

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

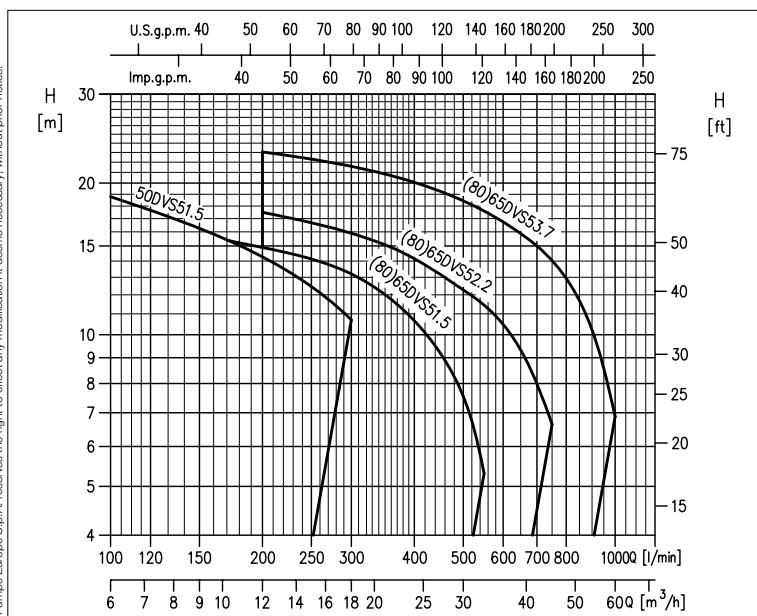
MATERIALS

- 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)

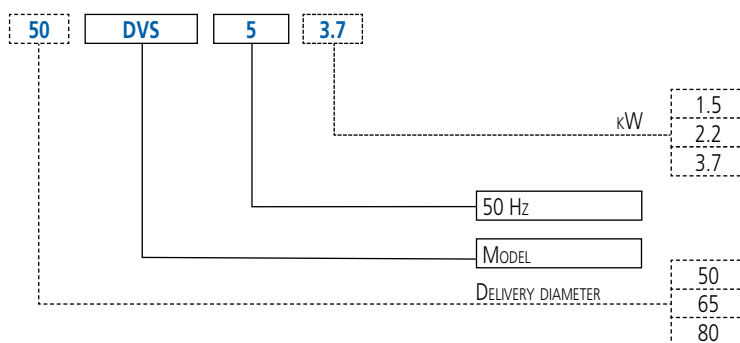
ACCESSORIES (on request)

For accessories, see page 151 onwards

PERFORMANCE RANGE (per ISO 9906 Annex A)



PUMP IDENTIFICATION CODE



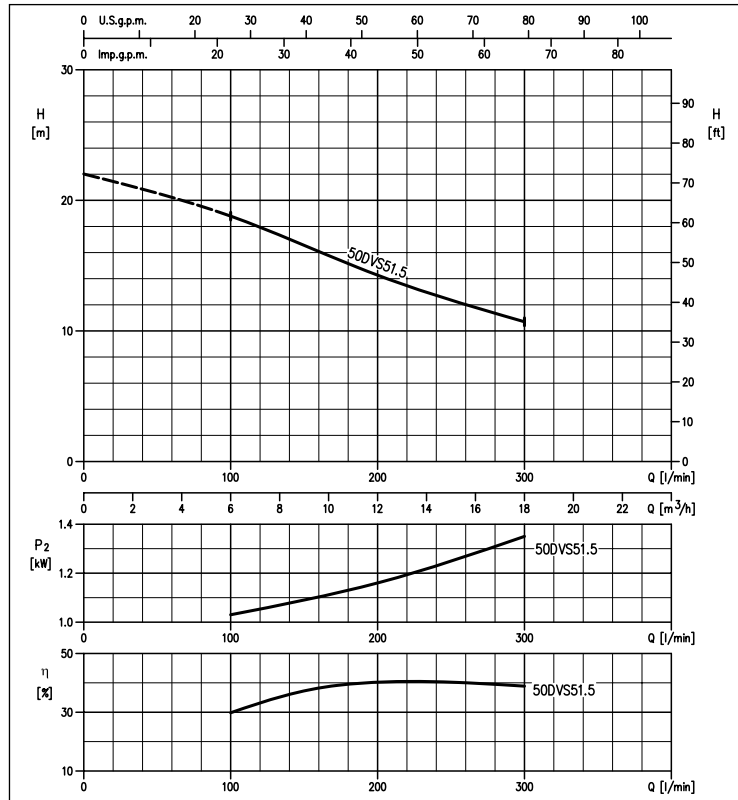
PERFORMANCE TABLE

Model	P ₂		Q = Flow rate												
			l/min	100	150	200	300	400	500	550	600	700	750	900	1000
	[HP]	[kW]	m³/h	6	9	12	18	24	30	33	36	42	45	54	60
	H = Head [m]														
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	

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

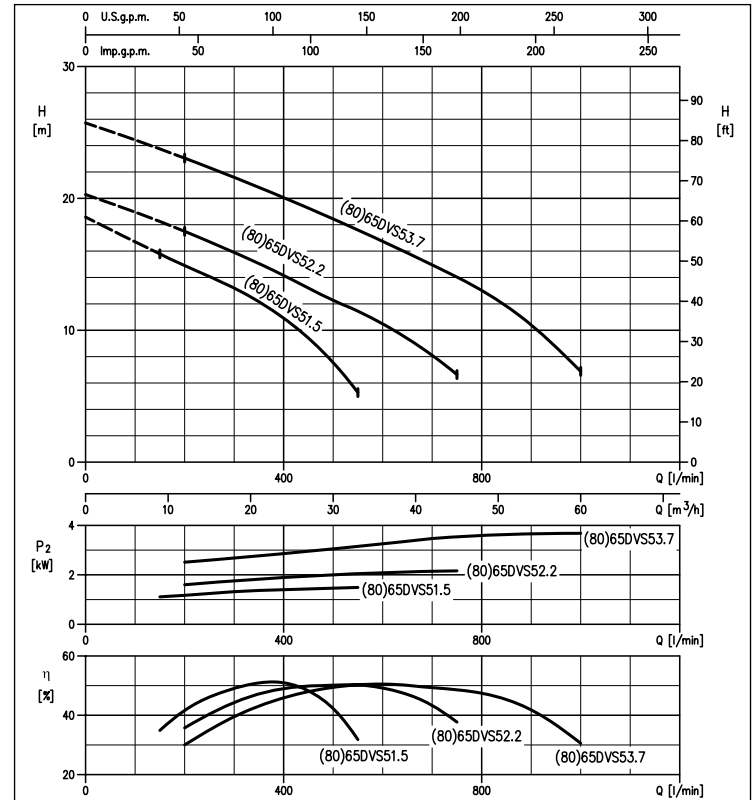
PERFORMANCE CURVES series 50DVS51.5 (1.5 kW)

(per ISO 9906 Annex A)



PERFORMANCE CURVES series (80)65DVS51.5 (1.5 kW) series (80)65DVS52.2 (2.2 kW) series (80)65DVS53.7 (3.7 kW)

(per ISO 9906 Annex A)



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

DIMENSIONS DVS

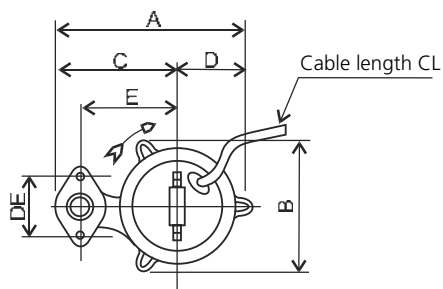


Figure 1

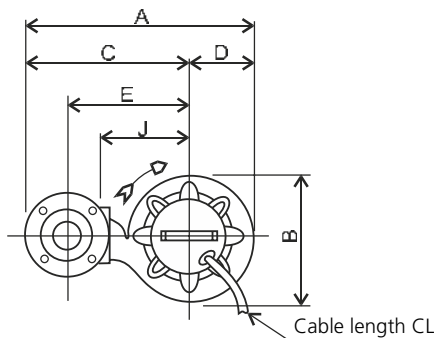
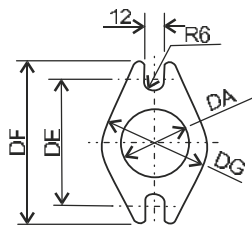
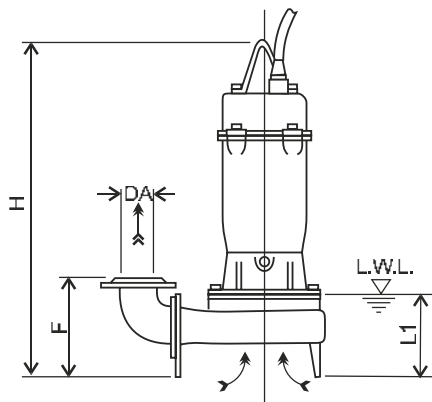
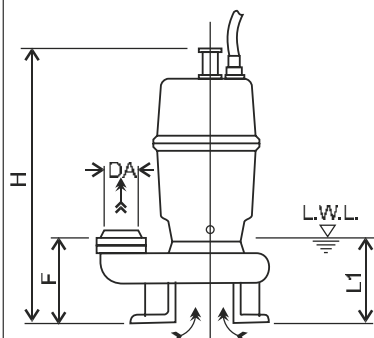
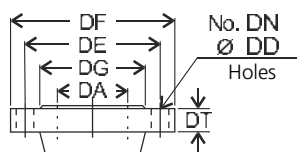


Figure 2



Oval flange



Round flange

Flange dimensions table [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	

TABLE OF DIMENSIONS DVS

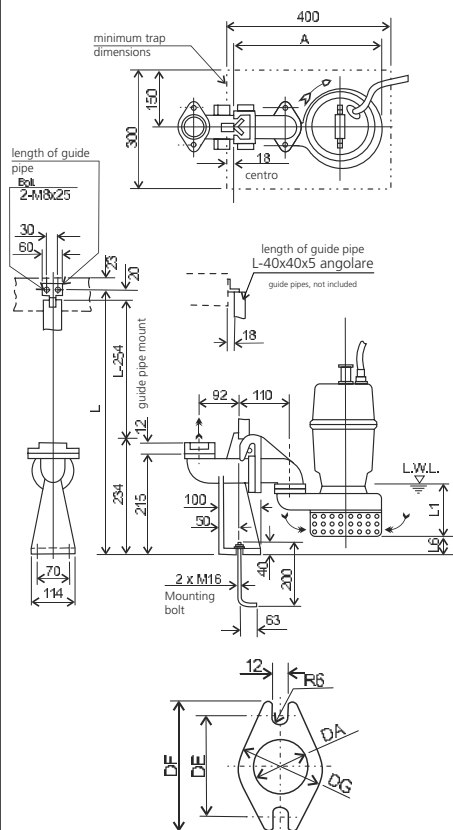
DA	Model	Fig.	Type Flange	[kW]	DA	A	B	C	D	E	F	H	DE	J	L1 (*)	CL [m]	Weight [kg]
50	50DVS51.5	1	Oval	1.5	G2	249	171	163	86	125	82	439	96	-	105	6	27
65	65DVS51.5	2	Round	1.5	65	396	195	298	98	210	178	519	-	145	125		34
	65DVS52.2			2.2		427	227	313	114	225	201	643		160	155	10	50
	65DVS53.7			3.7								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

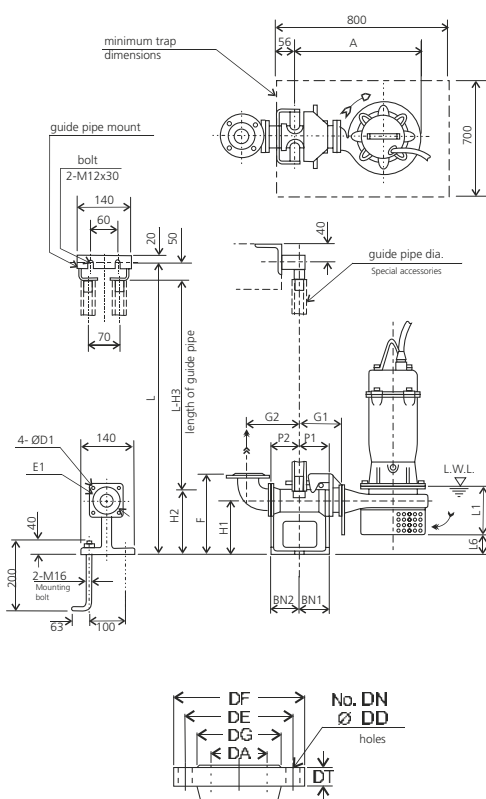
DIMENSIONS DVS with QDC (lowering device kit)

Figure 1



Oval flange

Figure 2



Round flange

Flange dimensions table [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	

TABLE OF DIMENSIONS DVS with QDC (lowering device kit)

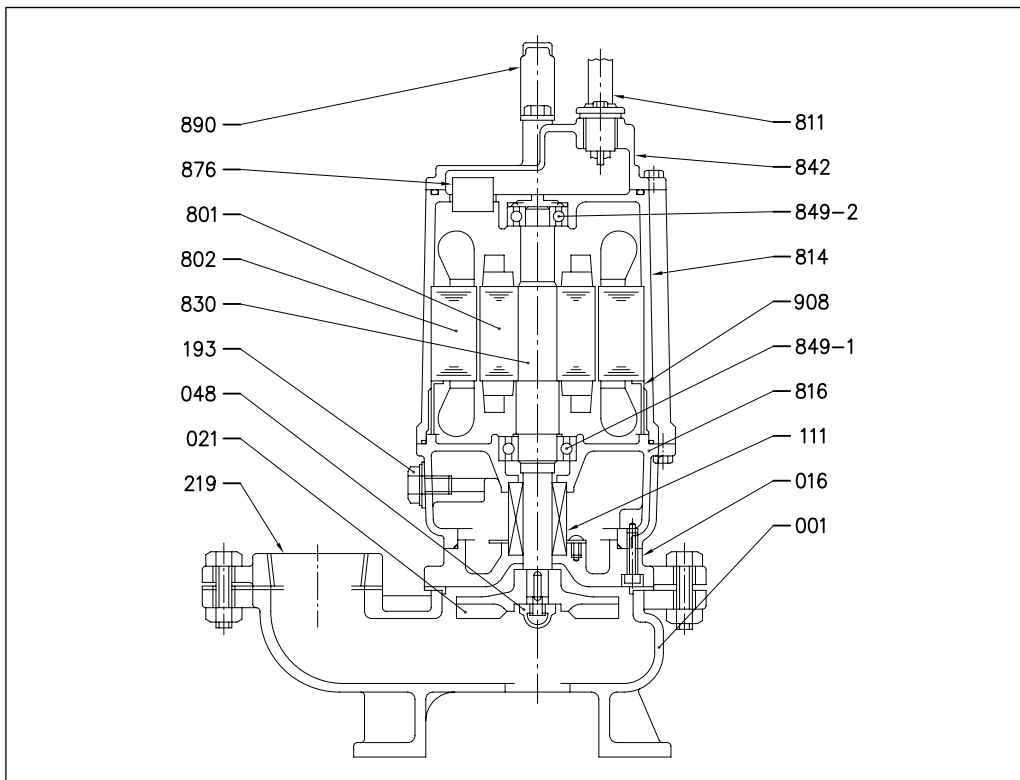
DA	Model	Fig.	Type Flange	[kW]	A	P1	P2	G1	G2	F	H1	H2	H3	L1 (*)	L6	BN1	BN2	D1	E1	QDC (lowering device kit) ModelWeight (kg)	
50	50DVS51.5	1	Oval	1.5	311	-	-	-	-	-	-	-	-	105	58	-	-	-	-	LS50	9
65	65DVS51.5	2	Round	1.5	363	75	95	120	160	250	145	190	240	125	72	75	95	12	140	LM65	14
	2.2			394	155									49							
	3.7																				
	3.7																				
80	80DVS51.5			1.5	363				170	255	145	125	72								
	80DVS52.2			2.2	394							155	49								
	80DVS53.7			3.7																	

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

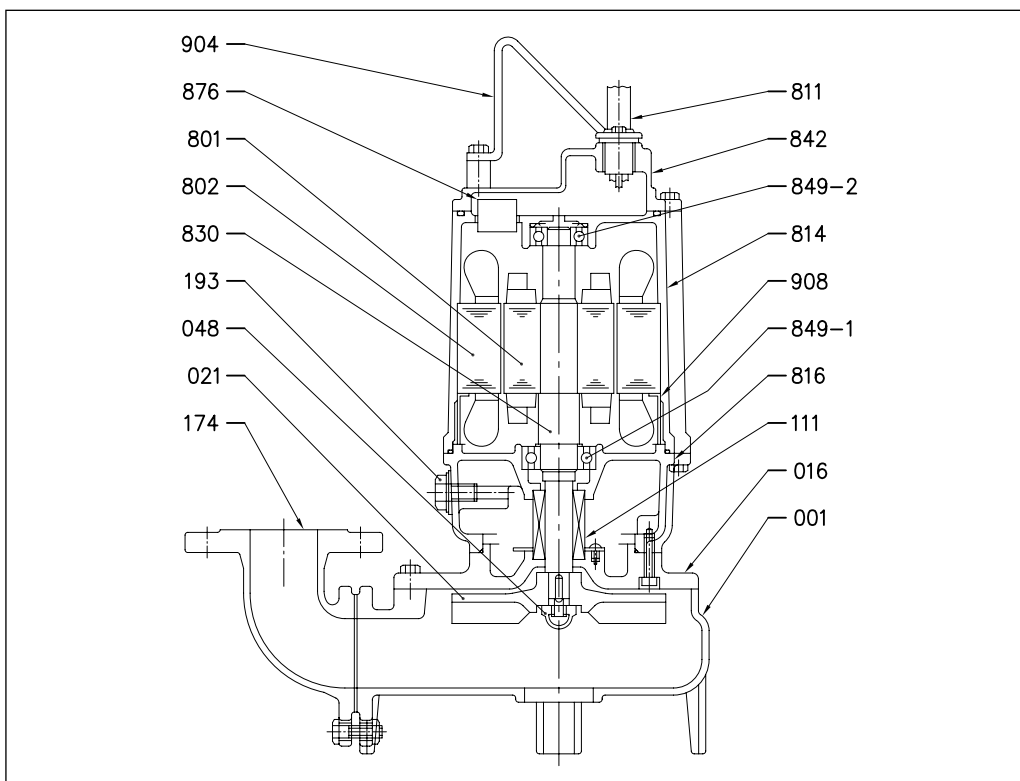
SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER SEMI-VORTEX

in cast iron

SECTIONAL VIEW 50 DS (1.5kW)



SECTIONAL VIEW 65(80) DVS (1.5kW)



SUBMERSIBLE ELECTRIC PUMPS FOR LOADED WATER SEMI-VORTEX

in cast iron

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

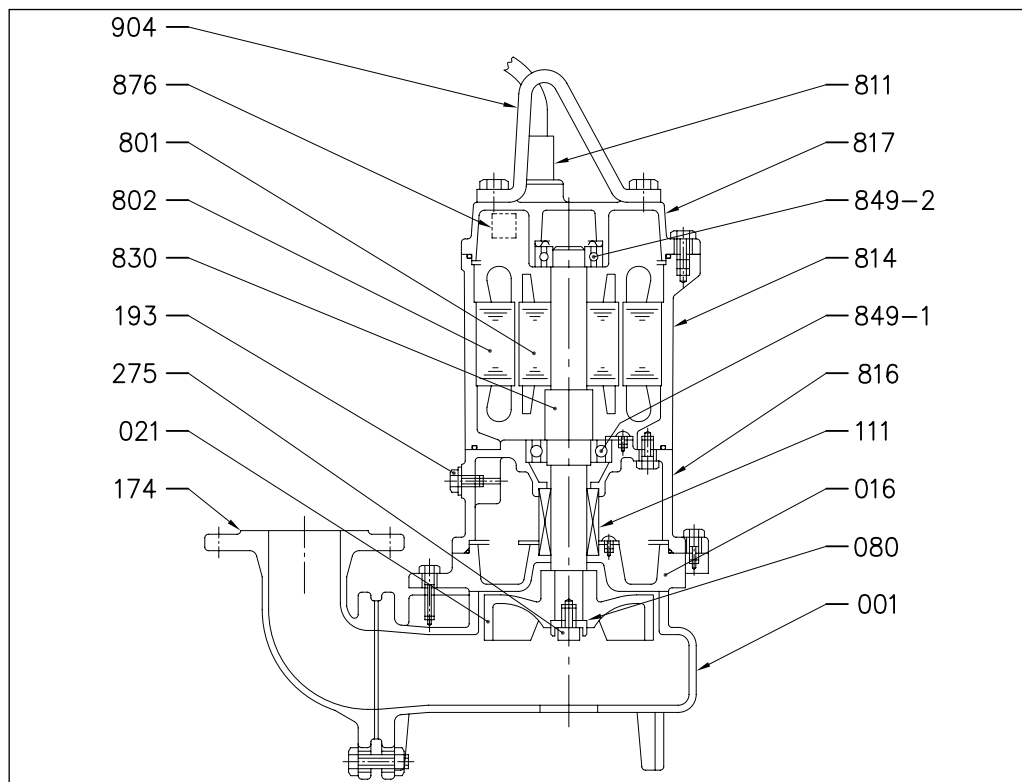


TABLE OF MATERIALS DVS

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/m²]	0.0057			0.0082			0.011		
Voltage			[V]	380	400	415	380	400	415	380	400	415
Full load	0%	Current	[A]	1.25	1.32	1.30	1.95	2.15	2.33	3.20	3.30	3.90
		Power	[W]	430	405	400	500	500	252	800	500	600
	75%	Current	[A]	2.92	2.62	2.61	4.07	4.06	3.82	7.07	6.32	6.45
		Efficiency	[%]	63.59	69.18	70.11	71.23	69.69	77.58	68.00	75.54	74.26
		Power factor	[%]	91.93	89.54	85.68	86.44	84.27	77.40	87.75	83.92	80.61
		rpm	[min ⁻¹]	2872	2887	2898	2895	2901	2927	2890	2917	2922
	100%	Current	[A]	3.70	3.30	3.30	5.10	5.00	4.60	8.80	7.80	7.80
		Efficiency	[%]	65.61	71.25	70.89	73.05	72.28	79.33	70.79	77.64	76.74
		Power factor	[%]	9.88	92.08	89.21	89.71	87.87	83.88	90.24	88.18	86.00
		rpm	[min ⁻¹]	2821	2847	2854	2851	2864	2900	2847	2886	2890
Torque with rotor locked			[%]	243	295	303	161	186	184	175	216	233
Starting current			[A]	20.5	21.1	22.5	28.7	30.0	31.5	51.2	51.0	53.0
Poles				2								
Phases				3								
Frequency			[Hz]	50								
Starts per hour				10								
Tolerance for voltage			[%]	±10%								
Tolerance for frequency			[%]	±1%								
Insulation class				F								
Model				ZDSEU								