SB, SBA



GRUNDFOS

4. SBA

4.1 Product description



TM082251

Grundfos SBA is a complete all-in-one submersible booster pump for pumping clean water. The pump is especially suitable for rainwater applications and small private wells. It comes with an integrated control unit, eliminating the need for an external pump controller.

The pump is available in two versions:

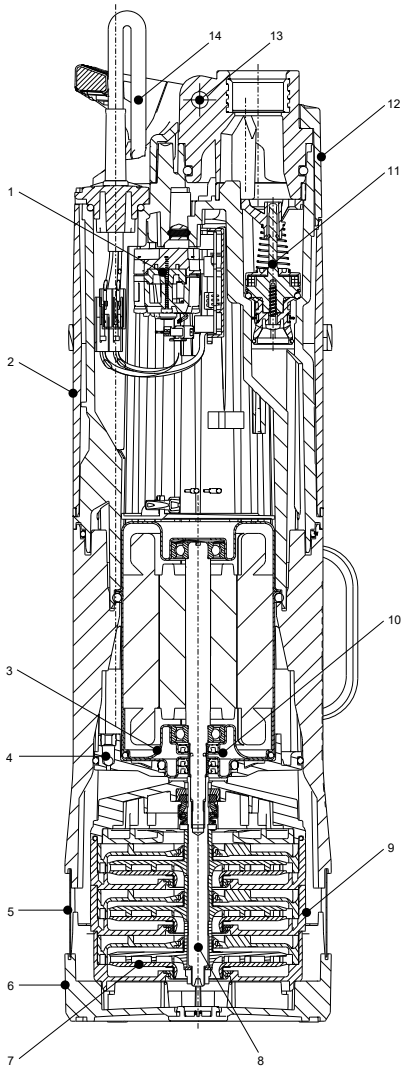
- with integrated inlet strainer with 1 mm / 0.04 inch mesh
- with side inlet which includes a flexible inlet hose with a floating inlet strainer with a 1.5 mm / 0.06 inch mesh.

Both variants are available with or without float switch. The float switch enables the pump to stop during low water levels which prevents surface fragments from entering the strainer.

4.2 Features and benefits

- All-in-one units with no external control unit.
- **Easy installation:**The pump offers quick installation by simply being plug and pump.
- **Noiseless operation:**The pump offers noiseless operation when submerged in a tank or installed underground in a well.
- **High reliability:**The pump is built from composite and stainless-steel materials that are resistant to corrosion. The stainless-steel strainer with 1 mm (0.04 inch) mesh prevents large particles from entering the pump housing.
- **Integrated protection against overheating:**The pump incorporates current- and temperature-dependent motor protection. If the pump is blocked or otherwise overloaded, the built-in thermal switch cuts out. When the motor has cooled sufficiently, it restarts automatically. No external motor protection is required.
- **Dry-running protection with automatic restart:**The integrated built-in control unit of SBA incorporates dry-running protection with automatic stop and restart.
- **Float switch:**The float switch is used for automatic operation for dry-running protection of the pump. The float switch offers stop at low water level.
- **Floating inlet strainer:**Models featuring an inlet strainer draw water from below the water surface where the water is clean and free from solid particles, ensuring that surface fragments do not block the strainer.
- **Lifting eye:**The lifting eye ensures stability when lifting the product.
- **Adapter:**The pump includes an outlet adapter suitable for 1 or 3/4 inch hose or pipe connections.

4.5 Construction



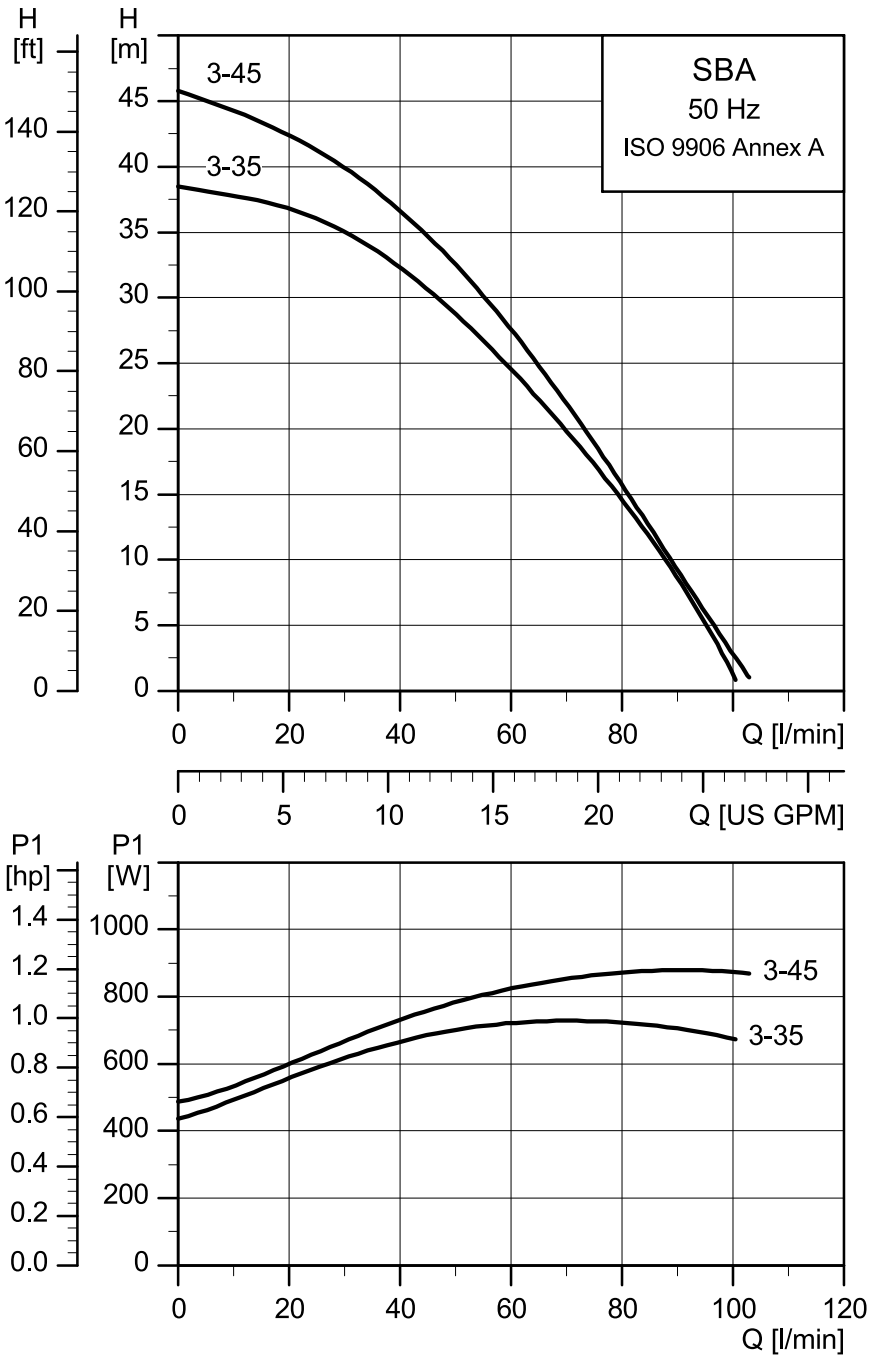
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Pos.	Component	Material
1	Built-in controller	
2	Pump housing	Polypropylene (PP30GF)
3	Stator housing	Stainless steel (EN 1.4301/AISI 304)
4	Venting ball valve	
5	Strainer [3)]	Stainless steel (EN 1.4301/AISI 304)
	Inlet collar [4)]	
6	Base	Polypropylene (PP30GF)
7	Impeller	Polypropylene (PP30GF)
8	Wetted part of shaft	Stainless steel (EN 1.4301/AISI 304)
9	Chamber/diffusor	Polypropylene (PPO20GF)
10	Shaft	Stainless steel (EN 1.4401/AISI 416)
11	Non-return valve	
12	Cover	Polypropylene (PP30GF)
13	Lifting eye	
14	Cable	Neoprene H07RN-F
-	O-rings	NBR

3) Only fitted on models with integrated inlet strainer.

4) Only fitted on models with floating inlet strainer.

4.6 Performance curves, SBA 50 Hz



TM1040467

4.8 Electrical data

SBA	Voltage [V]	Frequency [Hz]	P1 [kW]	P2 [kW]	$I_{1/1}$ [A]	rpm
3-35	1 × 230	50	0.75	0.47	3.5	2800
3-45			0.90	0.55	4.0	2800
3-35	1 × 115	60	0.75	0.45	7.0	3400
3-45			1.00	0.62	9.5	3400
3-35	1 × 230		0.75	0.47	3.5	3400
3-45			0.90	0.55	4.0	3400

4.9 Operating conditions

Max. flow rate	3 m^3/h (13.2 gpm)
Min. flow rate	1 l/min (0.26 gpm)
Liquid temperature	0-40 °C (32-104 °F)
Storage temperature	-10 to +40 °C (14-104 °F)
Max. system pressure	6 bar (87 psi)
Max. starts per hour	20
Max. installation depth	10 m (32.81 ft) below water level
Enclosure class	IPX8
Insulation class	F
Supply cable length	15 m (49.2 ft)

Starting conditions

The pump starts when one of the following conditions is fulfilled:

- The flow rate is higher than the minimum flow rate.
- The pressure is lower than the start pressure.

Stopping conditions

The pump stops with a time delay of 10 seconds when the flow rate is lower than the minimum flow rate.

Automatic restart of SBA pumps

Pumps with a float switch automatically restart when water is added. Pumps without a float switch attempt to restart every 24 hours.

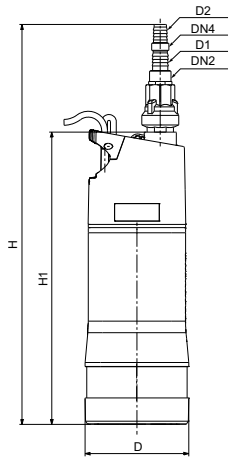
4.10 Start pressure

Pump	Start pressure	Max. height between pump and tap [5]
SBA 3-35	1.5 bar (0.15 MPa)	13 m (42.65 ft)
SBA 3-45	2.4 bar (0.22 MPa)	20 m (65.62 ft)

[5] Install the pump so that the height between the pump and the highest tapping point does not exceed the maximum height.

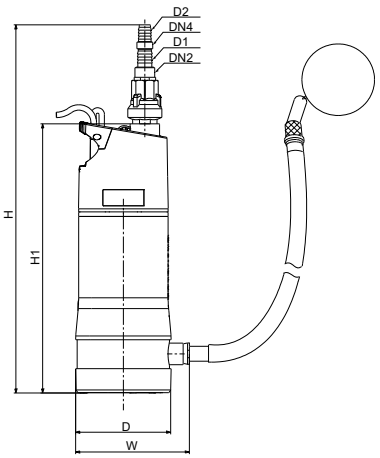
4.11 Dimensions

Model with integrated inlet strainer



TM082677

Model with floating inlet strainer



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Pump type	H	H1	W	D	D1	D2	DN2	DN4
	mm[inch]	mm[inch]	mm[inch]	mm[inch]	mm[inch]	mm[inch]		
SBA 3-35	664 [26]	571 [22]	180 [7]	160 [6]	25 [1]	18 [0.7]	NPT / G 1"	NPT / G 3/4"
SBA 3-45	664 [26]	571 [22]	180 [7]	160 [6]	25 [1]	18 [0.7]	NPT / G 1"	NPT / G 3/4"

4.12 Product range SBA

Pump type	Frequency	Product number	Voltage[V]	Plug type	Float switch	Floating inlet strainer	Net weight[kg]
SBA	50 Hz	92713060	230 V	Schuko	✔	-	13.2
		92713065	230 V	Schuko	✔	✔	13.7
		92713049	230 V	Schuko	-	-	13
		92713062	230 V	Schuko	-	✔	13.5
		92713105	230 V	No plug	✔	-	13.2
		92713107	230 V	No plug	✔	✔	13.7
		92713104	230 V	No plug	-	-	13
		92713106	230 V	No plug	-	✔	13.5
		92713166	230 V	AUS	✔	-	13.2
		92713068	230 V	Schuko	✔	-	13.2
		92713101	230 V	Schuko	✔	✔	13.7
		92834170	230 V	Schuko	-	-	13
		92713100	230 V	Schuko	-	✔	13.5
		92713120	230 V	No plug	✔	-	13.2
		92713123	230 V	No plug	✔	✔	13.7
		92713108	230 V	No plug	-	-	13
		92713122	230 V	No plug	-	✔	13.5
		92713133	230 V	AUS	✔	-	13.2
	60 Hz	92713164	230 V	No plug	✔	-	13.2
		92713196	230 V	No plug	✔	✔	13.7
		92713152	115 V	NEMA	✔	-	13.2
		92713155	115 V	NEMA	✔	✔	13.7
		92713154	115 V	NEMA	-	✔	13.5
		92713197	115 V	No plug	✔	-	13.2
		92713200	115 V	No plug	✔	✔	13.7
		92713157	115 V	NEMA	✔	-	13.2
		92713162	115 V	NEMA	✔	✔	13.7
		92713158	115 V	NEMA	-	✔	13.5
		92713241	230 V	NEMA	✔	-	13.2