

Submersible Effluent Pump

Type DAR

Submersible electric pumps with vortex and dual-channel impeller, for demanding applications. Suitable for handling liquids containing solid and/or filamentary substances in suspension and for draining effluent water (sanitary fixtures). They are also recommended for draining and discharging cesspits and effluent water.

TECHNICAL DATA

- Max. immersion 7m (with 10m cable length)
- Max. temperature of the liquid : 25°C with partially submersed pump
35°C with totally submersed pump
- Max. solids passage : 50mm
- Pump Speed : 2 Poles
- Insulation class F
- Protection degree IP68
- Voltage: - Single phase 1~230V±10%,
- Three phase 3~400V±10%

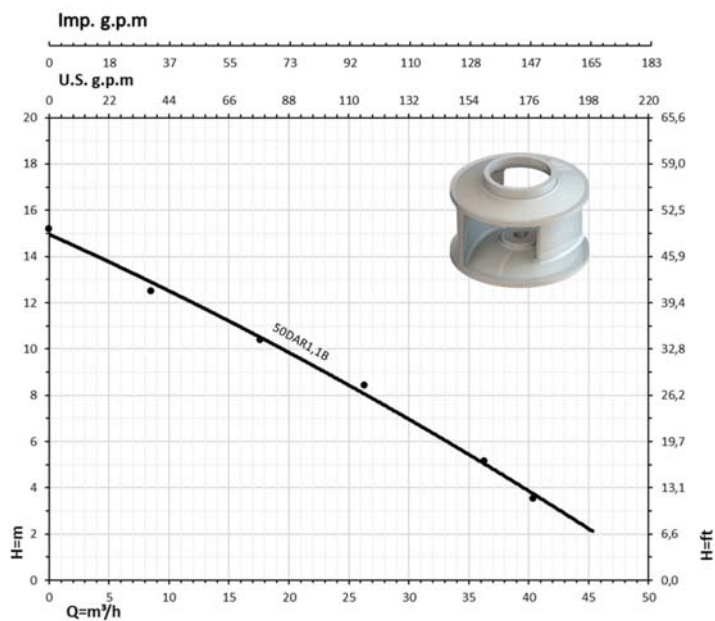
Permanent split capacitor built in overload motor protector with automatic reset. The three phase version does not have an internal motor protector, therefore overload protection must be provided by the user.

MATERIALS

- Pump body: Cast iron
- Impeller AISI 304 (EN 1.4301)
- Shaft AISI 316 (EN 1.4401)

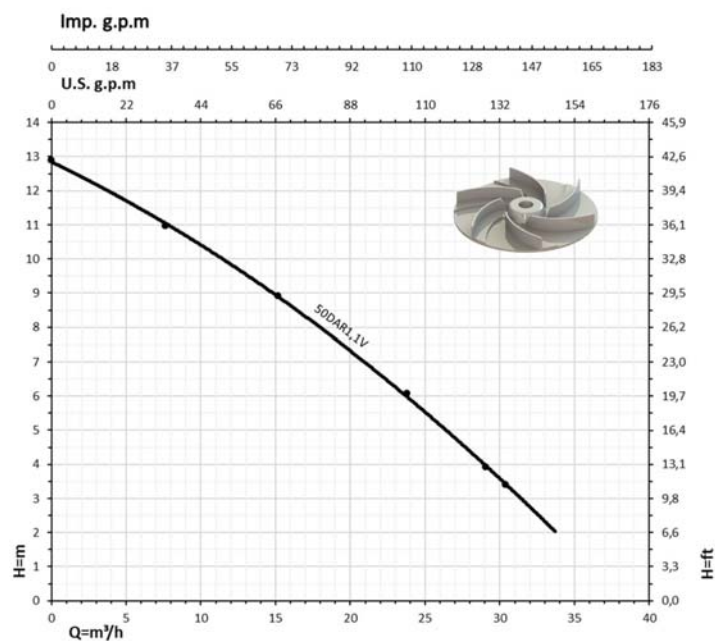


PERFORMANCE CHART

**50DAR51.1B - Impeller diameter = Ø108**

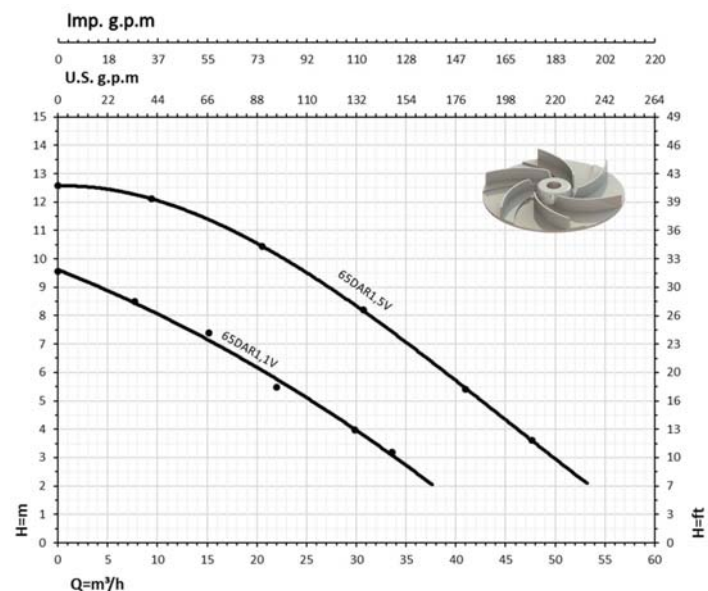
Pump Type	Q=Capacity									
	[l/min]	0	83,33	166,7	250	333,3	416,7	500	667	750
	[m³/h]	0	5	10	15	20	25	30	40	45
H=Total manometric head in meters										
50DAR51,1B		15,0	13,8	12,5	11,0	9,8	8,5	7,0	4,0	2,0

Rotation speed $\approx 2800 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

**50DAR51.1V - Impeller diameter = Ø108**

Pump Type	Q=Capacity									
	[l/min]	0	83,33	166,7	250	333,3	416,7	500	567	
	[m³/h]	0	5	10	15	20	25	30	34	
H=Total manometric head in meters										
50DAR51,1V		13,0	11,7	10,5	9,0	7,7	5,5	3,7	2,0	

Rotation speed $\approx 2800 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

**65DAR51.1V - Impeller diameter = Ø115**
65DAR51.5V - Impeller diameter = Ø115

Pump Type	Q=Capacity									
	[l/min]	0	166,7	333,3	500	583,3	666,7	750	900	
	[m³/h]	0	10	20	30	35	40	45	54	
H=Total manometric head in meters										
65DAR51,1V		13,0	11,7	10,5	9,0	7,7	5,5	3,7	2,0	
65DAR51,5V		12,5	11,8	10,5	8,5	7,2	5,8	4,3	2,0	

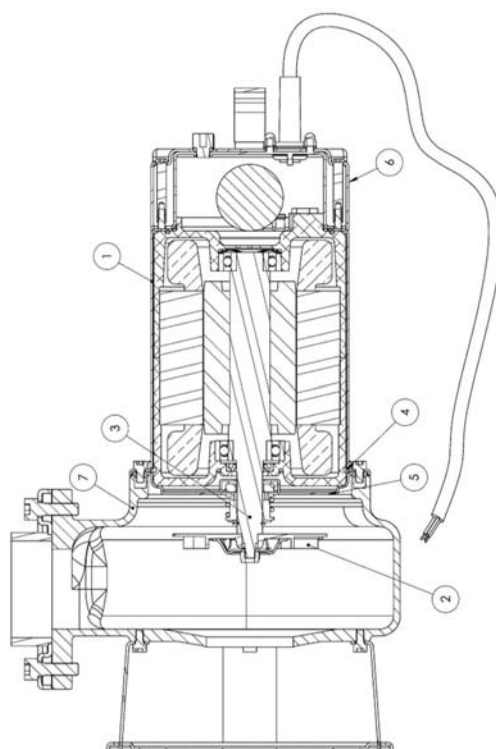
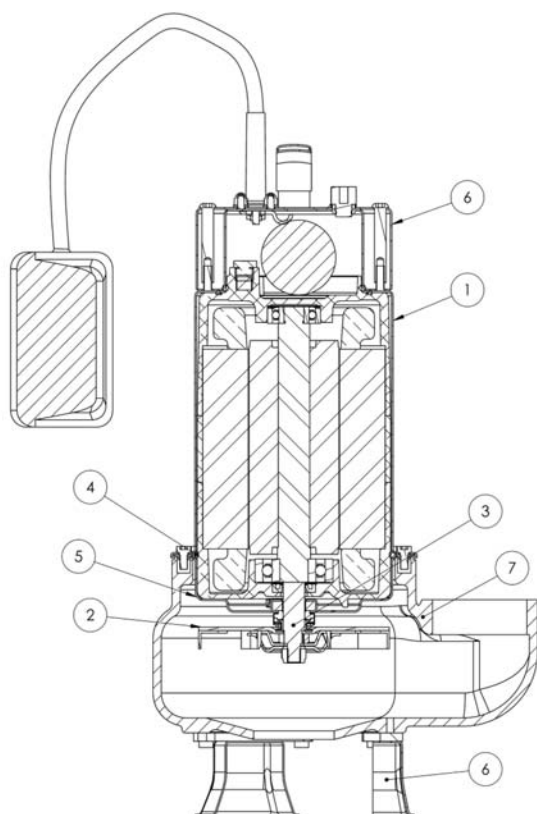
Rotation speed $\approx 2800 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

SPECIFICATIONS

PUMP		
Liquid Handled	Type of liquid	Dirty water
	Max temperature [°C]	35
	Max solids size [mm]	50 spherical (DAR) 65 spherical (DAR-F)
Maximum immersion [m]		7
Construction	Impeller	Bicanal Vortex
	Shaft seal type	Single mechanical seal
	Bearing	Sealed ball bearing
Pipe Connection	Suction-Flange [mm]	50 Open (DAR) 65 Open (DAR-F)
	Discharge-Flange	DAR50 - G 2 UNI ISO 228 DAR65 - Flange DN 65
Material	Casing	Cast Iron
	Impeller	AISI 304
	Casing cover	AISI 304
	Shaft seal	Graphite/Alumina/NBR (DAR) SiC/Alumina/NBR (DAR-F)
	Seal cover	AISI 304
	Shaft	AISI 316 (wet extension)
	Lubricating liquid	White mineral oil: Vabriol atoxoil
Applicable standard of test		ISO 9906 - Annex A

MOTOR			
Type	Submersible oil bath motor		
	Single Phase		Three Phase
No. of Poles	2		
Rotation speed [min ⁻¹]	≈ 2800		
Insulation Class	F		
Protection degree	IP X8		
Power rating	[kW]	1.1 ÷ 1.5	1.1 ÷ 1.5
	[HP]	1.5 ÷ 2	1.5 ÷ 2
Frequency [Hz]	50		
Voltage [V]	230 ±10%		400 ±10%
Capacitor	Built in		
Over load protection	Built in		Provided by the user
Float switch	Optional		
Float switch cable	material	H07RN-F	-
	size	3G1	-
	length [m]	10	
Power cable	material	H07RN-F	H07RN-F
	size	3G1.5	4G1 (DAR) 4G1.5 (DAR-F)
Dimensions of cable	Cable Gland		

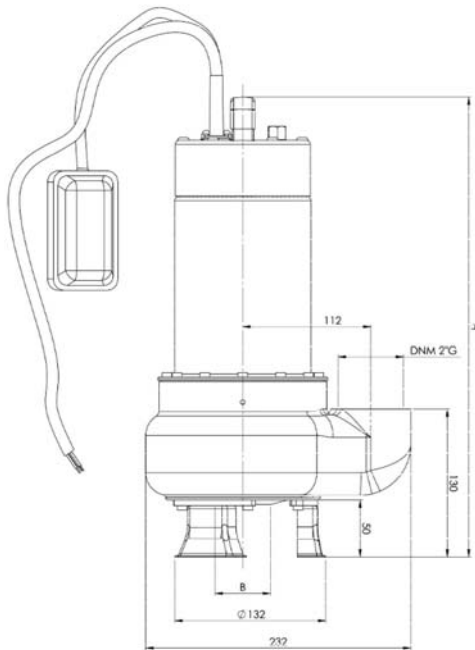
SECTIONAL VIEW



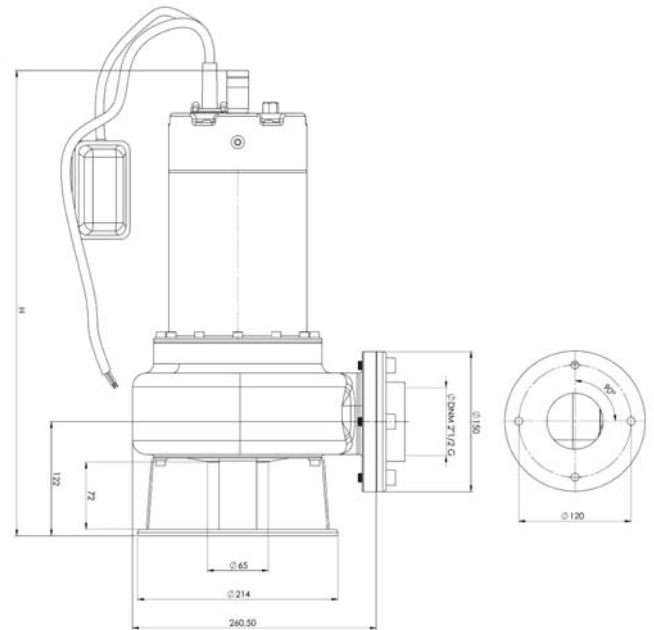
N°	PART NAME	MATERIAL	Q.TY
1	External housing	AISI 304	1
2	Impeller	AISI 304	1
3	Shaft pump side	AISI316	1
4	O-ring	NBR	1
5	Porta motore	AISI304	1
6	Coperchio	AISI304	1
7	Pump body	G20	1

DIMENSION

DAR



DAR F

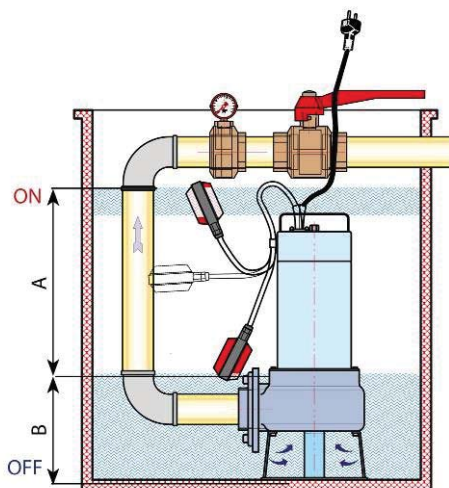


Pump type	H [mm]		B [mm]	Weight [kgf]	
	1~	3~		1~ Automatic (With float switch)	3~
50DAR51,1V	403,5	403,5	Ø50	16,5	16,5
50DAR51,1B	407,5	407,5	Ø50	17,5	17,5

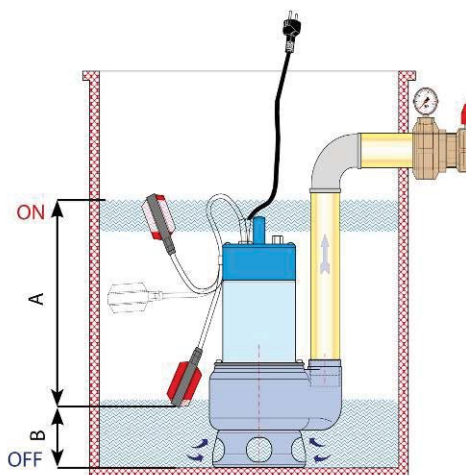
Pump type	H [mm]		Weight [kgf]	
	1~	3~	1~ Automatic (With float switch)	3~
65DAR51,1V	498	498	28	25
65DAR51,1B	498	498	28	27,5

INSTALLATION

DAR-F



DAR



Pump	A (ON)	B (OFF)
	[mm]	
DAR	280	160
DAR F 1,1	300	160
DAR F 1,5	350	160

* Dimensional details are provided for reference only.

* All specifications are subject to change without prior notice.



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