

UNILIFT AP35B



TM079226

The UNILIFT AP35B pump is a single-stage, submersible pump designed for pumping effluent. The pump has a side outlet allowing easy adaptation to existing pipes including auto coupling systems. The pump is able to handle particles up to 35 mm.

The pump is suitable for permanent installation or can be used as a portable pump. The pump is available with the following options: :

- with a float switch fitted for automatic on/off operation between two liquid levels (single-phase pumps)
- with a separate level switch and control box for automatic on/off operation between two liquid levels (three-phase pumps)
- without a level switch for manual on/off operation.

Pumps that are fitted with a float switch can also be used for manual on/off operation. In this case, the float switch must be secured in an upward-facing position.

Applications

The pump is suitable for the following applications:

- groundwater lowering
- pumping in drainage collecting wells
- pumping in surface water collecting wells with inflow from, for example, roof gutters, shafts and tunnels
- emptying of, for example, ponds and tanks
- pumping of fibre-containing wastewater from laundries and industries
- pumping of domestic effluents from septic and sludge-treating systems
- pumping of domestic effluent without discharge from water closets.

Features and benefits of UNILIFT AP35B

UNILIFT AP35B has many beneficial features:

- designed for more demanding effluent pumping
- high performance, high reliability and low maintenance
- UNILIFT AP35B is designed for effluent applications
- included motor protection on single phase pumps that reacts to blockage
- Service friendly – quick access to change wear parts like cable, shaft sealing, impeller and rotor.

Type key

Example:

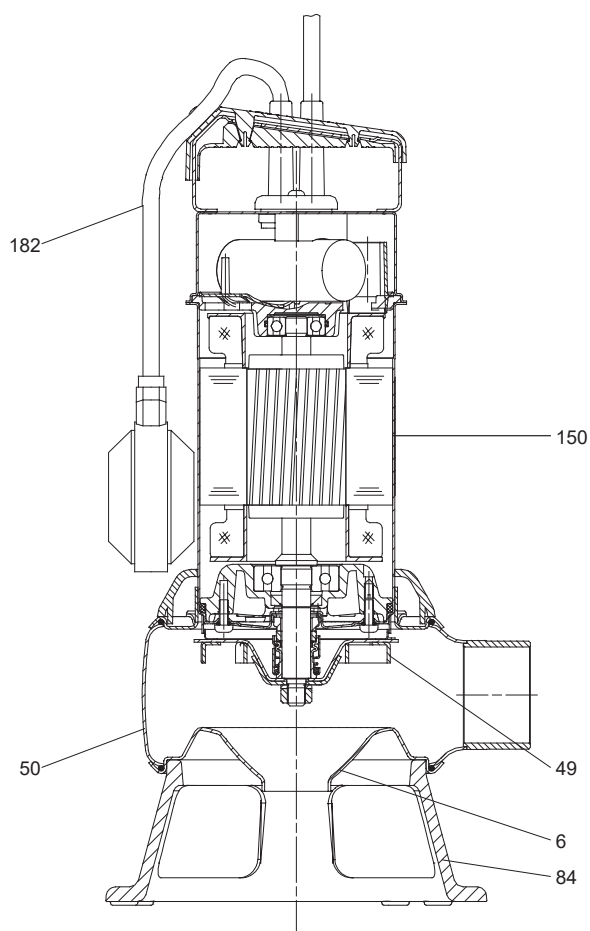
UNILIFT AP.35.B.50.08.A1V

	Description
UNILIFT AP	Type range
12 35 50	Maximum solids size
Blank - AP pump B - AP Basic	Pump type
40 50	Nominal diameter of the discharge port [mm]
	Power output (P2/100[W])
A - automatic operation (with float switch) Blank - manual operation (without float switch)	Level control
1 - single-phase 3 - three-phase	Motor
V - vortex impeller	Impeller

Approvals and markings

Approvals			
	TM075405		TM074611
	98507008_RCM_MARK		TM075835
	99853271		TM074619

Construction of UNILIFT AP35B



Materials

Pos.	Component	Materials	DIN W. - Nr.	AISI
6	Pump housing	Stainless steel	1.4301	304
-	Riser pipe	Stainless steel	1.4301	304
49	Impeller	Stainless steel	1.4301	304
150	Motor unit complete	Parts in contact with liquid: Stainless steel	1.4401	316
-	Pump shaft - wet end	Stainless steel	1.4301	304
181	Motor cable	Neoprene		
-	O-rings	NBR rubber		
-	Spring	Stainless steel	1.4310	
50	Pump inlet	Stainless steel	1.4301	304
84	Ring stand	Composite		
-	Oil	Shell Odina 15, non-toxic		

Pump sleeve and housing

The stainless-steel pump sleeve is made in one piece and equipped with an insulated carrying handle. The suction strainer is clipped onto the pump housing for easy removal in connection with maintenance.

The strainer prevents the passage of large solids and ensures a slow flow into the pump. As a result, most impurities are prevented from entering the pump. The stainless-steel pump housing is fitted with an internal riser pipe ensuring high efficiency.

The riser pipe has a number of holes enabling efficient cooling of the motor during operation. The cable entry has a socket and plug connection for quick and easy dismantling.

Discharge port

All UNILIFT AP35B pumps have a threaded R 2 horizontal discharge port.

Motor

The motor is a single- or three-phase asynchronous dry-rotor motor.

Enclosure class	IP68
Insulation class	F (155 °C)
Cable type	H07RN(8)-F

Single-phase motors have built-in thermal protection.

Manufactured according to EN 60335-2-41.

Shaft and bearings

The stainless-steel shaft rotates in maintenance-free pre-lubricated ball bearings.

Impeller

The stainless-steel impeller is a vortex impeller with L-shaped blades and a clearance of 35 mm in the pump housing. The blades are curved backwards to reduce any harmful effect from solid particles and to minimise power consumption. The impeller has a protective cap to prevent the deposit of long-fibred material.

Shaft seal

The shaft seal is a combination of a mechanical bellows shaft seal and a lip seal with 60 ml oil between. Seal faces are made of silicone carbide.

Pumped liquids

The pumps are suitable for the below liquids:

- clean, non-aggressive water
- slightly dirty (grey) wastewater.

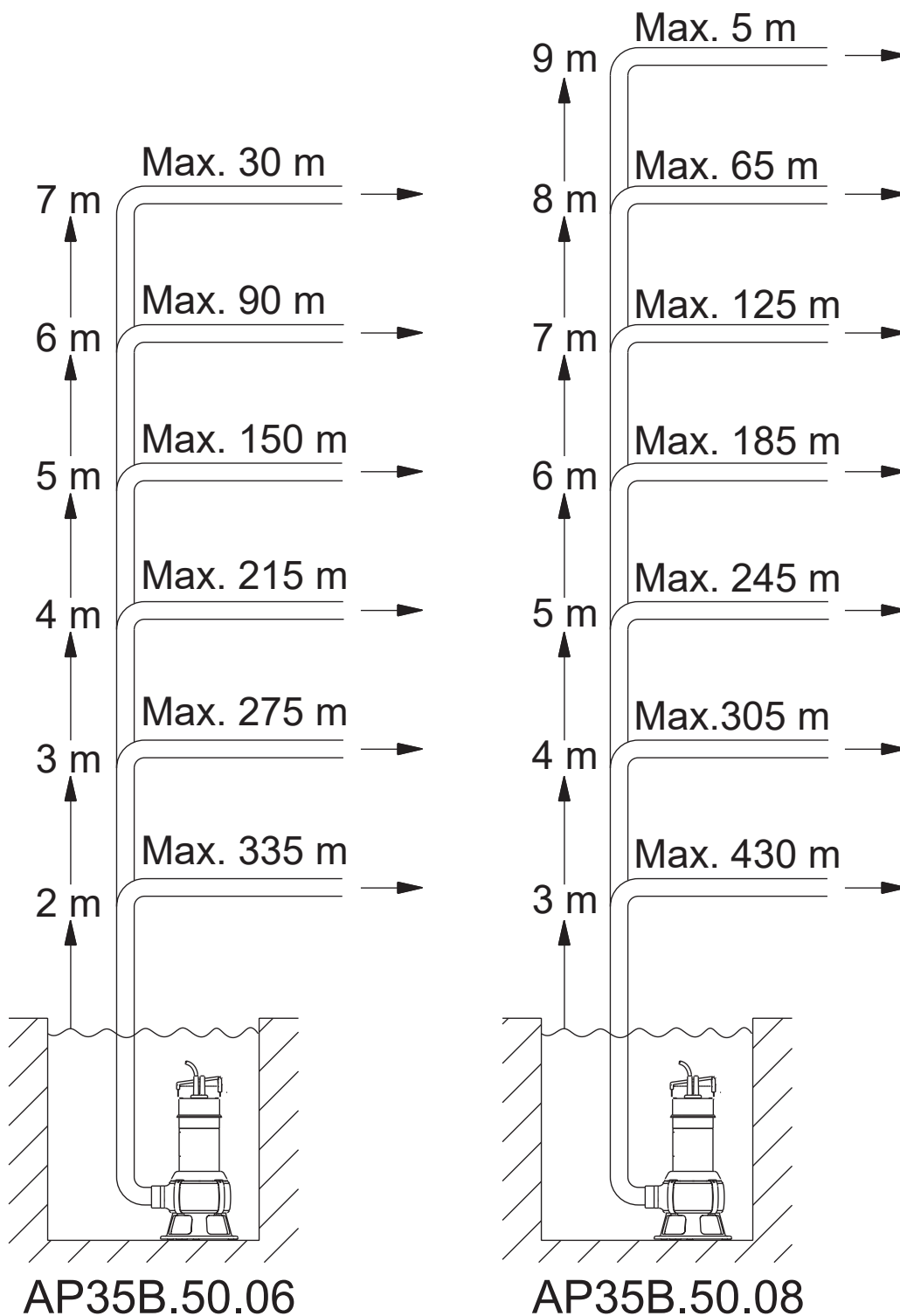
The open-impeller design ensures free passage of solids up to 35 mm.

Level switches

Level controllers and switches are delivered with the product and are directly connected to the single-phase motors.

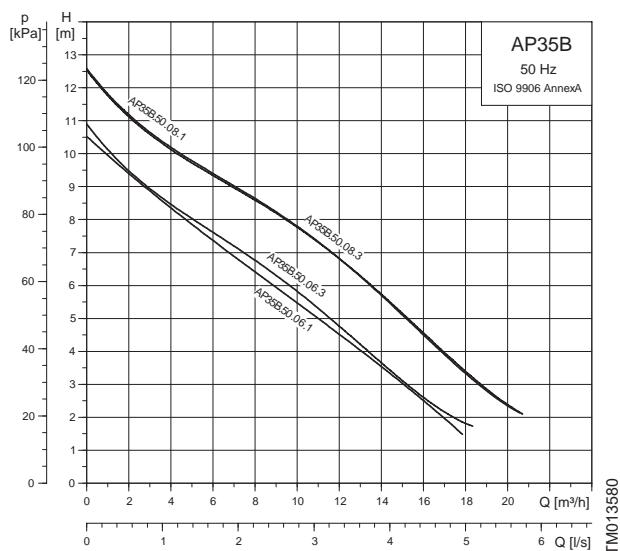
Sizing guide

The quick sizing chart below gives an approximate overview of heights and discharge pipe lengths with an inner pipe diameter of 50 mm and a flow of 5 m³/h, so that a self-cleaning velocity of $v=0,7$ m/s is covered. The overview is only intended as a guide. Grundfos is not liable for installations that do not comply with the overview. Pressure loss of a non-return valve and a gate valve is calculated. The vertical height of the discharge pipe must be measured from the pump stop level. For more flow requirements a calculation is needed.

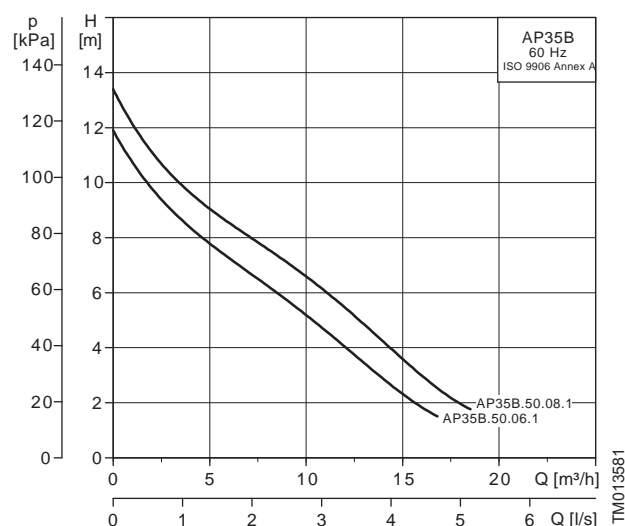


TM066589

Performance curves UNILIFT AP35B 50 Hz



Performance curves UNILIFT AP35B 60 Hz



Product range UNILIFT AP35B 50 Hz

Pump type	Product number	Voltage[V]	Plug type	Float switch type	Cable length [m]	Cable type	Net weight [kg]
AP35B.50.06.1V	96004563	1 x 230	SCHUKO	-	10	H07RN8-F 3G1	10.3
AP35B.50.06.A1V	96004562	1 x 230	SCHUKO	Cable guided	5	H07RN8-F 3G1	9.9
AP35B.50.06.A1V	96468356	1 x 230	SCHUKO	Cable guided	10	H07RN8-F 3G1	10.5
AP35B.50.08.1V	96004575	1 x 230	SCHUKO	-	10	H07RN8-F 3G1	10.8
AP35B.50.08.A1V	96004574	1 x 230	SCHUKO	Cable guided	5	H07RN8-F 3G1	10.4
AP35B.50.08.A1V	96468355	1 x 230	SCHUKO	Cable guided	10	H07RN8-F 3G1	11.0
AP35B.50.06.3V	96004565	3 x 400	No plug	-	5	H07RN8-F 4G1	9.9
AP35B.50.06.3V	96468190	3 x 400	No plug	-	10	H07RN8-F 4G1	10.5
AP35B.50.08.3V	96004577	3 x 400	No plug	-	5	H07RN8-F 4G1	10.5
AP35B.50.08.3V	96468193	3 x 400	No plug	-	10	H07RN8-F 4G1	11.1
AP35B.50.08.3V	96007152	3 x 230	No plug	-	5	H07RN8-F 4G1	10.5

Product range UNILIFT AP35B 60 Hz

Pump type	Product number	Voltage[V]	Plug type	Float switch type	Cable length [m]	Cable type	Net weight [kg]
AP35B.50.06.1V	96004569	1 x 220-230	SCHUKO	-	10	H07RN8-F 3G1	10.2
AP35B.50.06.A1V	96004568	1 x 220-230	SCHUKO	Cable guided	5	H07RN8-F 3G1	9.8
AP35B.50.06.3V	96004571	3 x 200-220	No plug	-	5	H07RN8-F 4G1	9.9
AP35B.50.08.1V	96004581	1 x 220-230	SCHUKO	-	10	H07RN8-F 3G1	10.7
AP35B.50.08.A1V	96004580	1 x 220-230	SCHUKO	Cable guided	5	H07RN8-F 3G1	9.8
AP35B.50.08.3V	96004583	3 x 200-220	No plug	-	5	H07RN8-F 4G1	10.5

Technical data

Electrical data

UNILIFT AP35B 50 Hz

Pump type	Voltage[V]	P ₁ [kW]	P ₂ [kW]	I _n [A]	I _{start} [A]	Speed [rpm]
AP35B.50.06.1V	1 x 230	1.0	0.66	4.4	13.8	2810
AP35B.50.06.A1V	1 x 230	1.0	0.66	4.4	13.8	2810
AP35B.50.06.3V	3 x 400	1.0	0.63	1.55	8.0	2830
AP35B.50.08.1V	1 x 230	1.25	0.71	5.44	18.4	2795
AP35B.50.08.A1V	1 x 230	1.25	0.71	5.44	18.4	2795
AP35B.50.08.3V	3 x 230	1.25	0.78	3.52	18.8	2820
AP35B.50.08.3V	3 x 400	1.25	0.78	1.98	10.8	2820

UNILIFT AP35B 60 Hz

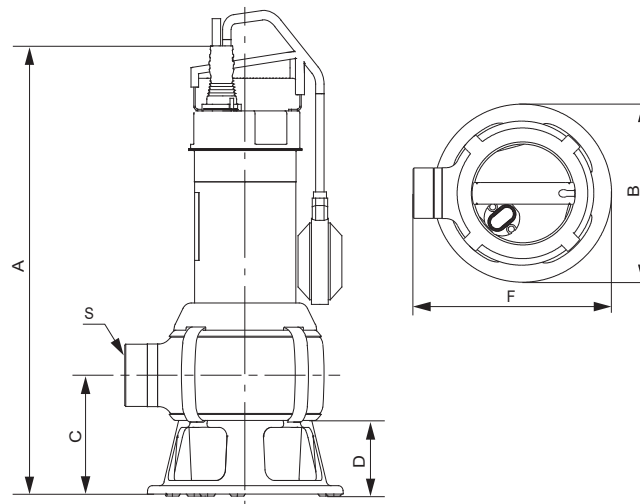
Pump type	Voltage[V]	P ₁ [kW]	P ₂ [kW]	I _n [A]	I _{start} [A]	Speed [rpm]
AP35B.50.06.1V	1 x 220-230	1.29	0.75	5.91	22.0	3330
AP35B.50.06.A1V	1 x 220-230	1.29	0.75	5.91	22.0	3330
AP35B.50.06.3V	3 x 200-220	1.21	0.66	3.71	4.39	3300
AP35B.50.08.1V	1 x 220-230	1.47	1.02	6.74	30.9	3300
AP35B.50.08.A1V	1 x 220-230	1.47	1.02	6.74	30.9	3300
AP35B.50.08.3V	3 x 200-220	1.48	0.95	4.50	4.87	3300

Operating conditions

Maximum head	13 m
Maximum flow rate	21.6 m ³ /h
Liquid temperature range	0-40 °C
Liquid pH range	4-10
Liquid requirements	Clean, non-aggressive water and grey wastewater
Maximum ambient temperature	40 °C
Maximum particle size through the suction strainer	35 mm
Maximum installation depth	2 m with 5 m cable 7 m with 10 m cable
Automatic float switch	Type name extension A
Special versions on request	Other voltages and/or frequencies

¹ IEC 60335-2-41 requires 3 m cable length outside of water.

Dimensions



TM034097

UNILIFT AP35B

Pump type	A [mm]	B [mm]	C [mm]	D [mm]	F [mm]	S [in]
AP35B.50.06	443	210	116	73	234	Rp 2
AP35B.50.08	468	210	116	73	234	Rp 2

Accessories

The following are recommended accessories for UNILIFT APB pumps.

Product number	Description
96023844	Non-return valve PVC, ball type 2"
97644486	Auto-coupling set Rp 2"
99369644	LC231 (1 pump) without float switch
99369650	LC231 (2 pump controller) without float switch
91427145	Float switch M2 with 5m cable