



Submersible Grey Water Pump

AmaDrainer 301/302/303/358

For the UK

Type Series Booklet



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Drainage

Drainage Pumps / Grey Water Pumps

AmaDrainer 301/302/303/358



Main applications

- Drainage
- Disposal
- Drainage systems
- Lowering groundwater levels
- Maintaining groundwater levels
- Draining of pits, shafts, etc.
- Surface drainage

Fluids handled

- Sizes 301/302/303:
 - Solid particles with a particle size of up to 10 mm
- Size 358:
 - Solid particles with a particle size of up to 35 mm

Material variant A (variant for grey water)

- Slightly contaminated grey water ($\leq 50^\circ\text{C}$)
- Wash water (up to $\leq 90^\circ\text{C}$ max. for short periods $t \leq 3$ minutes)
- Seepage water
- River water, lake water and groundwater
- Waste water without faeces

Material variant C (universal variant, also for aggressive fluids)

- Slightly contaminated grey water ($\leq 50^\circ\text{C}$)
- Wash water (up to $\leq 90^\circ\text{C}$ max. for short periods $t \leq 3$ minutes)
- Seepage water
- River water, lake water and groundwater
- Waste water without faeces

- Brackish water
- Seawater ($\leq 20^\circ\text{C}$)
- Water containing salt ($\leq 20^\circ\text{C}$)

Further information on fluids handled

Overview of fluids handled ($\Rightarrow$ Page 6)

Operating data

Table 1: Operating properties

Characteristic		Value
Flow rate	Q [m ³ /h]	$\leq 16,5$
	Q [l/s]	$\leq 4,6$
Head	H [m]	$\leq 12,5$
Fluid temperature	T [°C]	$\leq +50$ (continuous duty)
		$\leq +90$ (short-time duty)

Design details

Design

- Fully floodable submersible motor pump
- Close-coupled design
- Single-stage
- Wetted parts made of materials coated with anti-corrosive
- External float switch
- Maximum immersion depth: 2 m
- Sizes 301/302/303:
 - Integrated swing check valve

Installation

- Vertical installation
- Wet-installed transportable model

Drive

- Jacket-cooled single-phase AC motor
- 230 V, 50 Hz
- Frequency of starts ≤ 30 starts/hour
- Integrated temperature switch
- Enclosure IP68 (permanently submerged) to EN 60529/ IEC 529
- Power cable incl. shockproof plug

Shaft seal

- Drive end, 1 shaft seal ring
- Pump end, 2 shaft seal rings
- Liquid reservoir between the seals for cooling and lubrication

Bearings

- Rolling element bearings
- Grease-packed for life
- Maintenance-free

Automation

- Pump controlled via float switch
- Pump controlled by external control unit

Designation

Example: AmaDrainer C 301

Table 2: Designation key

Code	Description	
AmaDrainer	Type series	
C	Material variant	
	A ¹⁾	Variant for grey water
	C ²⁾	Universal variant, also for aggressive fluids
301	Size	

Materials

Table 3: Overview of available materials

Part No. (⇒ Page 16)	Description	Material variant A	Material variant C
		AmaDrainer 358	AmaDrainer 301/302/303
79-1	Float switch (float)	Polypropylene	
101	Pump casing	Polyamide, 30 % glass fibre reinforced	Polypropylene, 20 % glass fibre reinforced
107	Discharge casing	Polypropylene, 30 % glass fibre reinforced	
161	Casing cover	Polypropylene with 20 % talc (PP-TS 20)	
210	Shaft	1.4057	Chrome nickel molybdenum steel (1.4404)
230	Impeller	Polyamide	Noryl GNF2
811	Motor housing	Chrome nickel steel (1.4301)	Chrome nickel molybdenum steel (1.4404)

Product benefits

- **Universal use**
 - Suitable for many different fluids, absolutely tight and reliable
- **Worry-free selection**
 - Shaft and motor housing made of 1.4404 as standard for handling aggressive fluids (sizes 301/302/303)
- **Maximum flexibility**
 - Variable adjustment of float switch
 - Easy to adapt for external control
- **Fast and straightforward**
 - Immediately ready to use with convenient connections
 - Integrated swing check valve (sizes 301/302/303)
- **Space-saving and clever**
 - Compact design also fits into narrow sumps.
- **Protected all round**
 - Thermal motor protection and triple shaft seal provide maximum operating reliability.
- **Robust and durable**
 - Resistant plastic casing: lightweight, corrosion-proof and impact-resistant
- **Efficient operation**
 - High pump output at low energy consumption
- **Always dependable**
 - Jacket cooling prevents overheating even when the motor is not submerged.

1 Size 358 only

2 Sizes 301/302/303 only

Overview of product features / selection tables

Overview of fluids handled

Table 4: Symbols key

Symbol	Description
X	Standard
-	Version not available / not feasible

The table of fluids handled is a selection aid for different applications. It serves as guidance and is based on long-standing experience. The data are reference values and are not to be considered generally binding recommendations. They shall not be the basis for warranty claims. Please contact your nearest sales branch for in-depth advice.

Table 5: Table of fluids handled

Fluids handled	Material variant A	Material variant C
	AmaDrainer 358	AmaDrainer 301/302/303
Antifrogen-water mixture	X	X
Cider	X	X
Beer	X	X
Spirits	X	X
Buttermilk	X	X
Calcium acetate	X	X
Calcium hydroxide	X	X
Deionised water	X	X
Peanut oil	X	X
Vinegar	-	X
Ethylene glycol	X	X
Liquid fertiliser	X	X
Anti-freeze	X	X
Glycerine	X	X
Grisiron	X	X
Uric acid	X	X
Potassium hydroxide	X	X
Calcium carbonate	X	X
Coconut oil	X	X
Evaporated milk	X	X
Lemonades	X	X
Corn oil	X	X
Milk	X	X
Whey	X	X
Sodium carbonate	X	X
Sodium chloride up to 15 % concentration	-	X ³⁾
Sodium hydrogen phosphate	X	X
Sodium nitrate	X	X
Sodium perborate	X	X
Sodium sulphate	X	X
Polyglycols	X	X
Rapeseed oil	X	X
Castor oil	X	X
Silicone oil	X	X
Silo leachate	-	X
Soybean oil	X	X
Edible vinegar	-	X
Edible oil	X	X
Trisodium phosphate	X	X
Vaseline	X	X
Washing machine lye	X	X
Water		

3 Fluid temperature ≤ 25 °C

Fluids handled	Material variant A	Material variant C
	AmaDrainer 358	AmaDrainer 301/302/303
Drainage water	X	X
Fire-fighting water	X	X
Heating water	X	X
Lime water	-	X
Boiler water	X	X
Condensate	-	X
Cooling water	X	X
Seawater	-	X ⁴⁾
Raw water	X	X
Swimming pool water (DIN 19643)	-	X
Salt water	-	X ⁴⁾
Partly desalinated water	X	X
Fully desalinated water	-	X

Technical data

AmaDrainer 301/302/303/358

Table 6: Technical data, 230 V, 50 Hz

Size	Discharge-side connection	Free passage	P ₁	P _N	I _N 1~230 V	Power cable	Mat. No.	[kg]
						H05RN8		
		[mm]	[kW]	[kW]	[A]	[m]		
Material variant A (variant for grey water)								
A 358	G 11/2	35	0,85	0,43	4,00	10	48034491	6.8
Material variant C (universal variant, also for aggressive fluids)								
C 301	Rp 11/4	10	0,43	0,18	1,90	10	48034488	5.2
C 302	Rp 11/4	10	0,75	0,36	4,00	10	48034489	6.7
C 303	Rp 11/4	10	1,05	0,50	4,90	10	48034490	6.9

4 Fluid temperature ≤ 20 °C

Characteristic curves

AmaDrainer 301/302/303, n = 2800 rpm (multi-vane impeller)

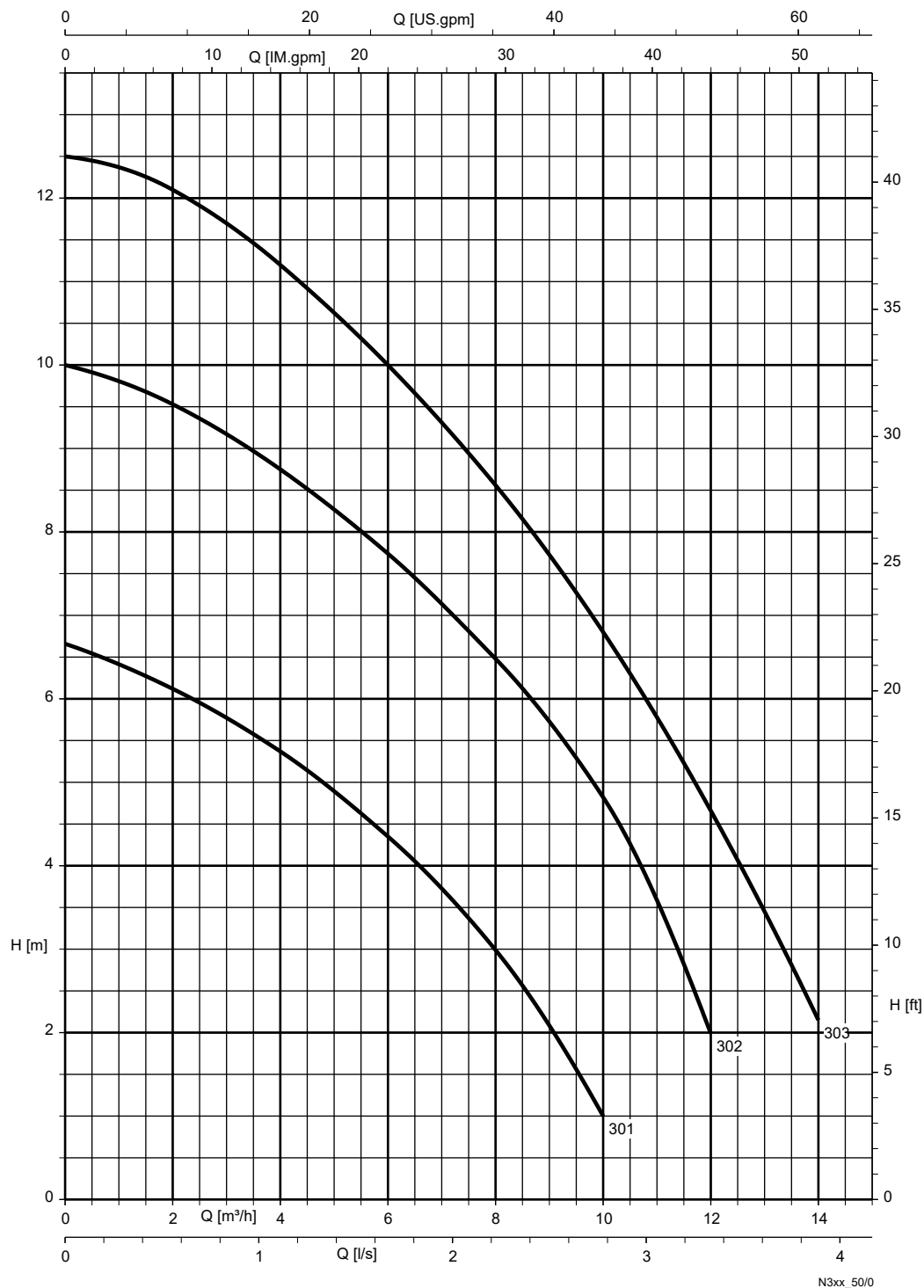


Fig. 1: Sizes 301/302/303: free passage = 10 mm

Performance tolerance to ISO 9906, Annex A (water under standard conditions)

AmaDrainer 358, n = 2800 rpm (F impeller)

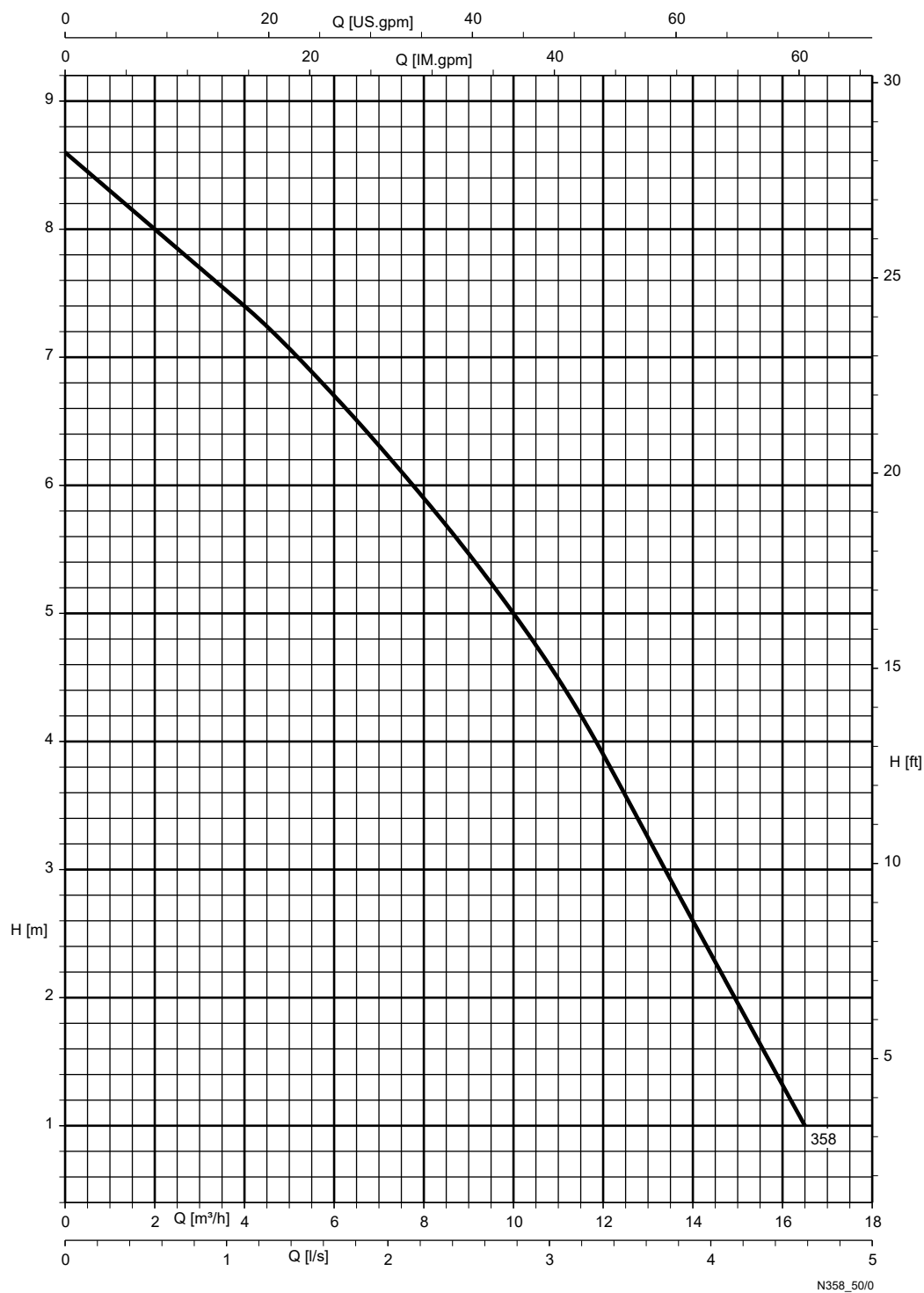


Fig. 2: Size 358: free passage = 35 mm
Performance tolerance to ISO 9906, Annex A (water under standard conditions)

Dimensions and connections

AmaDrainer 301/302/303/358

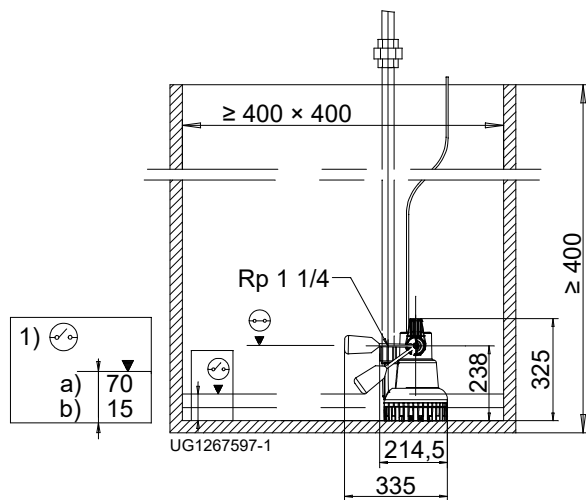


Fig. 3: Dimensions of AmaDrainer 301

1)	Residual water level
a)	Automatic
b)	Manual

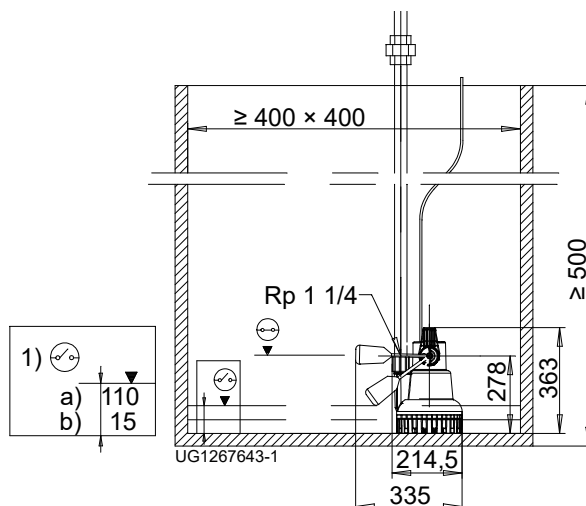


Fig. 4: Dimensions of AmaDrainer 302/303

1)	Residual water level
a)	Automatic
b)	Manual

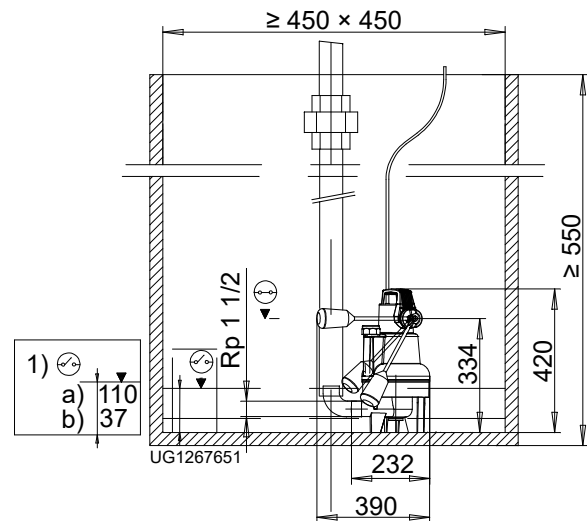


Fig. 5: Dimensions of AmaDrainer 358

1)	Residual water level
a)	Automatic
b)	Manual

Installation information

Installation example of a dual-pump station

i Dual-pump stations are operated via an external control system. For this purpose, the float switch suspension must be locked in place using the locking disc included in the scope of supply.

i The inlet is positioned above the highest float switch.

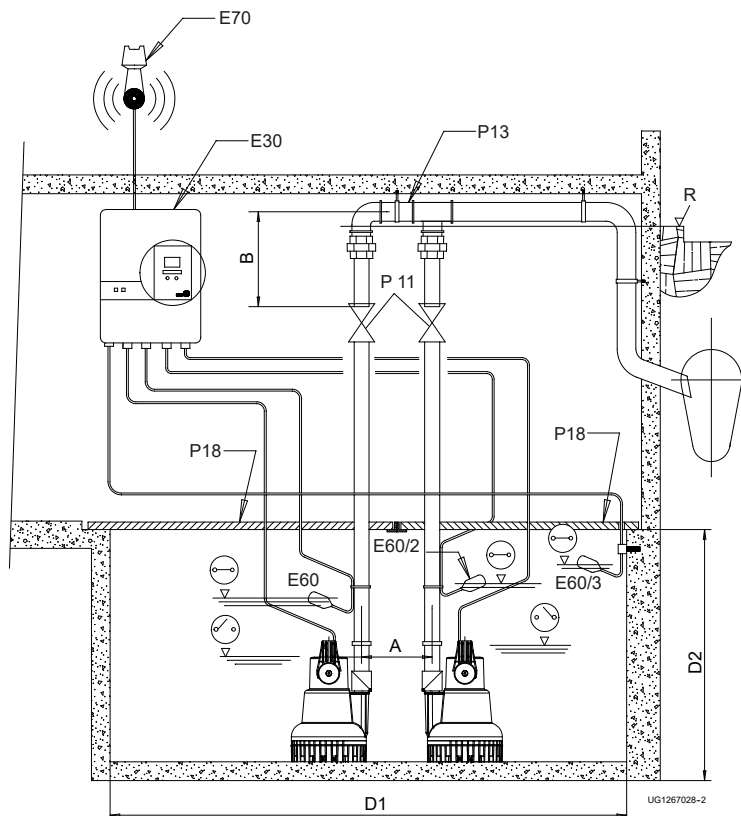


Fig. 6: Installation example of an AmaDrainer 301/302/303 dual-pump station

1)	Residual water level
a)	Automatic
b)	Manual
E30	Control unit
E60	Float switch, base load
E60/2	Float switch, peak load
E60/3	Float switch, high water alert
E70	Horn
P11	Gate valves
P13	Y-pipe
P18	Cover plate
R	Flood level

Table 7: Dimensions of an AmaDrainer 301/302/303 dual-pump station

Size	A	B	D1	D2
	[mm]	[mm]	[mm]	[mm]
301	275	320	1060 × 500	400
302	275	320	1060 × 500	500
303	275	320	1060 × 500	500

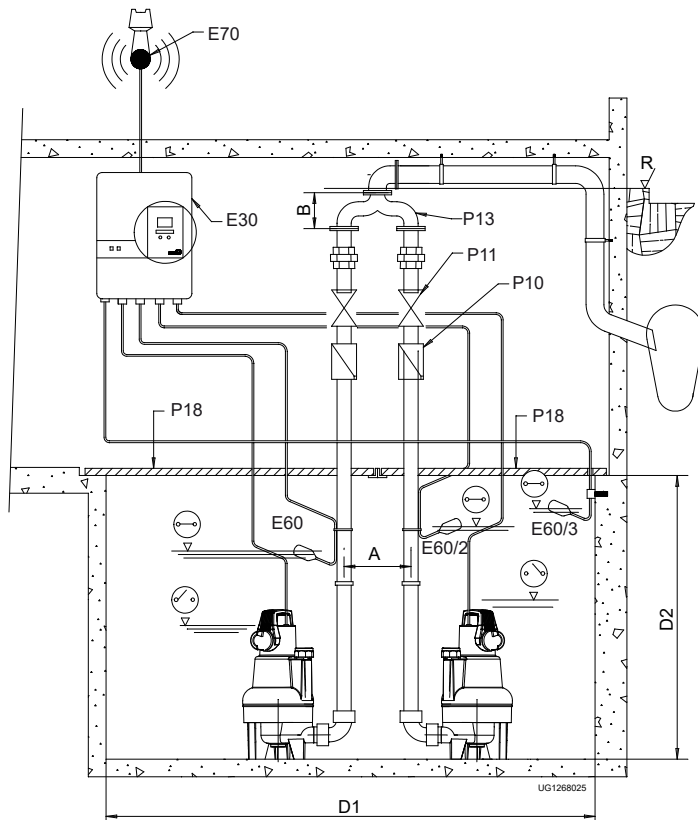


Fig. 7: Installation example of an AmaDrainer 358 dual-pump station

1)	Residual water level
a)	Automatic
b)	Manual
E30	Control unit
E60	Float switch, base load
E60/2	Float switch, peak load
E60/3	Float switch, high water alert
E70	Horn
P10	Lift check valve
P11	Gate valves
P13	Y-pipe
P18	Cover plate
R	Flood level

Table 8: Dimensions of an AmaDrainer 358 dual-pump station

Size	A	B	D1	D2
	[mm]	[mm]	[mm]	[mm]
358	275	180	1060 × 500	550

Scope of supply

Depending on the model, the following items are included in the scope of supply:

- Pump set
- Installation/operating manual
- Locking disc for continuous operation
- Sizes 301/302/303:
 - Integrated swing check valve
 - Connection socket with internal thread
- Size 358:
 - 90° bend (cross-section 1 1/2 inches) for discharge outlet to the top

Accessories
Pump accessories
Table 9: Pump accessories

Item	Description	Connection	AmaDrainer				Mat. No.	[kg]
			301	302	303	358		
P5 	Discharge-side adapter, graded For connecting various discharge lines (connections Rp 1 1/4 to Rp 3/4, DN 25 or DN 32)	Rp 1 1/4 to Rp 3/4, DN 25 or DN 32	X	X	X	-	05086820	0.16
P10 	RK swing check valve Plastic, EN 12050-4, with internal thread ISO 7/1, with full bore and drain plug	Rp 1 1/4	X	X	X	-	01009771	0.1
		Rp 1 1/2	-	-	-	X	01009772	0.52
P10 	Lift check valve, stainless steel (1.4401)	Rp 1 1/4	X	X	X	-	01084936	2.1
		Rp 1 1/2	-	-	-	X	01084935	2.2
P11 	Socket gate valve Material: CuZn, PN 16, with internal thread, with full bore	Rp 1 1/4	X	X	X	-	01014219	0.63
		Rp 1 1/2	-	-	-	X	00411502	0.78
P13 	Y-pipe For dual-pump sets, with external thread, galvanised steel	Rp 1 1/4	X	X	X	-	18040311	4.1
P13 	Y-pipe For dual-pump sets, grey cast iron, with hexagon head bolts, nuts and gaskets; flanges drilled to DIN 2501	DN 40	-	-	-	X	40000688	10.6
P18 	Cover plate Tread-proof, split, with profile seals and angle iron mounting frame (type A 560) for 500 x 500 mm pits (For dual-pump stations with Y-pipe 2 cover plates are fitted next to each other.)	Rp 1 1/4	X	X	X	X	18075627	13
P21 	A 25 B drain hose set (see P32) Comprising: rigid coupling with external thread, 6 m plastic hose DN 25, rapid-action hose coupling Rp 1 1/4, (free passage 21 mm)	Rp 1 1/4	X	X	X	-	18079719	3
P24 	Storz rigid coupling with internal thread to DIN ISO 228/1 Aluminium alloy, required pipe part see P32 Can be combined with P28	C-G 1 1/2	X	X	X	X	01002463	0.3
P26 	Storz hose coupling Required counterpart see P24	C 52 (DIN 14321)	X	X	X	-	00524551	0.3
P28 	Synthetic hose DN 40, with integrated C couplings, DIN 14811 Required pipe part see P32 Can be combined with P24	C 42-5 m	X	X	X	X	01062592	1.7
		C 42-10 m	X	X	X	X	01062593	2.8
		C 42-20 m	X	X	X	X	01062594	5
	Synthetic hose DN 50, DIN 14811, with integrated C couplings Required pipe part see P32 Can be combined with P24	C 52-5 m	X	X	X	X	00522262	2.3
		C 52-10 m	X	X	X	X	00522263	4.2
		C 52-20 m	X	X	X	X	00522264	5.7

Item	Description	Connection	AmaDrainer				Mat. No.	[kg]
			301	302	303	358		
P29 	Threaded flange for Y-pipe (P13), internal thread	DN 40 / Rp 1 1/2	-	-	-	✗	00260478	1.8
P31 	Bellmouth for draining residual water	-	✗	✗	✗	-	39300101	0.2
P32 	Pipe extension for Storz rigid coupling C (P24) PVC hard, internal/external thread For use without swing check valve and union nut	Internal thread Rp 1 1/4 / external thread R 1 1/2 × 170	✗	✗	✗	-	11035587	0.2

Control units and switchgear

 Control units and switchgear on request

Exploded view and list of components

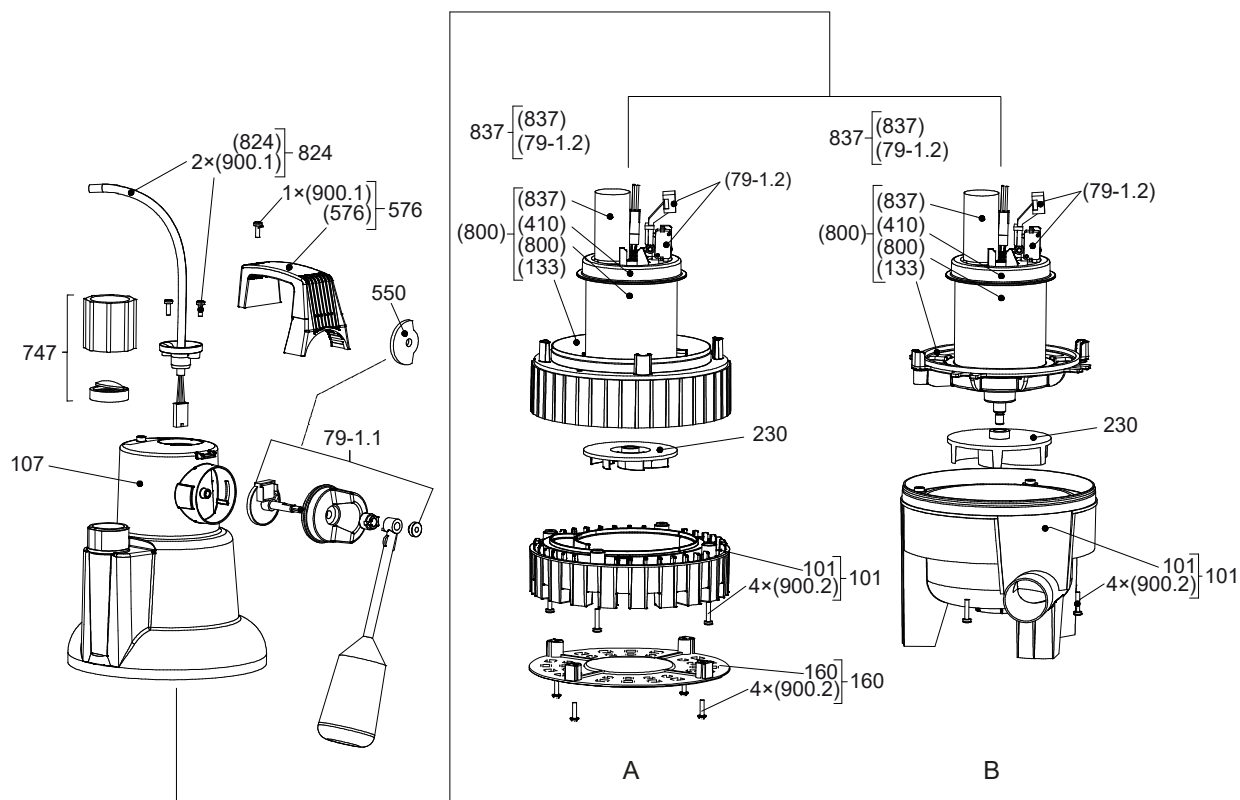


Fig. 8: Exploded view

A	AmaDrainer 301/302/303
B	AmaDrainer 358

Table 10: List of components

Part No.	Description	Part No.	Description
101	Pump casing	747	Swing check valve
107	Discharge casing	79-1.1	Automatic switchgear, external
133	Clearance plate	79-1.2	Automatic switchgear, internal
160	Cover	800	Motor
230	Impeller	824	Power cable
410	Profile seal	837	Capacitor
550	Locking disc for continuous operation	900.1/2	Screw
576	Handle		