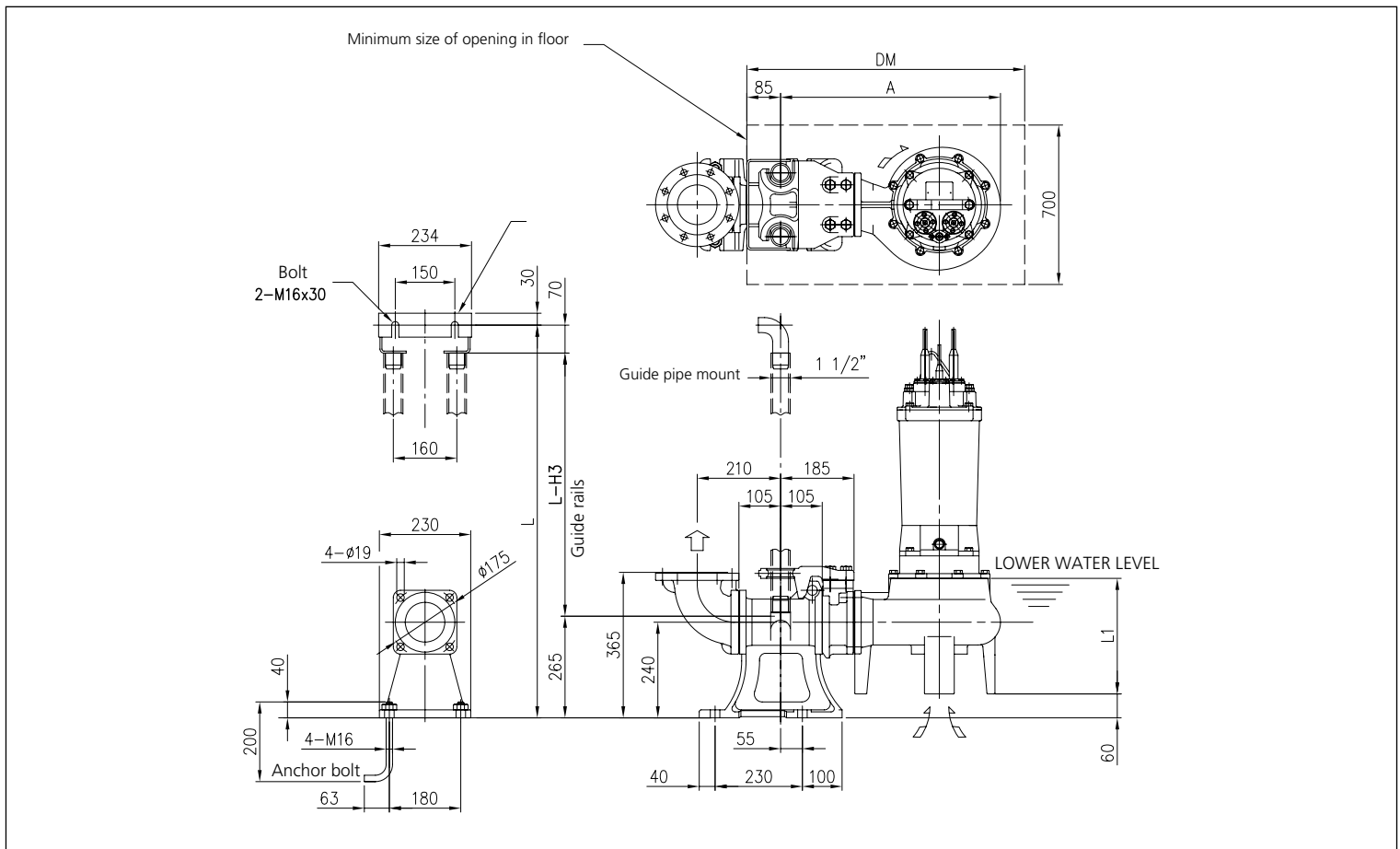


TABLE OF DIMENSIONS QDC (lowering device kit) LM 80 (DMLV)

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

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



DIMENSIONS FLANGES PN 10 (PER EN 1092-2)

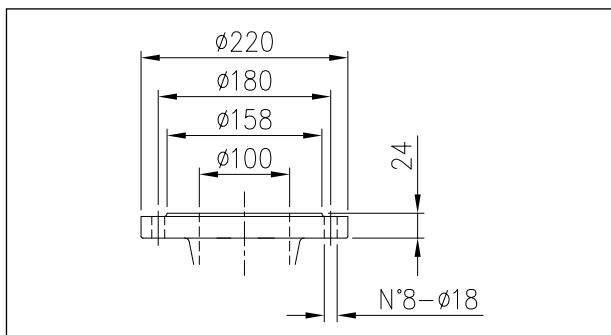


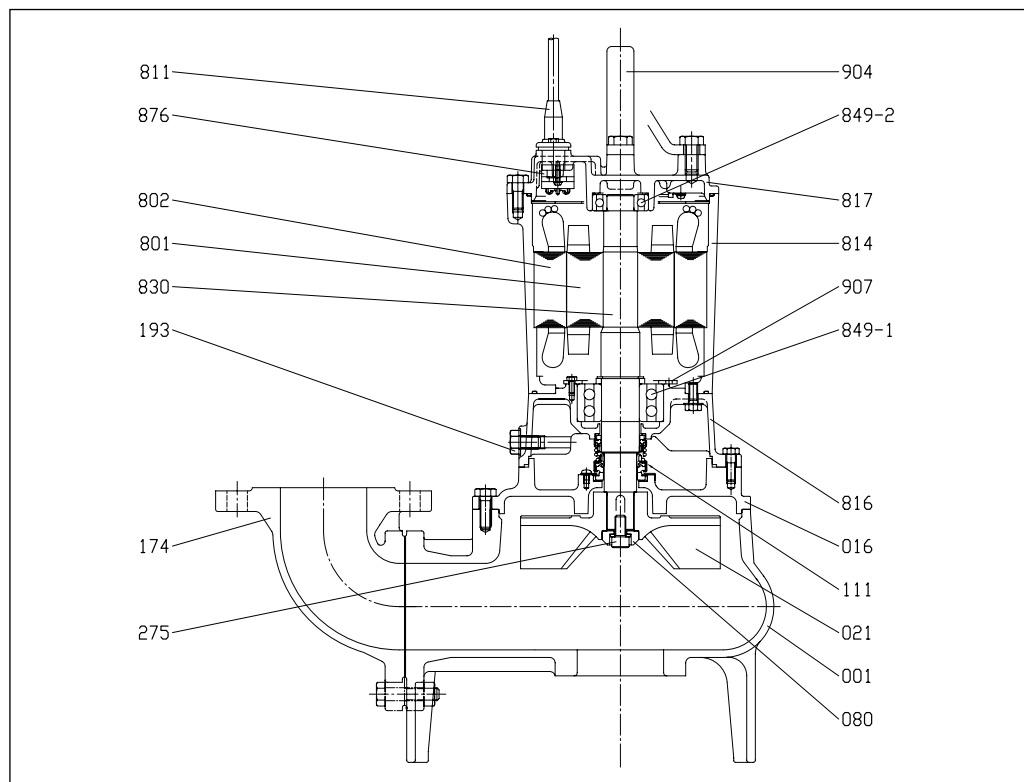
TABLE OF DIMENSIONS QDC (lowering device kit) LM 100 (DMLV)

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

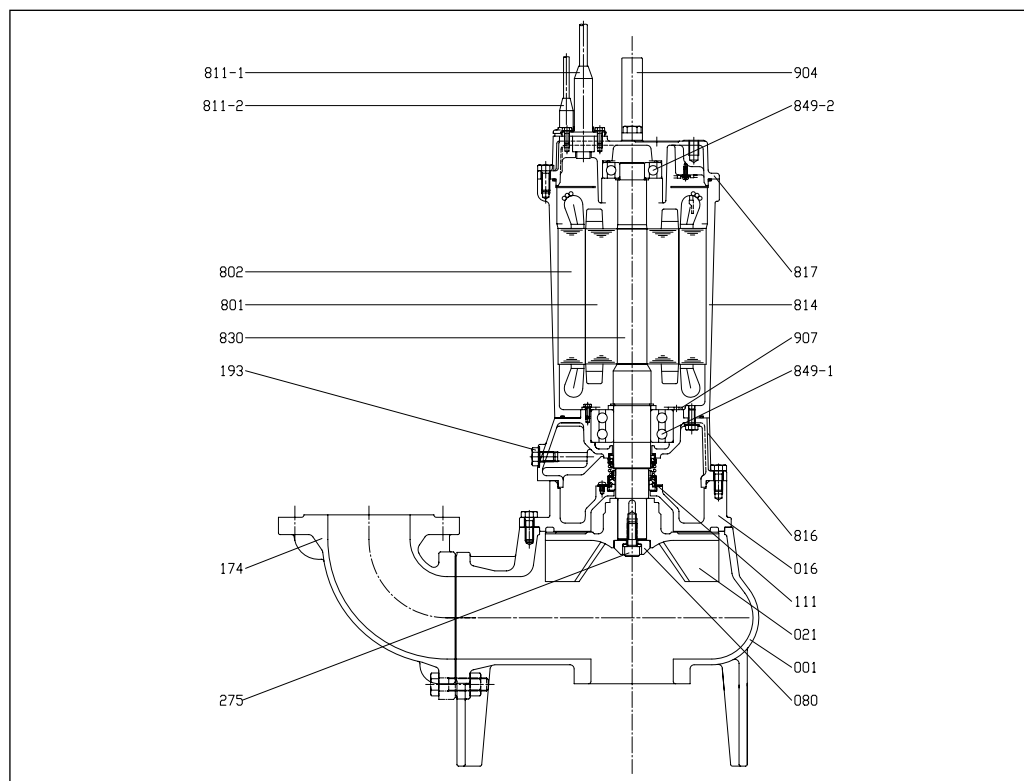
DMLV - DMLVF

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

SECTIONAL VIEW 80 DMLV 52.2



SECTIONAL VIEW DMLV (3.7÷7.5kW)



DMLV - DMLVF

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

SECTIONAL VIEW DMLV (11÷22kW)

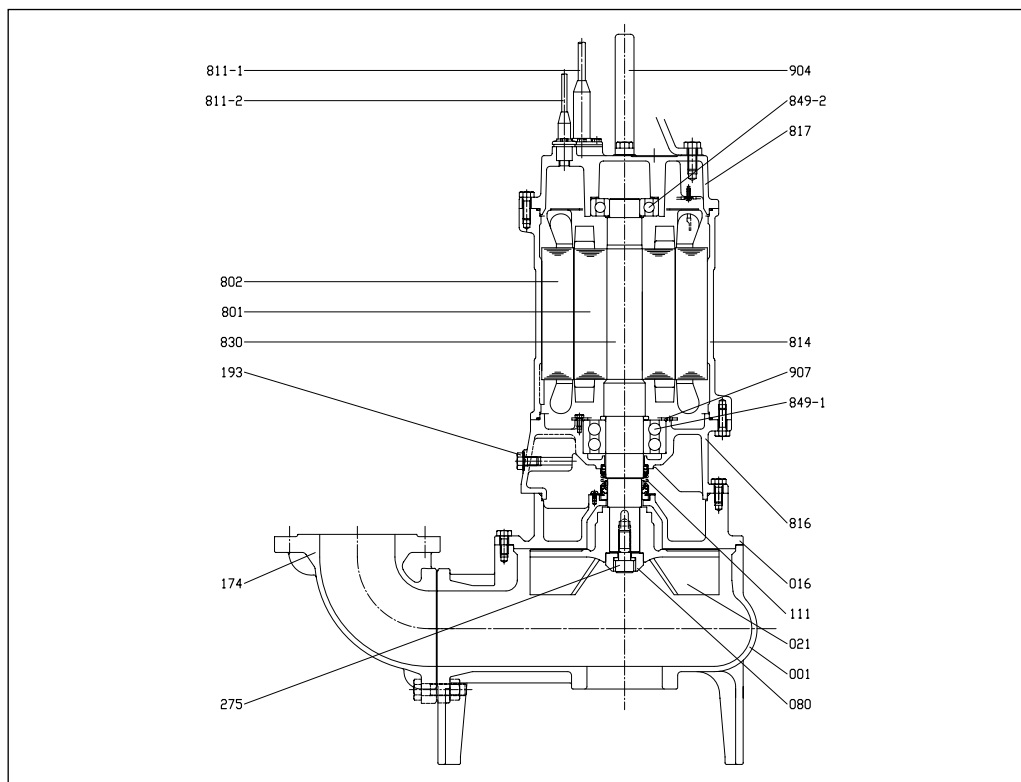


TABLE OF MATERIALS DMLV

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

DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)

in cast iron

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

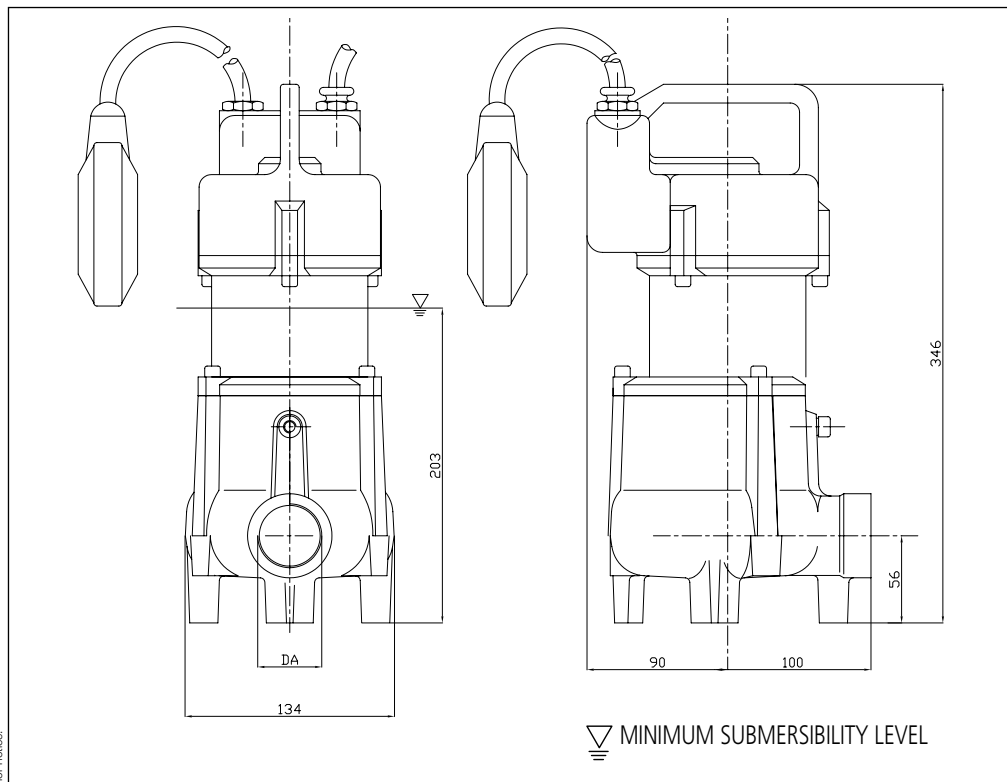


TABLE OF DIMENSIONS 40DMLVF/40DMLVF with QDC (0.5 kW)

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

DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX

in cast iron

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

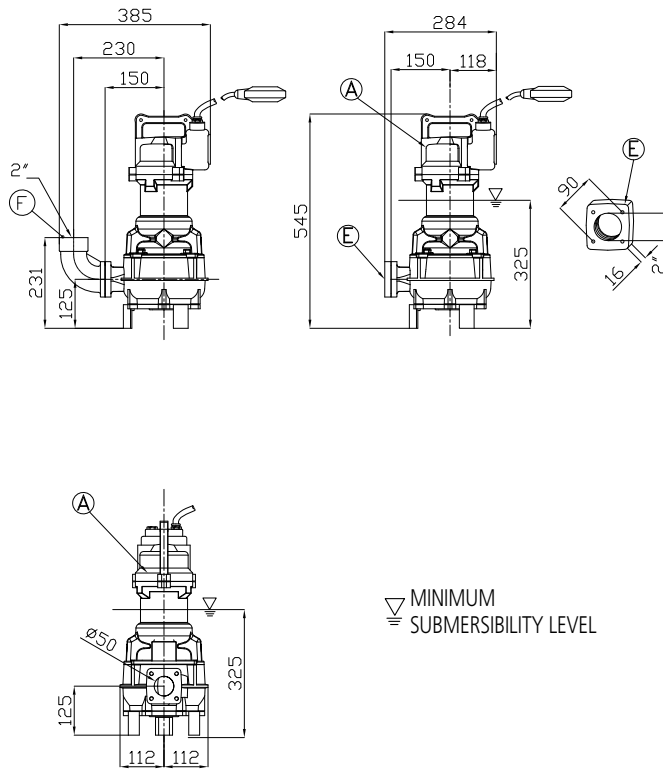
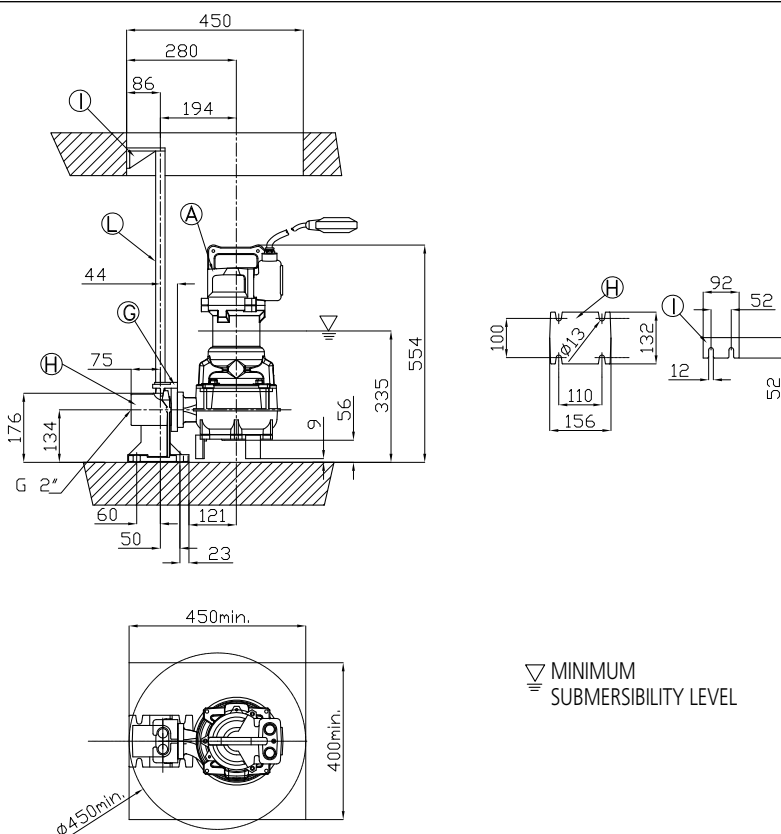


TABLE OF DIMENSIONS 50DMLVF/50DMLVF with QDC (1.5 - 1.9 kW)

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



DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)

in cast iron

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

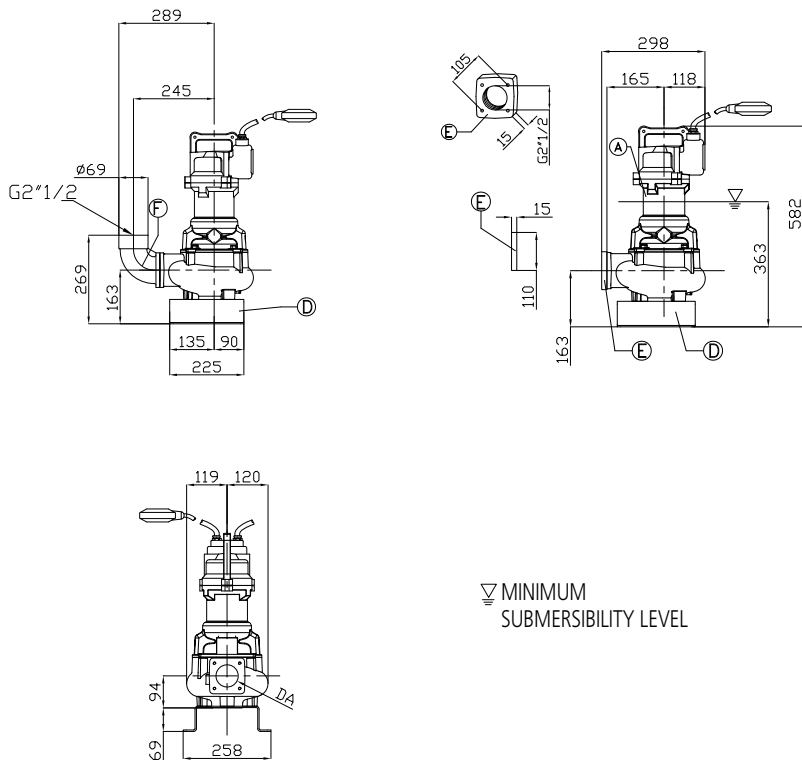
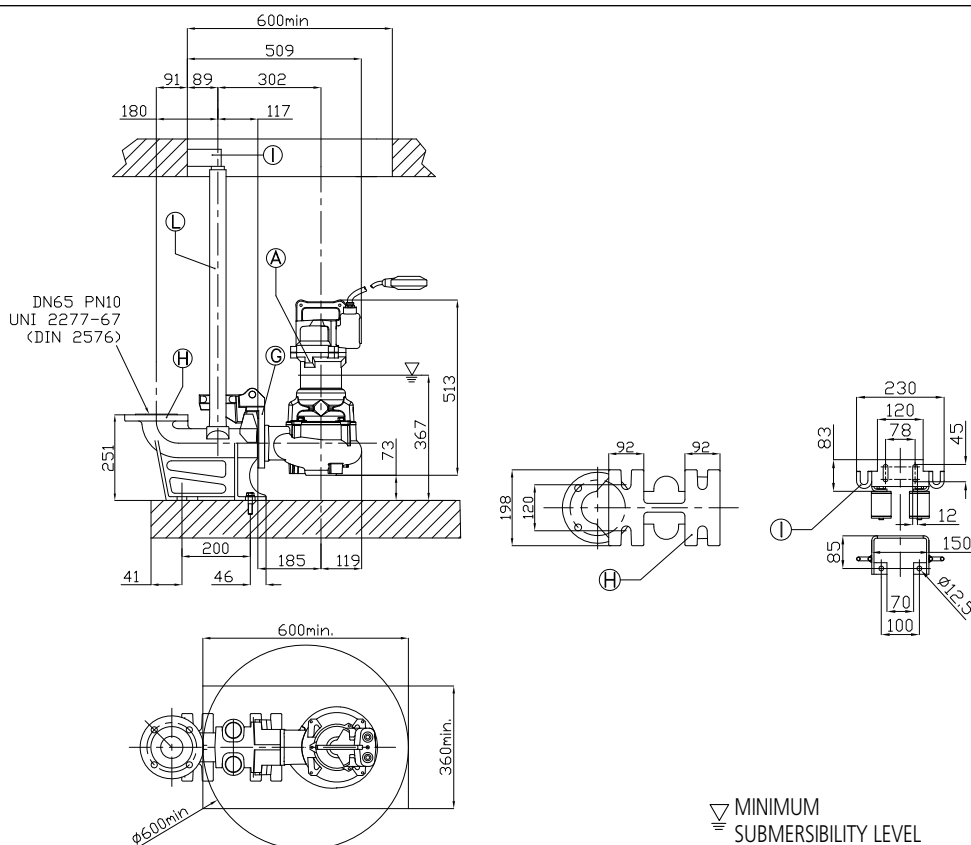


TABLE OF DIMENSIONS
65DMLVF/65DMLVF with QDC (1.5 kW)

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



DMLV - DMLVF

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

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

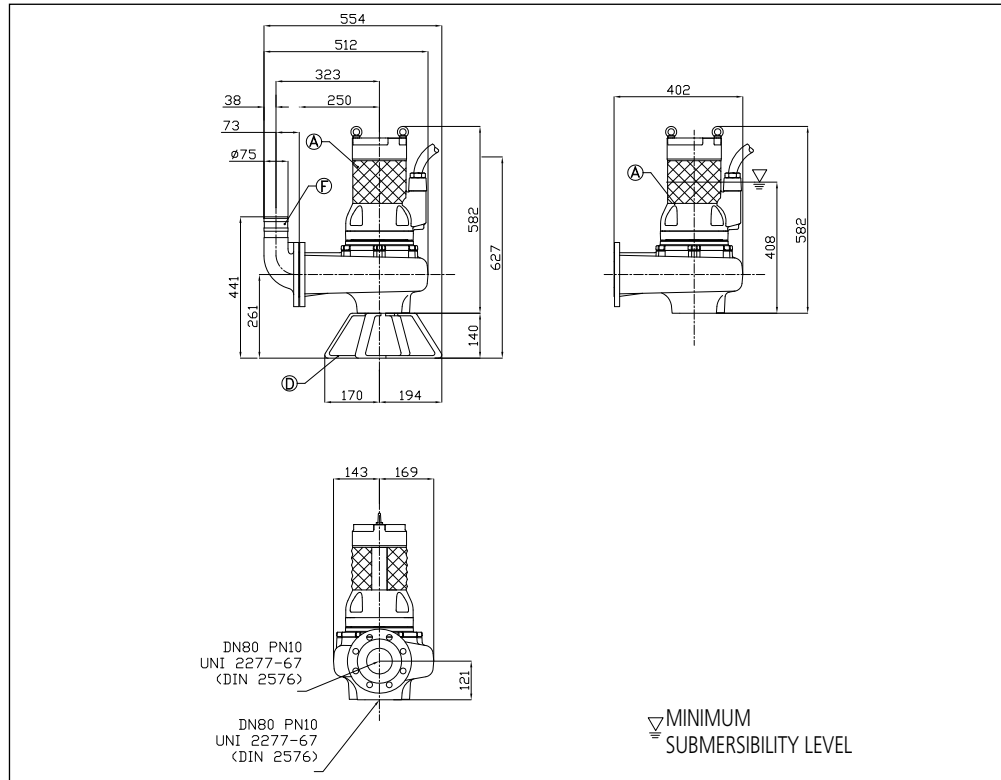
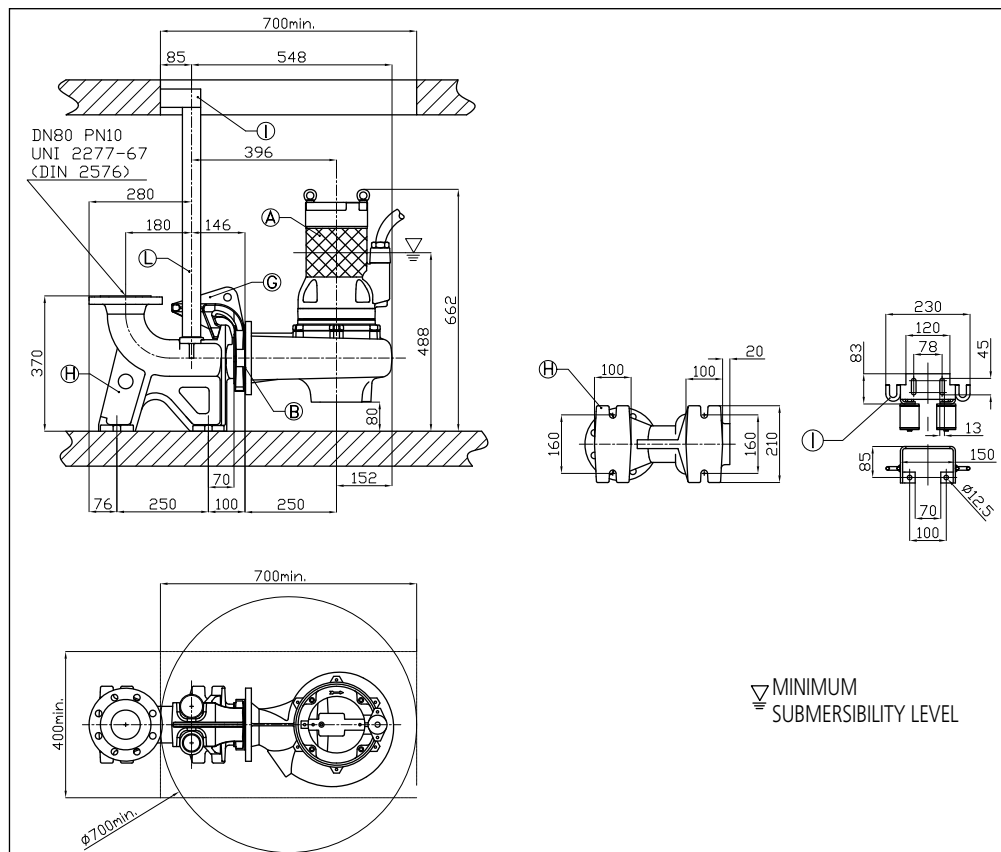


TABLE OF DIMENSIONS
80DMLVF/80DMLVF with QDC (4.9 kW)

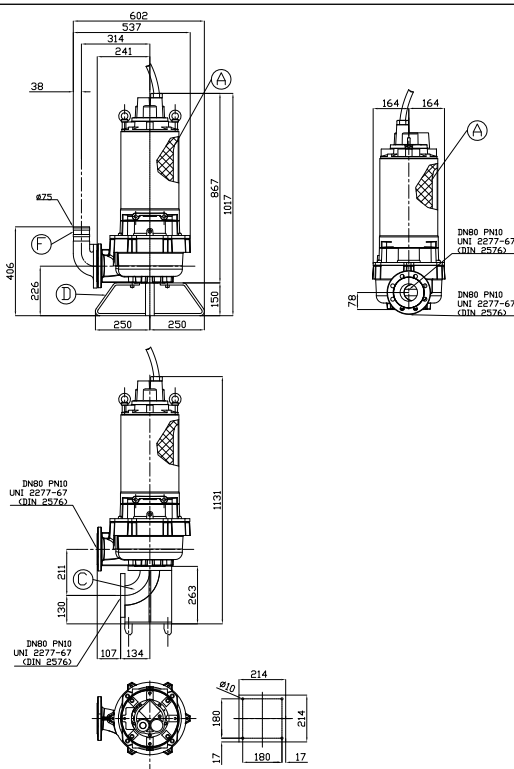
DA	Model	[kW]	Weight [kg]
DN 80 PN10 UNI 2277 - 67 (DIN 2576)	80DMLVF54.9T4AG	4.9	79



DMLV - DMLVF

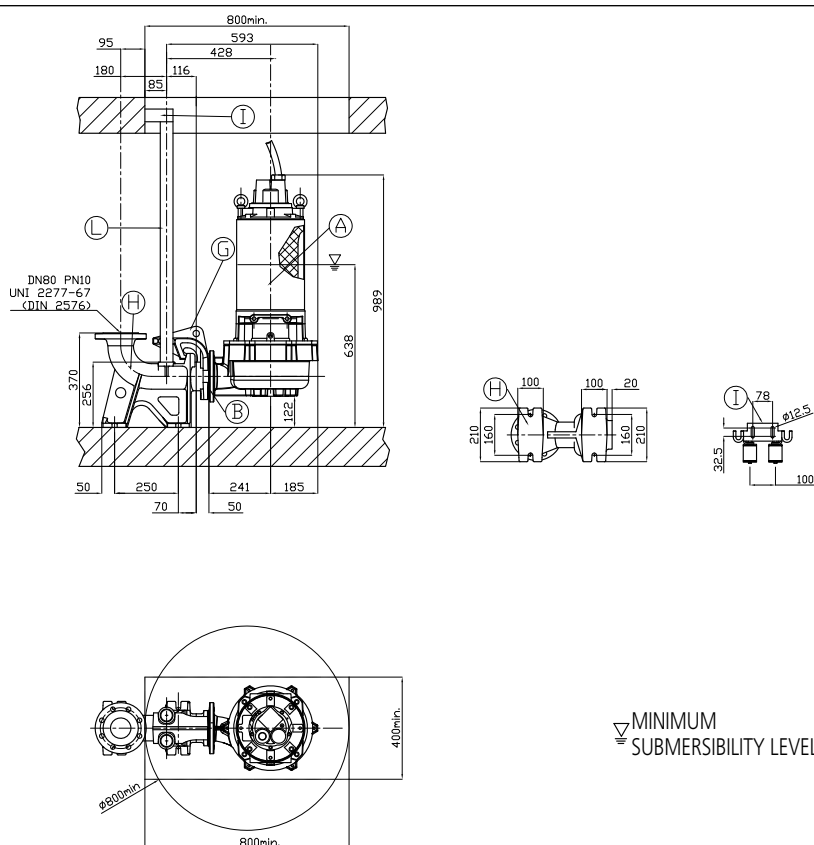
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

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



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

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

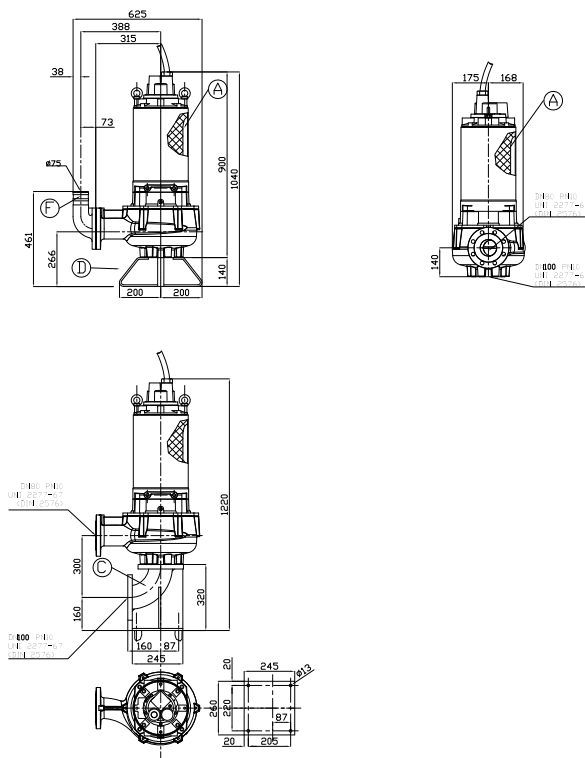


DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX

in cast iron

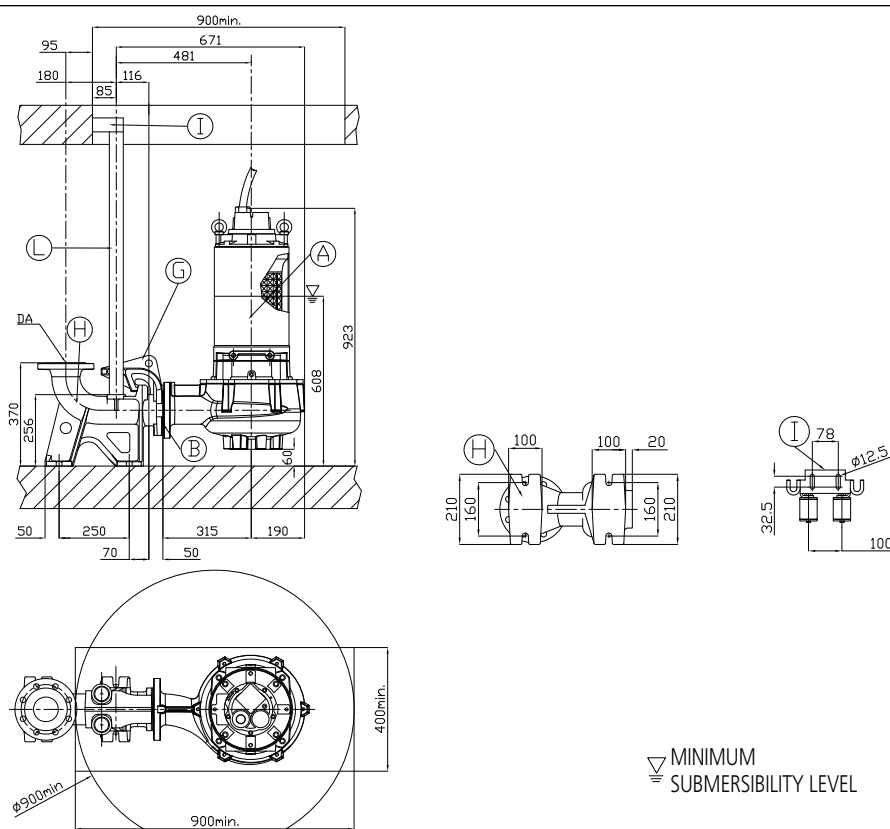
DIMENSIONS 80DMLVF/80DMLVF with QDC (18.2 kW)



DIMENSIONS CHART

80DMLVF/80DMLVF with QDC (18.2 kW)

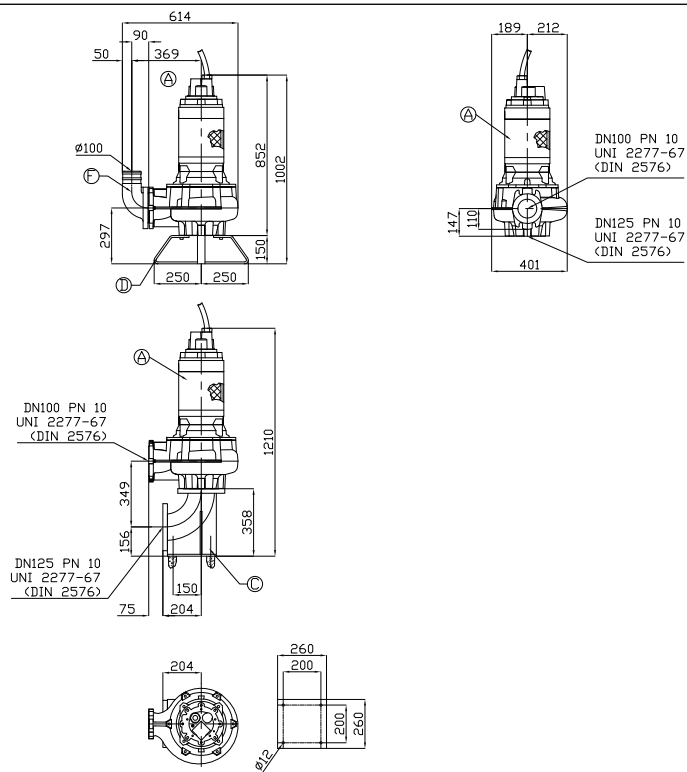
DA	Model	[kW]	Weight [kg]
DN 80 PN10 UNI 2277-67 (DIN 2576)	80DMLVF518.2T2DG	18.2	190



DMLV - DMLVF

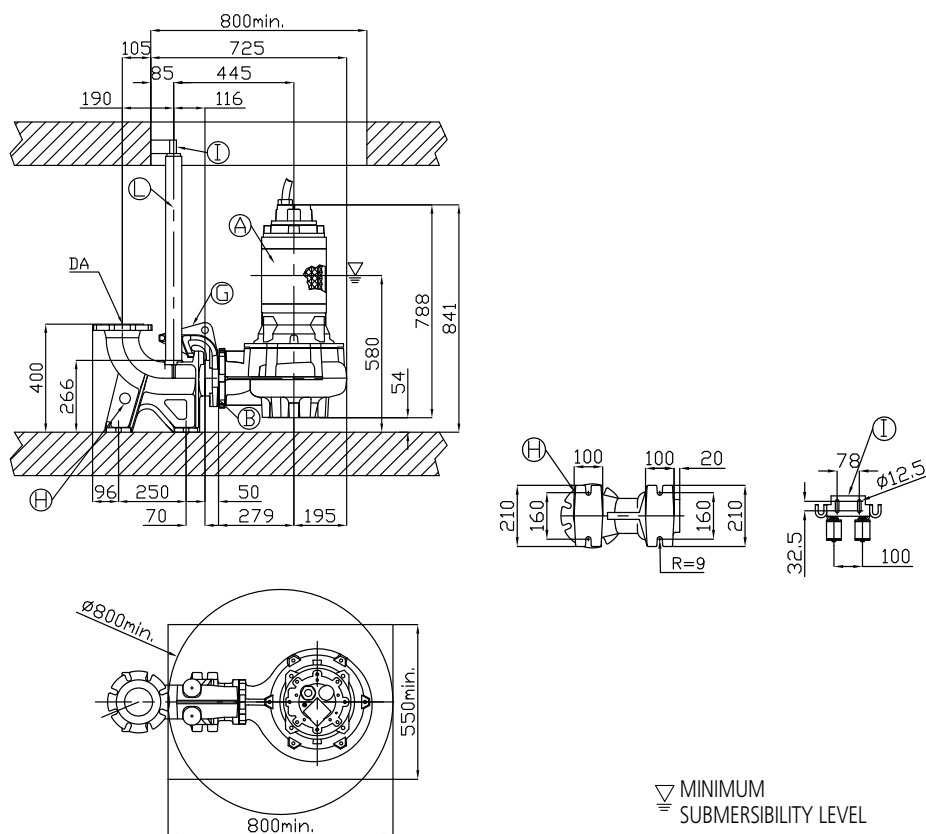
SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)
in cast iron

DIMENSIONS 100DMLVF/100DMLVF with QDC



DIMENSIONS CHART 100DMLVF/100DMLVF with QDC

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

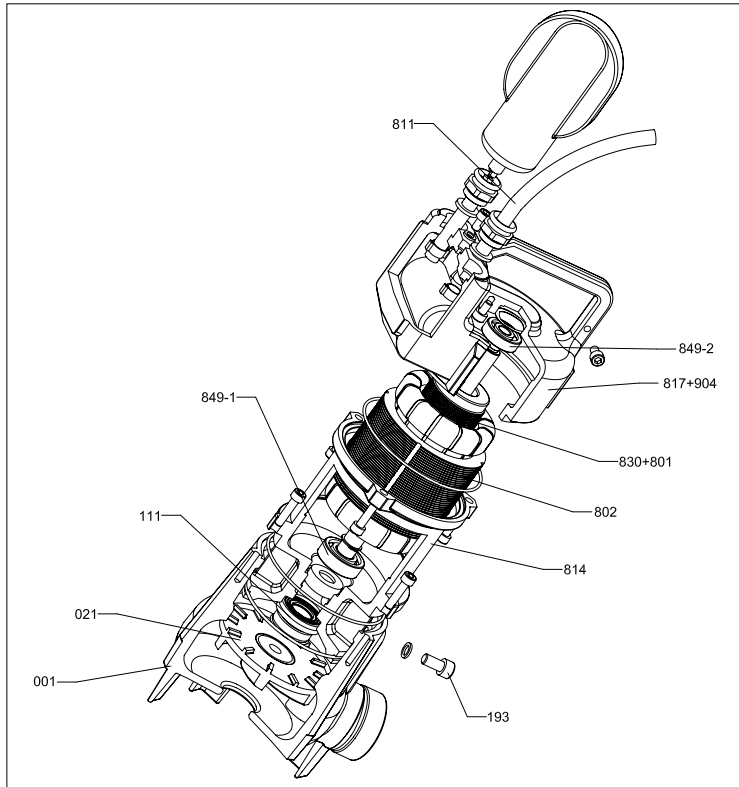


MINIMUM
SUBMERSIBILITY LEVEL

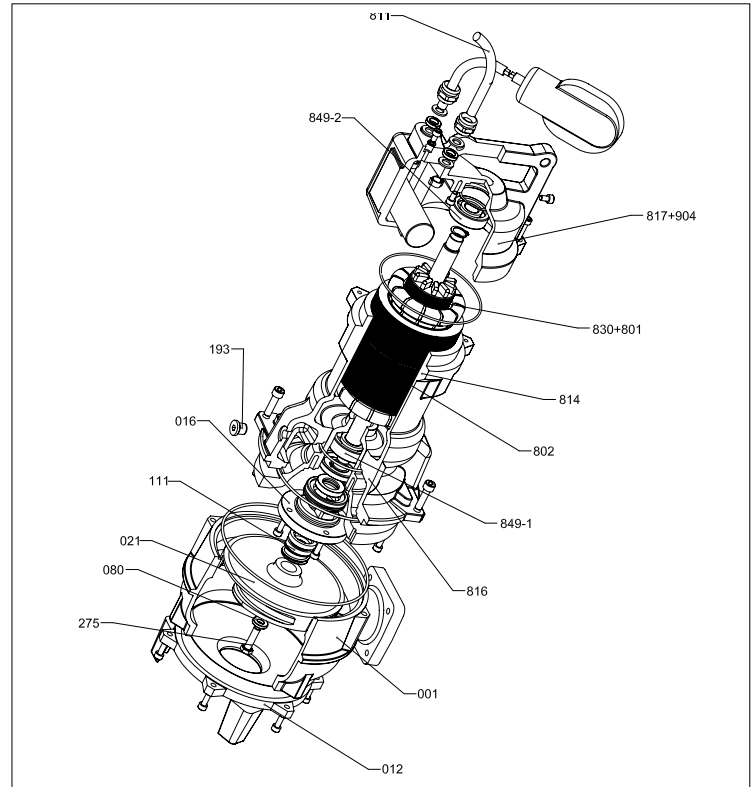
DMLV - DMLVF

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

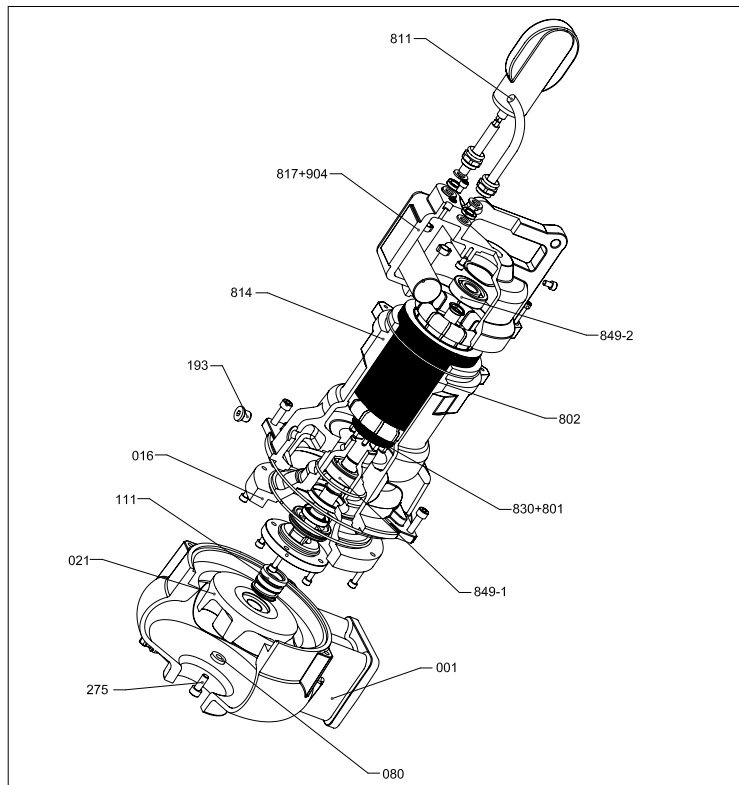
SECTIONAL VIEW 40DMLVF (0.5 kW)



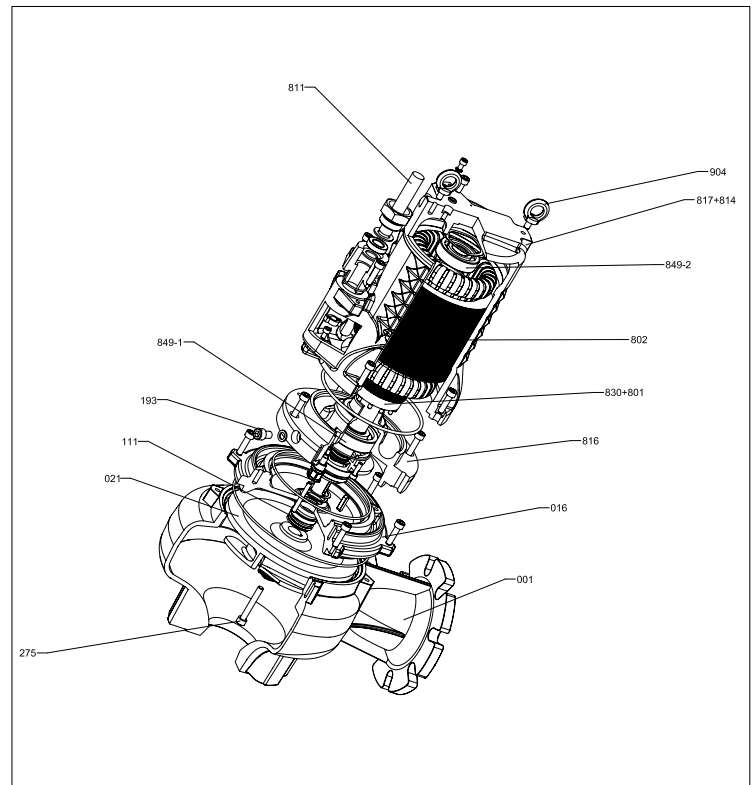
SECTIONAL VIEW 50DMLVF (1.5 - 1.9 kW)



SECTIONAL VIEW 65DMLVF (1.5 kW)



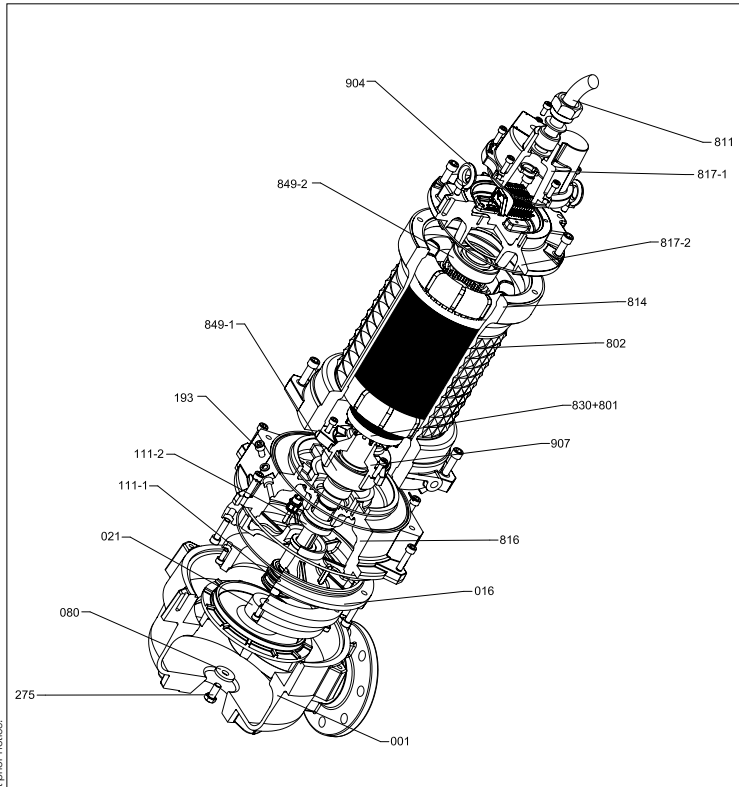
SECTIONAL VIEW 80DMLVF (4.9 kW)



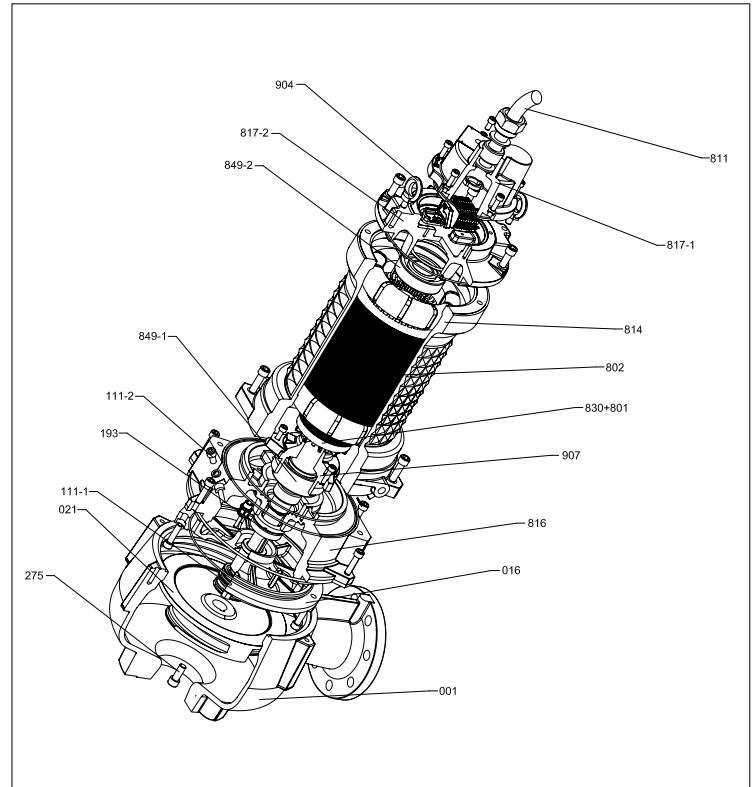
DMLV - DMLVF

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

SECTIONAL VIEW 80 DMLVF (16.6 kW)



SECTIONAL VIEW 80DMLVF (18.2 kW)



SECTIONAL VIEW 100DMLVF (5.2 kW)

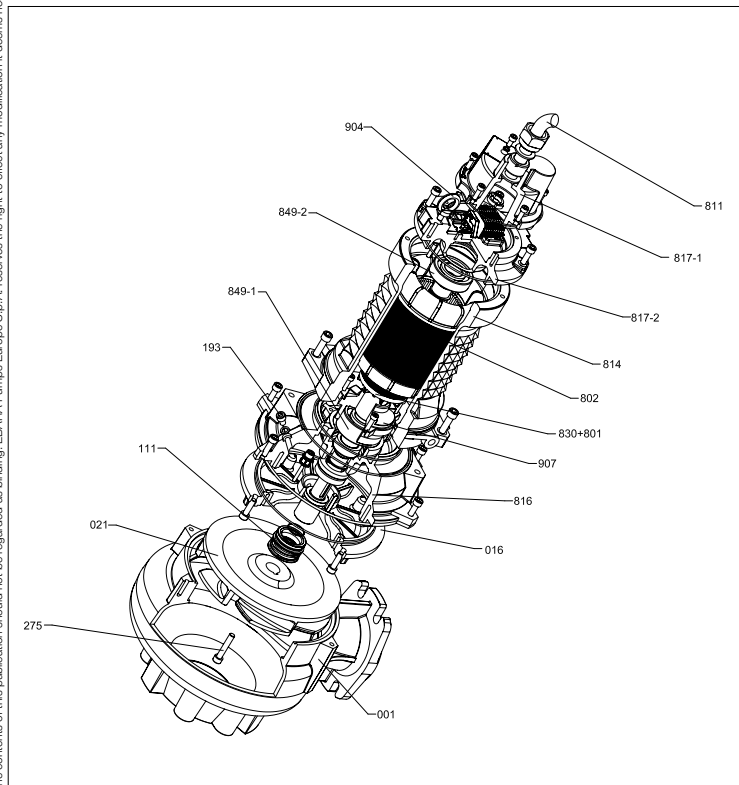


TABLE OF MATERIALS DMLVF

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

[1] - Except for 40DMLVF 0.5 kW, 50DMLVF (1.5 - 1.9 kW), 65DMLVF (1.5 kW), 80DMLVF (4.9 kW)

[2] - For models 80DMLVF (4.9 kW), 80DMLVF (16.6 kW), 80DMLVF (18.2 kW), 100DMLVF (5.2 kW) the lifting hook is in steel

DMLV - DMLVF

SUBMERSIBLE ELECTRIC PUMPS FOR FOUL WASTE WATER (VORTEX)

in cast iron

ELECTRICAL DATA TABLE DMLVF (0.5 - 18.2 kW)

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

[P ₂]			[kW]	0.5	1.5	1.5	1.9	1.5	4.9	16.6	18.2	5.2	
Resistance at 20°C			[Ω]	-	-	-	-	-	-	-	-	-	
GD ²			[kg/m ²]	0.0006	0.0052	0.0056	0.0066	0.0005	0.0438	0.0586	0.051	0.1331	
Voltage			[V]	230	230	230	230	230	400/690	400/690	400/690	400/690	
Full load	0%	Current	[A]	-	-	-	-	-	-	-	-	-	
		Power	[W]	-	-	-	-	-	-	-	-	-	
	75%	Current	[A]	-	-	-	-	-	-	-	-	-	
		Efficiency	[%]	67	72	72	73	72	74	92	92	88	
		Power factor	[%]	0.96	0.97	0.97	0.97	0.97	0.9	0.82	0.82	0.73	
		rpm	[min ⁻¹]	-	-	-	-	-	-	-	-	-	
	100%	Current	[A]	-	-	-	-	-	-	-	-	-	
		Efficiency	[%]	70	73	73	73	73	0.8	92	93	89	
		Power factor	[%]	0.98	0.99	0.99	0.99	0.99	0.9	0.87	0.87	0.81	
rpm		[min ⁻¹]	-	-	-	-	-	-	-	-	-		
Torque with rotor locked			[%]	-	-	-	-	-	-	-	-		
Starting current			[A]	3.2	33.3	33.3	62.7	33.3	49.5	175.8	192.3	61.4	
Poles			2						4	2		6	
Phases			1						3				
Starts per hour			15										
Model			M206M-0.5-230/50NY-E	M271M-1.5-230/50NY-E		M271M-1.9-230/50NY-E	M271M-1.5-230/50NY-E	M410T-4.9-400/50YY-IE3	M213T-16.6-400/50YY-IE3	M213T-18.2-400/50YY-IE3	M611T-5.2-400/50YY-IE3		
Type of pump			40DMLVF50.5M2AG	50DMLVF51.5M2CG	50DMLVF51.5M2BG	50DMLVF51.9M2AG	65DMLVF51.5M2CG	80DMLVF54.9T4AG	80DMLVF516.6T2BG	80DMLVF518.2T2DG	100DMLVF55.2T6BG		