

SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER SEMI-VORTEX

in cast iron



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

APPLICATIONS

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

TECHNICAL FEATURES

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

TECHNICAL DATA

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

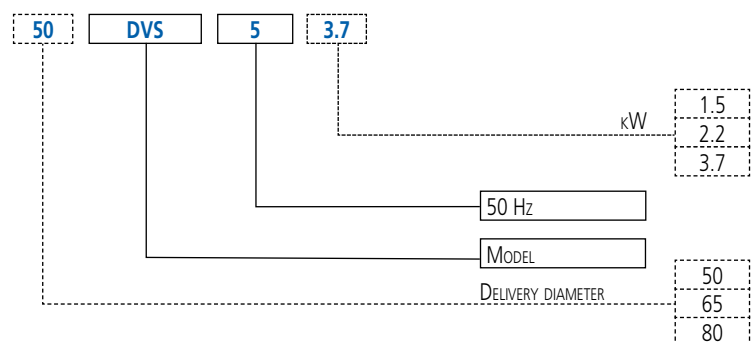
MATERIALS

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

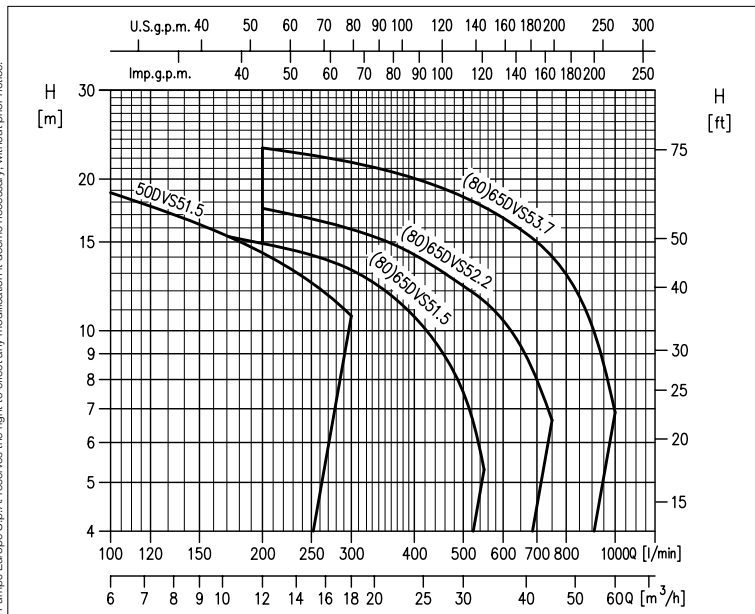
ACCESSORIES (on request)

For accessories, see page 151 onwards

PUMP IDENTIFICATION CODE



PERFORMANCE RANGE (per ISO 9906 Annex A)



PERFORMANCE TABLE

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

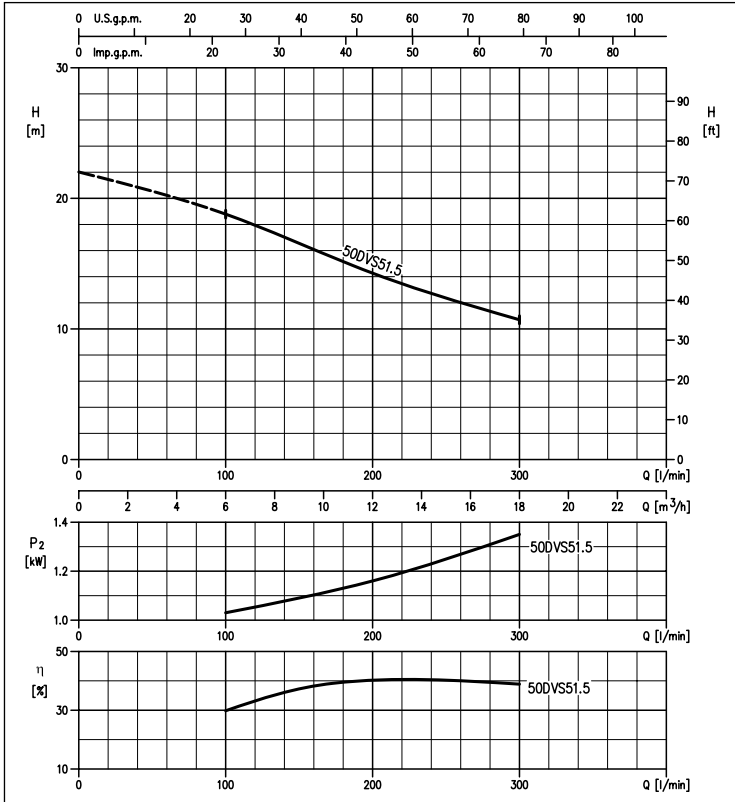
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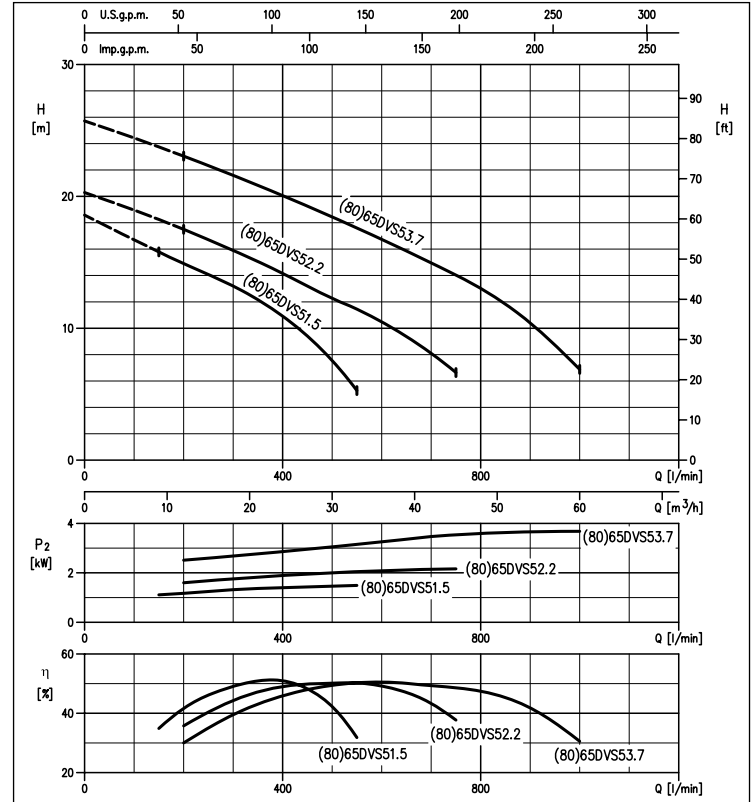
DVS

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



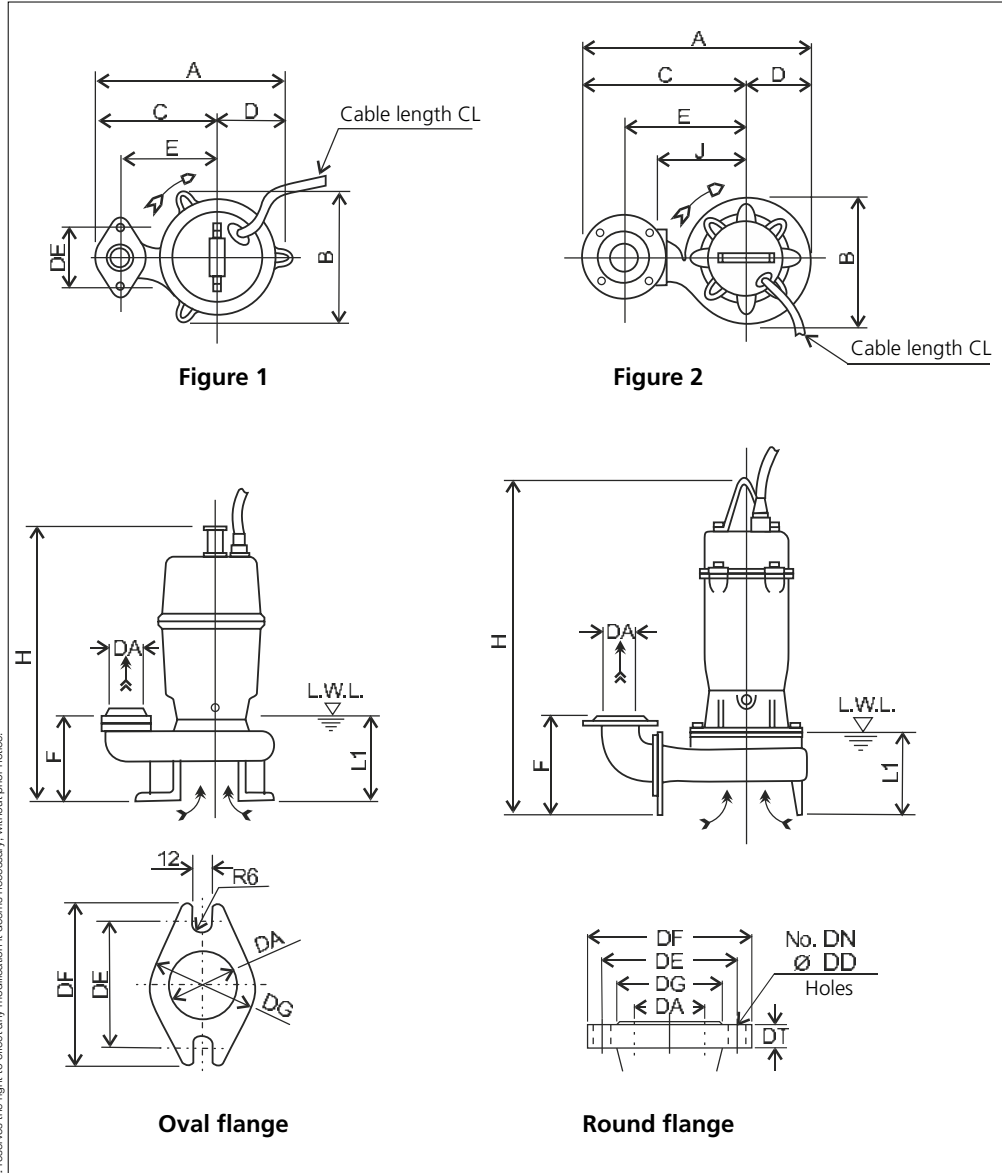
PERFORMANCE CURVES series (80)65DVS51.5 (1.5 kW)
series (80)65DVS52.2 (2.2 kW)
series (80)65DVS53.7 (3.7 kW)
(per ISO 9906 Annex A)



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DIMENSIONS DVS



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

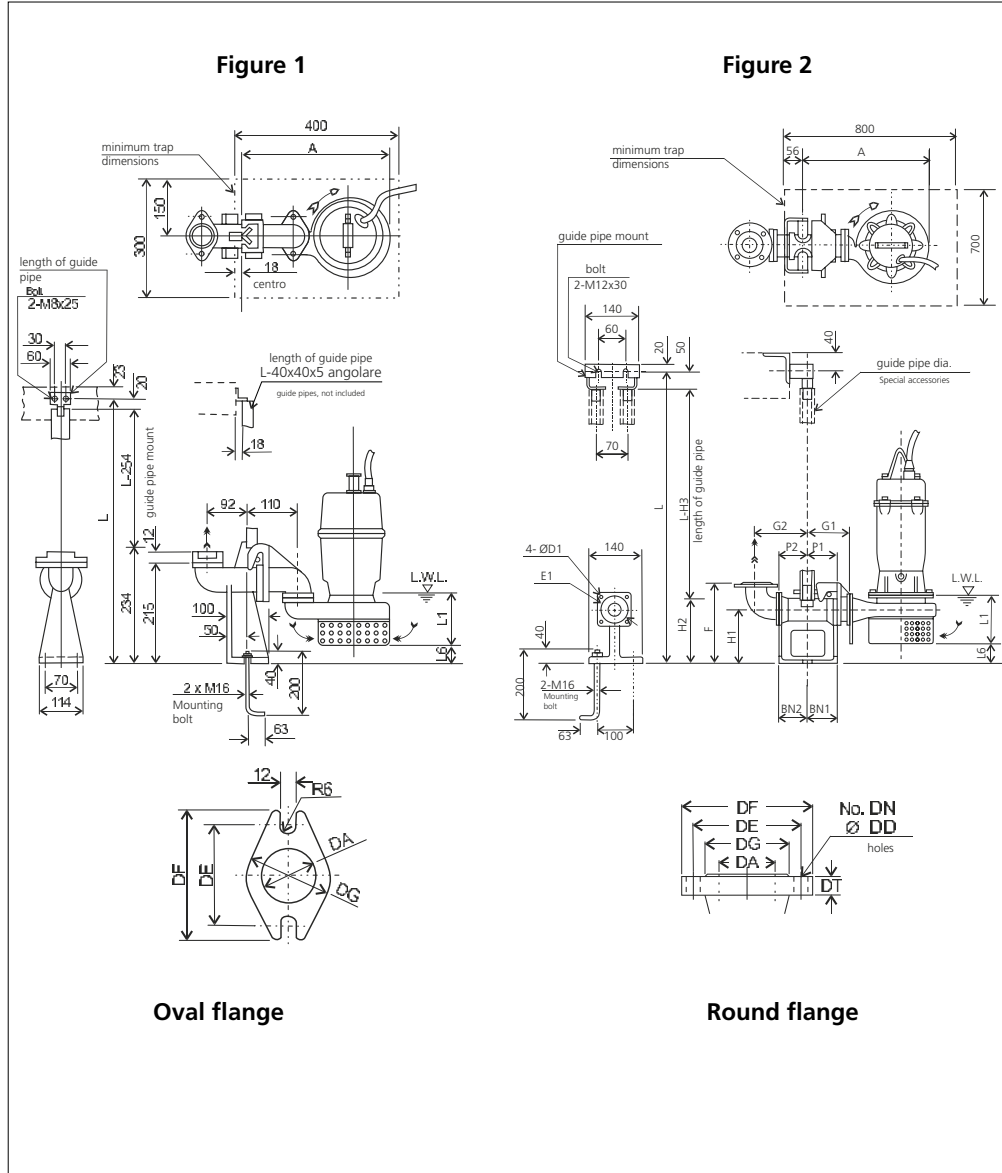
TABLE OF DIMENSIONS DVS

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

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

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

DIMENSIONS DVS with QDC (lowering device kit)



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

TABLE OF DIMENSIONS DVS with QDC (lowering device kit)

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

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

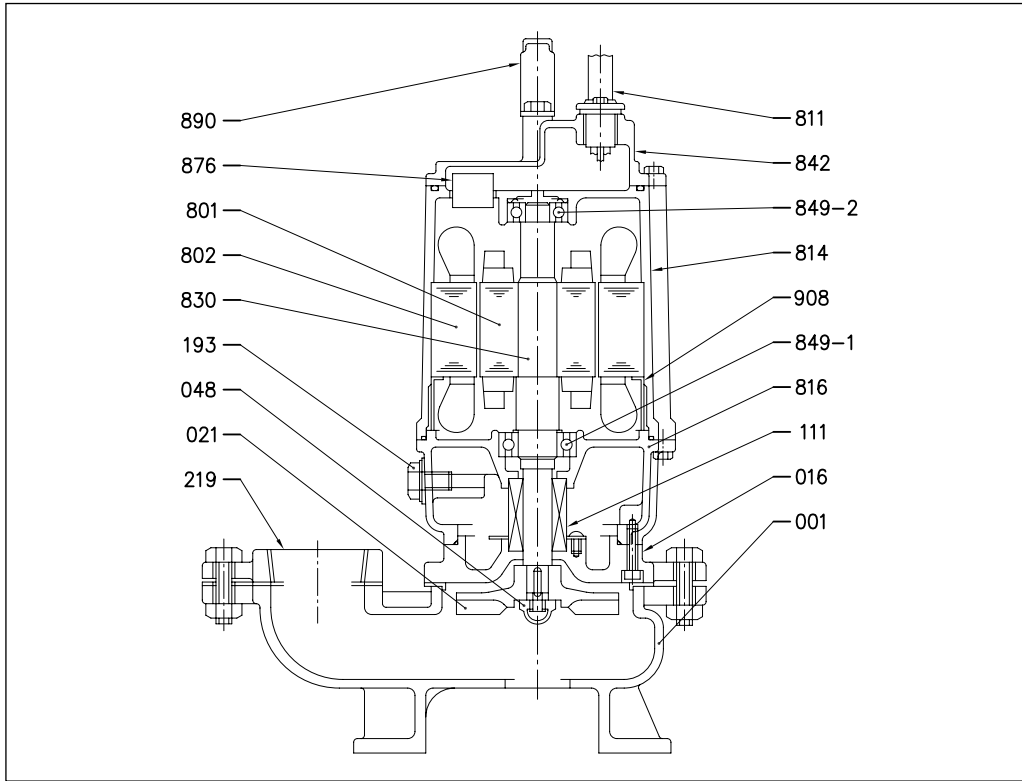
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DVS

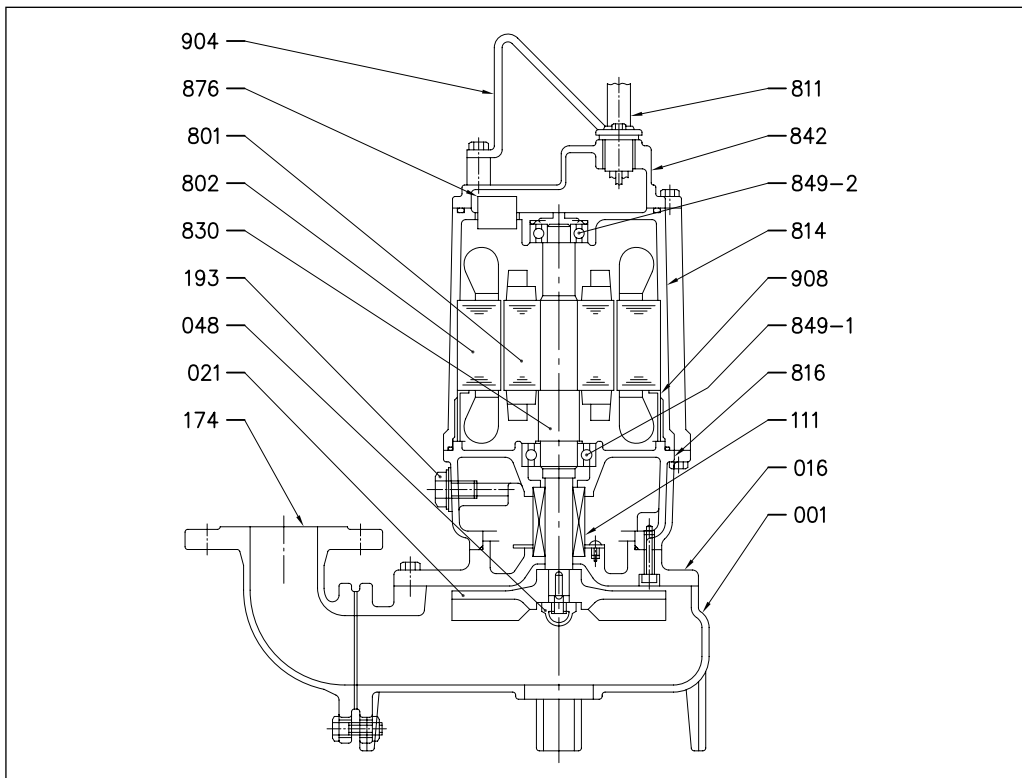
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SECTIONAL VIEW 50 DS (1.5kW)



SECTIONAL VIEW 65(80) DVS (1.5kW)



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

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

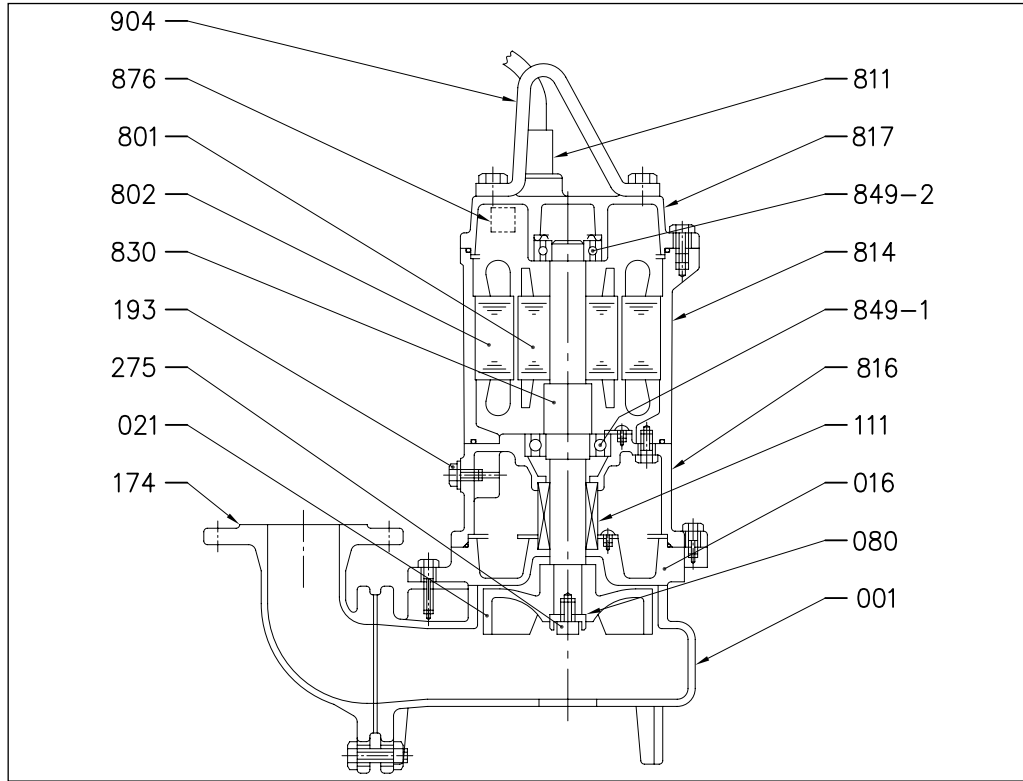


TABLE OF MATERIALS DVS

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

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ELECTRICAL DATA TABLE DVS (1.5 - 3.7 kW)

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

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