

## Submersible Waste Water Pumps 60 Hz



Ama-Drainer A 4../10



Ama-Drainer A, C, R 522/11



Ama-Drainer A, C, R 5../10K



Ama-Drainer A, C 4../35

### Fields of Application

- Automatic drainage of pits, shafts, yards and cellars subject to a flooding risk
- Lowering the surface water level
- Drainage of underground passages
- Extraction of water from rivers and reservoirs
- Drainage
- Disposal of highly contaminated, fibre-containing water, e.g. from laundries, common washing facilities, washing-machines and dish washers (also wash at the boil), industrial plants

### Medium Handled

#### Ama-Drainer /10, /11 – Standard variant for waste water

Slightly contaminated water, also containing solid particles with a particle size of up to 10 or 11 mm.

#### Ama-Drainer /35 – Variant for waste water

Waste water containing long fibres and substances liable to twist and bunch, also solid particles with a particle size of up to 35 mm.

#### Ama-Drainer C – Variant for aggressive water

- Transport of seawater or water containing salt

- Transport of swimming pool water and brackish water

#### Ama-Drainer R – Variant for water containing oil / oil emulsions

- Transport of oil emulsions and cutting oils
- Disposal of waste water containing oil

### Operating Data

Q up to 50 m<sup>3</sup>/h, 14 l/s

H up to 21 m

t up to 40 °C; up to max. 3 minutes: 90 °C

### Design / Variant

Vertical, fully floodable submersible motor pumps in close-coupled design, IP 68, single-stage, with or without level control. Cable length: 10 m.

Max. immersion depth 10 m.

### Bearings

Maintenance-free, grease-lubricated deep-groove ball bearings sealed for life.

### Materials

Please refer to page 9.

### Shaft Seal

Ama-Drainer	Pump end	Motor end
All pump sizes	1 mechanical seal	1 shaft seal ring

An oil reservoir is fitted in-between the two seal elements.

### Designation

	Ama-Drainer	A	4	22	S	D	/	10	K
Type series	_____								
Material variant	_____								
A = standard variant									
C = variant for aggressive water									
R = oil-resistant materials									
Discharge nozzle DN	_____								
4 = ≈4 cm (G 1 1/2), 5 = ≈5 cm (G 2)									
Motor rating in kW x 10	_____								
05 = 0.55 kW, 07 = 0.75 kW, 11 = 1.1 kW,									
15 = 1.5 kW, 22 = 2.2 kW									
N = without float switch									
S = with float switch									
E = single-phase a.c. motor									
D = three-phase motor									
Free passage in mm	_____								
10 = 10 mm, 11 = 11 mm, 35 = 35 mm									
with cooling jacket	_____								


### Drive

**Ama-Drainer /10 and /35 NE/SE:** Single-phase a.c. motor with integrated temperature switch, power supply cable and shockproof plug.

**Ama-Drainer /10, /11 and /35 SD:** Three-phase motor with integrated temperature switch, power supply cable and CEE plug (3L+PE+N) including motor contactor and phase inverter.

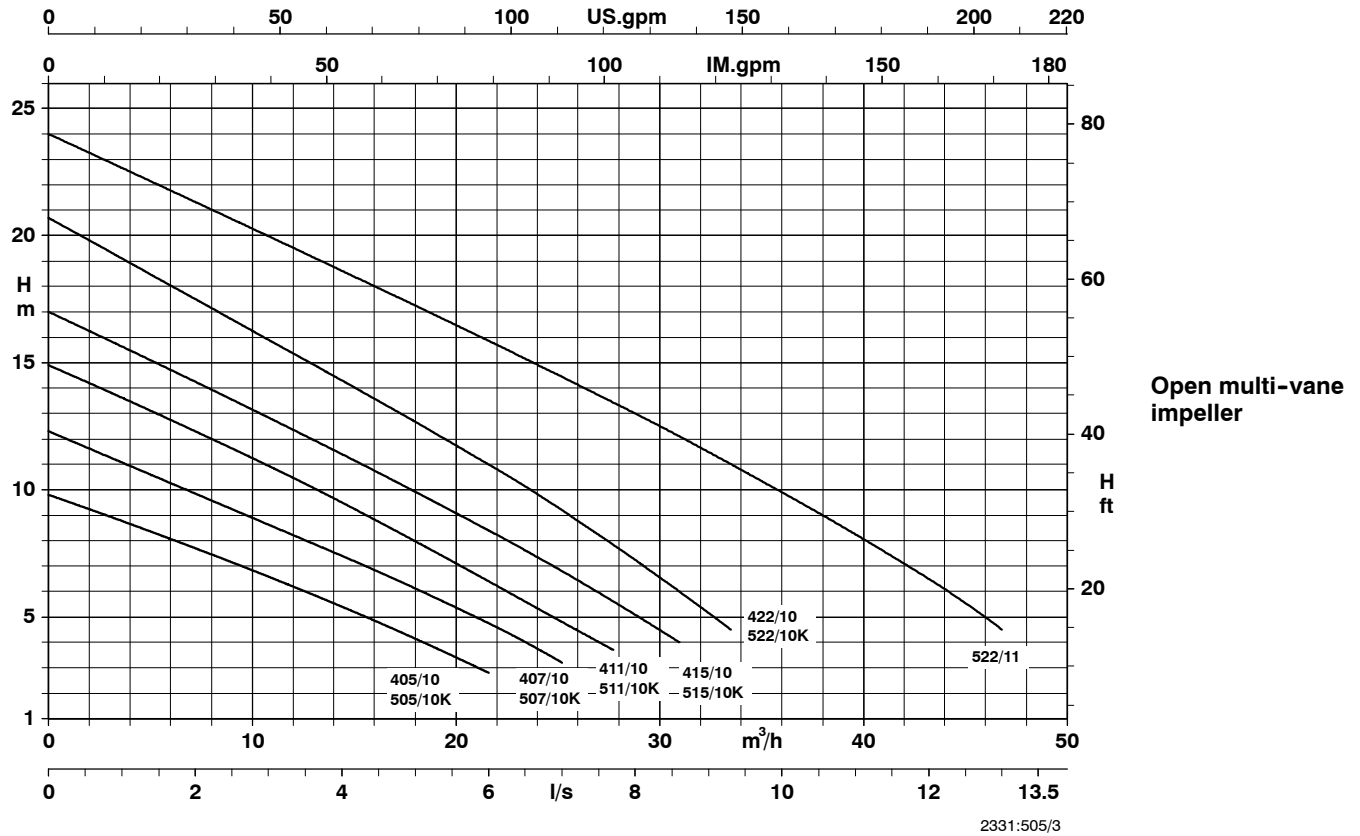
**Ama-Drainer /10, /11 and /35 ND:** Three-phase motor with integrated temperature switch, power supply cable without plug and with protective cap.

CE – EN 12 050-2

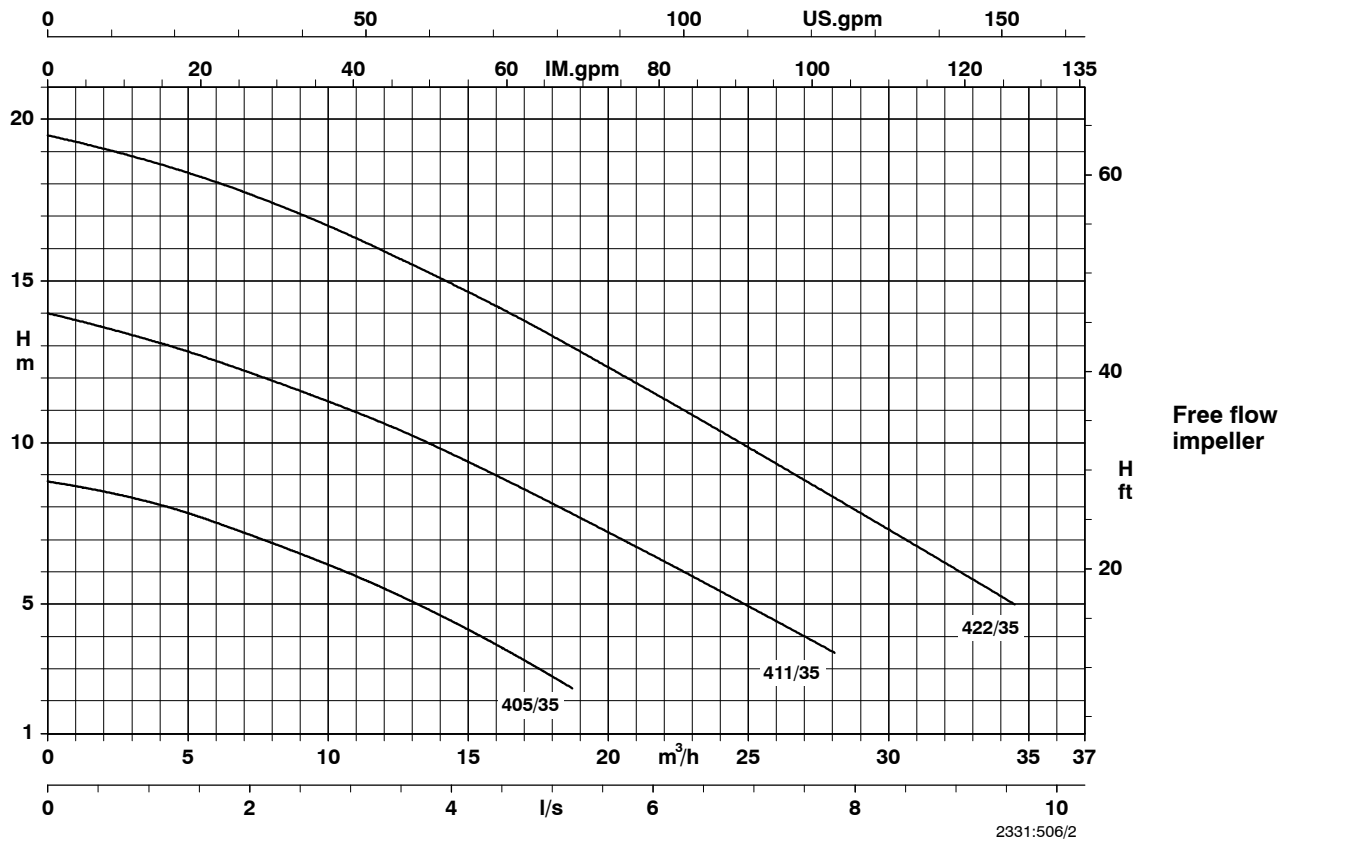
CCA, VDE/GS  for variant A 405–422/10 and 405–422/35, without SD

Other cable lengths, halogen-free cables, special voltages, other frequencies on request.

Ama-Drainer 405, 407, 411, 415, 422, 505, 507, 511, 515 with a free passage of 10 mm and 522 with a free passage of 11 mm Standard, C and R variants - n = 3400 1/min



Ama-Drainer 405, 411, 422 with a free passage of 35 mm Standard variant - n = 3400 1/min



Performance tolerance to ISO 2548 Class C (water under standard conditions)

**Ama-Drainer – standard variant, particle size 10 mm (522/11 11 mm)**

Ama-Drainer	Nominal diameter	Particle size mm	P <sub>1</sub> kW	P <sub>2</sub> kW	60 Hz		Power supply cable 10 m		Level control H07RN-F 3G1 m	net ≈ kg
					1~ 220 V I <sub>N</sub> ≈ A	3~ 380 V I <sub>N</sub> ≈ A	S07RN-F 6G1	H07RN-F3G1		
A 405 NE/10	G 1 1/2	10	0.89	0.55	4.0	-	-	X	-	12.2
A 405 SE/10			0.89		4.0	-	-	X	0.5	12.7
A 405 ND/10			0.76		-	1.8	X	-	-	13.3
A 405 SD/10			0.76		-	1.8	X	-	10	15.1
A 407 NE/10	G 1 1/2	10	1.21	0.75	5.4	-	-	X	-	12.2
A 407 SE/10			1.21		5.4	-	-	X	0.5	12.7
A 407 ND/10			1.01		-	2.0	X	-	-	13.3
A 407 SD/10			1.01		-	2.0	X	-	10	15.1
A 411 NE/10	G 1 1/2	10	1.49	1.1	6.6	-	-	X	-	14.5
A 411 SE/10			1.49		6.6	-	-	X	0.5	15.0
A 411 ND/10			1.54		-	2.6	X	-	-	13.3
A 411 SD/10			1.54		-	2.6	X	-	10	15.1
A 415 NE/10	G 1 1/2	10	2.03	1.5	9.0	-	-	X	-	14.5
A 415 SE/10			2.03		9.0	-	-	X	0.5	15.0
A 415 ND/10			1.88		-	3.8	X	-	-	15.6
A 415 SD/10			1.88		-	3.8	X	-	10	17.5
A 422 ND/10	G 1 1/2	10	2.9	2.2	-	5.0	X	-	-	15.7
A 422 SD/10			2.9		-	5.0	X	-	10	17.6
A 522 ND/11	G 2	11	2.9	2.2	-	5.0	X	-	-	22.5
A 522 SD/11			2.9		-	5.0	X	-	10	24.5

**Ama-Drainer – standard variant, particle size 10 mm, with cooling jacket**

Ama-Drainer	Nominal diameter	Particle size mm	P <sub>1</sub> kW	P <sub>2</sub> kW	60 Hz		Power supply cable 10 m		Level control H07RN-F 3G1 m	net ≈ kg
					1~ 220 V I <sub>N</sub> ≈ A	3~ 380 V I <sub>N</sub> ≈ A	S07RN-F 6G1	H07RN-F3G1		
A 505 NE/10 K	G 2	10	0.89	0.55	4.0	-	-	X	-	14.2
A 505 SE/10 K			0.89		4.0	-	-	X	0.5	14.7
A 505 ND/10 K			0.76		-	1.8	X	-	-	15.3
A 505 SD/10 K			0.76		-	1.8	X	-	10	17.1
A 507 NE/10 K	G 2	10	1.21	0.75	5.4	-	-	X	-	14.2
A 507 SE/10 K			1.21		5.4	-	-	X	0.5	14.7
A 507 ND/10 K			1.01		-	2.0	X	-	-	15.3
A 507 SD/10 K			1.01		-	2.0	X	-	10	17.1
A 511 NE/10 K	G 2	10	1.49	1.1	6.6	-	-	X	-	16.5
A 511 SE/10 K			1.49		6.6	-	-	X	0.5	17.0
A 511 ND/10 K			1.54		-	2.6	X	-	-	15.3
A 511 SD/10 K			1.54		-	2.6	X	-	10	17.1
A 515 NE/10 K	G 2	10	2.03	1.5	9.0	-	-	X	-	16.5
A 515 SE/10 K			2.03		9.0	-	-	X	0.5	17.0
A 515 ND/10 K			1.88		-	3.8	X	-	-	17.6
A 515 SD/10 K			1.88		-	3.8	X	-	10	19.5
A 522 ND/10 K	G 2	10	2.9	2.2	-	5.0	X	-	-	17.7
A 522 SD/10 K			2.9		-	5.0	X	-	10	19.6

**Ama-Drainer – standard variant, particle size 35 mm**

Ama-Drainer	Nominal diameter	Particle size mm	P <sub>1</sub> kW	P <sub>2</sub> kW	60 Hz		Power supply cable 10 m		Level control H07RN-F 3G1 m	net ≈ kg
					1~ 220 V I <sub>N</sub> ≈ A	3~ 380 V I <sub>N</sub> ≈ A	S07RN-F 6G1	H07RN-F3G1		
A 405 NE/35	G 1 1/2	35	0.89	0.55	4.0	-	-	X	-	13.2
A 405 SE/35			0.89		4.0	-	-	X	0.5	13.7
A 405 ND/35			0.76		-	1.8	X	-	-	14.4
A 405 SD/35			0.76		-	1.8	X	-	10	16.1
A 411 NE/35	G 1 1/2	35	1.49	1.1	6.6	-	-	X	-	15.5
A 411 SE/35			1.49		6.6	-	-	X	0.5	16.0
A 411 ND/35			1.54		-	2.6	X	-	-	14.4
A 411 SD/35			1.54		-	2.6	X	-	10	16.1
A 422 ND/35	G 1 1/2	35	2.9	2.2	-	5.0	X	-	-	16.9
A 422 SD/35			2.9		-	5.0	X	-	10	18.7

**Ama-Drainer – variant C for aggressive water, particle size 10 mm, with cooling jacket  
522/11 particle size 11 mm, without cooling jacket**

Ama-Drainer	Nominal diameter	Particle size mm	P <sub>1</sub> kW	P <sub>2</sub> kW	60 Hz		Power supply cable 10 m		Level control H07RN-F 3G1 m	net ≈ kg
					1~ 220 V I <sub>N</sub> ≈ A	3~ 380 V I <sub>N</sub> ≈ A	S07RN- F6G1	H07RN- F3G1		
C 505 NE/10 K	G 2	10	0.89	0.55	4.0	-	-	X	-	14.2
C 505 SE/10 K			0.89		4.0	-	-	X	0.5	14.7
C 505 ND/10 K			0.76		-	1.8	X	-	-	15.3
C 505 SD/10 K			0.76		-	1.8	X	-	10	17.1
C 507 NE/10 K	G 2	10	1.21	0.75	5.4	-	-	X	-	14.2
C 507 SE/10 K			1.21		5.4	-	-	X	0.5	14.7
C 507 ND/10 K			1.01		-	2.0	X	-	-	15.3
C 507 SD/10 K			1.01		-	2.0	X	-	10	17.1
C 511 NE/10 K	G 2	10	1.49	1.1	6.6	-	-	X	-	16.5
C 511 SE/10 K			1.49		6.6	-	-	X	0.5	17.0
C 511 ND/10 K			1.54		-	2.6	X	-	-	15.3
C 511 SD/10 K			1.54		-	2.6	X	-	10	17.1
C 515 NE/10 K	G 2	10	2.03	1.5	9.0	-	-	X	-	16.5
C 515 SE/10 K			2.03		9.0	-	-	X	0.5	17.0
C 515 ND/10 K			1.88		-	3.8	X	-	-	17.6
C 515 SD/10 K			1.88		-	3.8	X	-	10	19.5
C 522 ND/10 K	G 2	10	2.9	2.2	-	5.0	X	-	-	17.7
C 522 SD/10 K			2.9		-	5.0	X	-	10	19.6
C 522 ND/11	G 2	11	2.9	2.2	-	5.0	X	-	-	23.5
C 522 SD/11			2.9		-	5.0	X	-	10	25.5

**Ama-Drainer – variant R for water containing oil / oil emulsions, particle size 10 mm, with cooling jacket  
522/11 particle size 11 mm, without cooling jacket**

Ama-Drainer	Nominal diameter	Particle size mm	P <sub>1</sub> kW	P <sub>2</sub> kW	60 Hz		Power supply cable 10 m		Level control H07RN-F 3G1 m	net ≈ kg
					1~ 220 V I <sub>N</sub> ≈ A	3~ 380 V I <sub>N</sub> ≈ A	PUR 6x1	PUR 3x1		
R 505 NE/10 K	G 2	10	0.89	0.55	4.0	-	-	X	-	14.2
R 505 SE/10 K			0.89		4.0	-	-	X	0.5	14.7
R 505 ND/10 K			0.76		-	1.8	X	-	-	15.3
R 505 SD/10 K			0.76		-	1.8	X	-	10	17.1
R 507 NE/10 K	G 2	10	1.21	0.75	5.4	-	-	X	-	14.2
R 507 SE/10 K			1.21		5.4	-	-	X	0.5	14.7
R 507 ND/10 K			1.01		-	2.0	X	-	-	15.3
R 507 SD/10 K			1.01		-	2.0	X	-	10	17.1
R 511 NE/10 K	G 2	10	1.49	1.1	6.6	-	-	X	-	16.5
R 511 SE/10 K			1.49		6.6	-	-	X	0.5	17.0
R 511 ND/10 K			1.54		-	2.6	X	-	-	15.3
R 511 SD/10 K			1.54		-	2.6	X	-	10	17.1
R 515 NE/10 K	G 2	10	2.03	1.5	9.0	-	-	X	-	16.5
R 515 SE/10 K			2.03		9.0	-	-	X	0.5	17.0
R 515 ND/10 K			1.88		-	3.8	X	-	-	17.6
R 515 SD/10 K			1.88		-	3.8	X	-	10	19.5
R 522 ND/10 K	G 2	10	2.9	2.2	-	5.0	X	-	-	17.7
R 522 SD/10 K			2.9		-	5.0	X	-	10	19.6
R 522 ND/11	G 2	11	2.9	2.2	-	5.0	X	-	-	23.5
R 522 SD/11			2.9		-	5.0	X	-	10	25.5

**Ama-Drainer – variant C for aggressive water, particle size 35 mm**

Ama-Drainer	Nominal diameter	Particle size mm	P <sub>1</sub> kW	P <sub>2</sub> kW	60 Hz		Power supply cable 10 m		Level control H07RN-F 3G1 m	net ≈ kg
					1~ 220 V I <sub>N</sub> ≈ A	3~ 380 V I <sub>N</sub> ≈ A	S07RN-F6G1	H07RN-F3G1		
<b>C 405 NE/35</b>	G 1 1/2	35	0.89	0.55	4.0	-	-	X	-	13.2
<b>C 405 SE/35</b>			0.89		4.0	-	-	X	0.5	13.7
<b>C 405 ND/35</b>			0.76		-	1.8	X	-	-	14.4
<b>C 405 SD/35</b>			0.76		-	1.8	X	-	10	16.1
<b>C 411 NE/35</b>	G 1 1/2	35	1.49	1.1	6.6	-	-	X	-	15.5
<b>C 411 SE/35</b>			1.49		6.6	-	-	X	0.5	16.0
<b>C 411 ND/35</b>			1.54		-	2.6	X	-	-	14.4
<b>C 411 SD/35</b>			1.54		-	2.6	X	-	10	16.1
<b>C 422 ND/35</b>	G 1 1/2	35	2.9	2.2	-	5.0	X	-	-	16.9
<b>C 422 SD/35</b>			2.9		-	5.0	X	-	10	18.7

**Product Features**
**to Our Customers' Benefit**
**Ama-Drainer A 405 SE/10**
**Ready to be plugged in**

**Your benefit:**  
No need for external electrical installation

**Integrated motor protection**

**Your benefit:**  
Prevents motor overloads and ensures dry-running protection

**Cooling jacket**

**Your benefit:**  
Conversion of uncooled design to cooled variant by retrofitting a cooling jacket

**Vertical discharge nozzle**

**Your benefit:**  
Easy installation  
Low space requirement  
No need for additional components such as elbows

**Clamp**

**Your benefit:**  
Hydraulic parts are easily accessible

**Locking the float switch at a specific switching point**

**Your benefit:**  
Can be done with effortless ease

**Grease-lubricated bearings sealed for life**

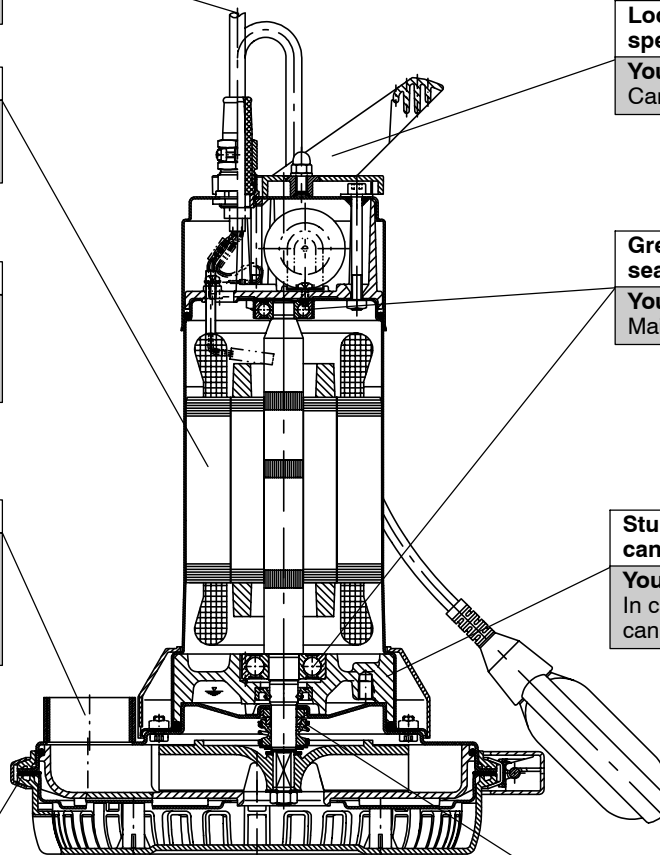
**Your benefit:**  
Maintenance-free

**Sturdy bearing bracket which can be dismantled**

**Your benefit:**  
In case of repair, all components can be easily replaced

**SiC-SiC mechanical seal with oil supply**

**Your benefit:**  
Reliable shaft seal with good dry-running characteristics



2331,137/2

**Product Features**

**to Our Customers' Benefit**

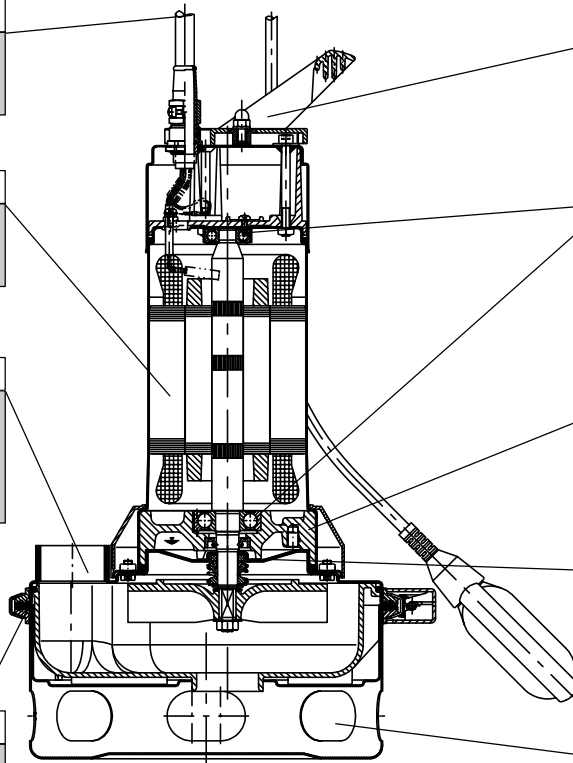
**Ama-Drainer 422 SD/35**

**Ready to be plugged in**  
**Your benefit:**  
 No need for external electrical installation

**Integrated motor protection**  
**Your benefit:**  
 Prevents motor overloads and ensures dry-running protection

**Vertical discharge nozzle**  
**Your benefit:**  
 Easy installation  
 Low space requirement  
 No need for additional components such as elbows

**Clamp**  
**Your benefit:**  
 Hydraulic parts are easily accessible



2331+136/2

**Locking the float switch at a specific switching point**  
**Your benefit:**  
 Can be done with effortless ease

**Grease-lubricated bearings sealed for life**  
**Your benefit:**  
 Maintenance-free

**Sturdy bearing bracket which can be dismantled**  
**Your benefit:**  
 In case of repair, all components can be easily replaced

**SiC-SiC mechanical seal with oil supply**  
**Your benefit:**  
 Reliable shaft seal with good dry-running characteristics

**Copes with solid particles up to a particle size of 35 mm**  
**Your benefit:**  
 Broad range of applications, including waste water containing fibrous matter

**Ama-Drainer 515 SE/10 K**

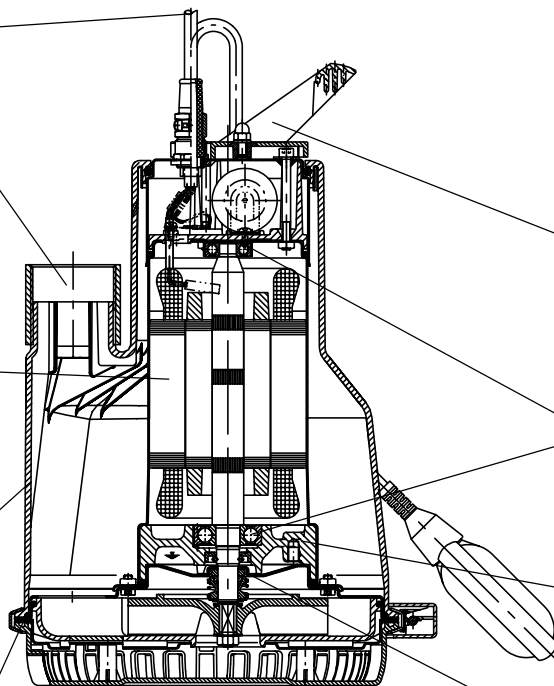
**Ready to be plugged in**  
**Your benefit:**  
 No need for external electrical installation

**Vertical discharge nozzle**  
**Your benefit:**  
 Easy installation  
 Low space requirement  
 No need for additional components such as elbows

**Integrated motor protection**  
**Your benefit:**  
 Prevents motor overloads and ensures dry-running protection

**High-quality plastic casing**  
**Your benefit:**  
 Low weight  
 Corrosion-resistant  
 Shock-resistant  
 Abrasion-resistant  
 Low-noise operation

**Clamp**  
**Your benefit:**  
 Hydraulic parts are easily accessible



2331+135/2

**Cooling jacket**  
**Your benefit:**  
 Conversion of uncooled design to cooled variant by retrofitting a cooling jacket

**Locking the float switch at a specific switching point**  
**Your benefit:**  
 Can be done with effortless ease

**Grease-lubricated bearings sealed for life**  
**Your benefit:**  
 Maintenance-free

**Sturdy bearing bracket which can be dismantled**  
**Your benefit:**  
 In case of repair, all components can be easily replaced

**SiC-SiC mechanical seal with oil supply**  
**Your benefit:**  
 Reliable shaft seal with good dry-running characteristics

**Jacket cooling**  
**Your benefit:**  
 Permits operation even when not submerged

**Selection Tool for Drainage Duties**

The table below for your guidance is based on KSB's long-standing experience. The data are standard values and are not to be considered as generally binding recommendations. They shall not be the basis for warranty claims.

Please contact your nearest KSB sales branch and/or our technical departments for in-depth advice.

Medium Handled	Temperature	Percentage	pH value	Type series Material variants Particle size (mm)	Ama-Drainer				
					Standard 10/11	35	C 10/11 35		R 10/11
Acids, diluted	≤ 20 °C		≤ pH 5				X	X	
Alkaline cleaning agents							1)	1)	
Aluminium sulphate	≤ 40 °C	10 %		Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>			X		
Ammonium chloride		10 %		NH <sub>4</sub> Cl			X		
Ammonium hydroxide	≤ 30 °C	10 %		NH <sub>4</sub> OH	X	X			
Antifreeze agent					X	X			
Antifrogen-water mixture					X	X			
Barium nitrate					X	X			
Boring emulsion									X
Brackish water							X	X	
Calcium chloride	≤ 25 °C	5 %		CaCl <sub>2</sub>			X	X	
Calcium hydroxide	≤ 30 °C	5 %		Ca (OH) <sub>2</sub>	X	X			
Calcium hydroxide (lime water)	≤ 30 °C	5 %		Ca (OH) <sub>2</sub>	X	X		X	
Calcium nitrate		10 %		Ca (NO <sub>3</sub> ) <sub>2</sub>	X	X			
Citric acid	≤ 10 %						X		
Condensate (from condensing applications)							X		
Cutting oil									X
Degreaser							1)	1)	
Deionized water					X	X			
Desinfecting lye							1)	1)	
Edible oil									X
Edible vinegar							X		
Ethylene glycol					X	X			
Fermentation juice									X
Ferrous nitrate		5 %		Fe (NO <sub>3</sub> ) <sub>2</sub>			X		
Ferrous sulphate		5 %		Fe (SO <sub>4</sub> ) <sub>2</sub>			X		
Fibrous material						X		X	
Fixative baths							1)		
Fruit juice							X	X	
Galvanic baths							1)	1)	
Glycol					X	X			
Lab water							1)	1)	
Landfill leachate							1)	1)	
Lactic acid		5 %					X		
Lees for metal cleaning							1)	1)	
Lemonades							X		
Liquid fertilizer							X	X	
Lye	≤ 40 °C		≤ pH 12				X	X	
Magnesium chloride	≤ 20 °C	3 %		MgCl <sub>2</sub>			X		
Magnesium sulphate		10 %		MgSO <sub>4</sub>	X	X			
Milk					X	X			
Oil-water mixture									X
Osmosis									
- Raw water (containing salt/chloride)							1)	1)	
- Permeate (low salt content)							X	X	
Paraffin oil									X
Photographic developer							1)		
Potassium carbonate					X	X			
Potassium chloride	≤ 20 °C	3 %		KCl			X		
Potassium hydroxide	≤ 30 °C	10 %		KOH	X	X			
Potassium nitrate		10 %		KNO <sub>3</sub>	X	X			
Rapeseed oil									X

**Selection Tool for Drainage Duties      Continued**

Medium handled	Temperature	Percentage	Type series Material variants Particle size (mm)	Ama-Drainer				
				Standard		C		R
				10/11	35	10/11	35	10/11
Silage percolating water						X	X	
Silicon oil								X
Sodium carbonate		10 %	Na <sub>2</sub> CO <sub>3</sub>	X	X			
Sodium chloride	≤ 20 °C	3 %	NaCl			X		
Sodium hydroxide	≤ 30 °C	10 %	NaOH	X	X			
Sodium nitrate				X	X			
Sodium perborate				X	X			
Sodium sulphate		10 %	Na <sub>2</sub> SO <sub>4</sub>	X	X			
Soy-bean oil				X	X			X
Trisodium phosphate				X	X			
Vaseline				X	X			
Vinegar						X		
Washing machine lye				X	X	X	X	
Water								
– Boiler water				X	X			
– Clean water				X	X			
– Cooling water				X	X			
– Drainage water				X	X			
– Fire-extinguishing water				X	X			
– Fully desalinated water						X	X	
– Heating water				X	X			
– Partly desalinated water				X	X			
– Raw water						1)	1)	
– Salt water						1)	1)	
– Seawater	≤ 15 °C					X	X	
– Swimming pool water (DIN 19 643)						X	X	
Waste water								
– Beverage industry, breweries						X	X	
– Bottle/crate/keg rinsing						X	X	
– Car repair shops, car washes								X
– Containing salt (from fish-processing plants)							X	
– Dairies, winegrowers' cooperatives						X	X	
– Electroplating shops						1)	1)	
– Emergency applications (floods)					X		X	
– Filling stations								X
– Lake and river water					X		X	
– Pit drainage (chemically aggressive substances)						X	X	
– Pit drainage (raffinates)								X
– Washing water containing long fibres and substances liable to twist and bunch					X		X	
Whey						X		

1) Please contact KSB and provide the relevant analysis as well as the data on temperature and mode of operation

**Special Programme (upon request)**

For improved fire protection in building services

Variant: power supply cables free from halogen and noxious substances



**Materials**
**Ama-Drainer – Standard Variant**

	<b>Ama-Drainer A 4.. ../10</b>	<b>Ama-Drainer A 4.. ../35</b>	<b>Ama-Drainer A 5.. ../10 K</b>	<b>Ama-Drainer A 522 ../11</b>
Pump casing	Chrome nickel steel (1.4301)	Chrome nickel steel (1.4301)	Chrome nickel steel (1.4301)	Cast iron EN-GJL-250 (GG-25)
Suction cover	Chrome nickel steel (1.4301)	Chrome nickel steel (1.4301)	Chrome nickel steel (1.4301)	Cast iron EN-GJL-250 (GG-25)
Volute	Acrylonitrile-butadiene-styrene copolymer (ABS)	Acrylonitrile-butadiene-styrene copolymer (ABS)	Acrylonitrile-butadiene-styrene copolymer (ABS)	-
Impeller	Polyamide (PA)	Polyamide (PA)	Polyamide (PA)	Polyamide (PA)
Foot	Polypropylene (PP)	Chrome nickel steel (1.4301)	Polypropylene (PP)	Polyethylene (PE)
O-rings	Acrylonitrile-butadiene (NBR)	Acrylonitrile-butadiene (NBR)	Acrylonitrile-butadiene (NBR)	Acrylonitrile-butadiene (NBR)
Mechanical seal	Silicon carbide (SiC/SiC)	Silicon carbide (SiC/SiC)	Silicon carbide (SiC/SiC)	Silicon carbide (SiC/SiC)
Stator case	Chrome nickel steel (1.4301)	Chrome nickel steel (1.4301)	Chrome nickel steel (1.4301)	Chrome nickel steel (1.4301)
Rotor shaft	Chrome steel (1.4021)	Chrome steel (1.4021)	Chrome steel (1.4021)	Chrome steel (1.4021)
Motor connection cable	Polychloroprene rubber (CR)	Polychloroprene rubber (CR)	Polychloroprene rubber (CR)	Polychloroprene rubber (CR)
Float	Polypropylene (PP)	Polypropylene (PP)	Polypropylene (PP)	Polypropylene (PP)
Cooling jacket	-	-	Polyoxymethylene (POM)	-
Oil supply	Liquid paraffin (environmentally friendly)	Liquid paraffin (environmentally friendly)	Liquid paraffin (environmentally friendly)	Liquid paraffin (environmentally friendly)

**Ama-Drainer - Variant C**

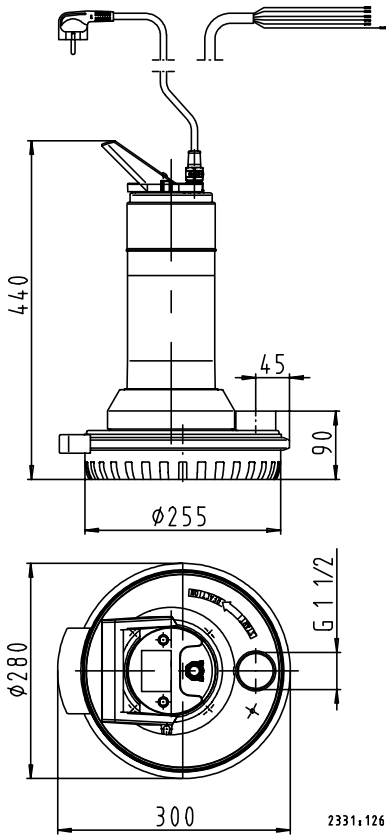
		<b>Ama-Drainer C 4.. ../35 *)</b>	<b>Ama-Drainer C 5.. ../10 K *)</b>	<b>Ama-Drainer C 522 ../11 *)</b>
Pump casing		CrNiMo steel (1.4401)	CrNiMo steel (1.4401)	Cast CrNiMo steel (1.4408)
Suction cover		CrNiMo steel (1.4401)	CrNiMo steel (1.4401)	Cast CrNiMo steel (1.4408)
Volute		Acrylonitrile-butadiene-styrene copolymer (ABS)	Acrylonitrile-butadiene-styrene copolymer (ABS)	-
Impeller		Polyamide (PA)	Polyamide (PA)	Polyamide (PA)
Foot		Polypropylene (PP)	Polypropylene (PP)	Polyethylene (PE)
O-rings		Acrylonitrile-butadiene (NBR)	Acrylonitrile-butadiene (NBR)	Acrylonitrile-butadiene (NBR)
Mechanical seal		Silicon carbide (SiC/SiC)	Silicon carbide (SiC/SiC)	Silicon carbide (SiC/SiC)
Stator case		CrNiMo steel (1.4401)	CrNiMo steel (1.4401)	CrNiMo steel (1.4401)
Rotor shaft		CrNiMo steel (1.4571)	CrNiMo steel (1.4571)	CrNiMo steel (1.4571)
Motor connection cable		Polychloroprene rubber (CR)	Polychloroprene rubber (CR)	Polychloroprene rubber (CR)
Float		Polypropylene (PP)	Polypropylene (PP)	Polypropylene (PP)
Cooling jacket		-	Polyoxymethylene (POM)	-
Oil supply		Liquid paraffin (environmentally friendly)	Liquid paraffin (environmentally friendly)	Liquid paraffin (environmentally friendly)

**Ama-Drainer -Variant R**

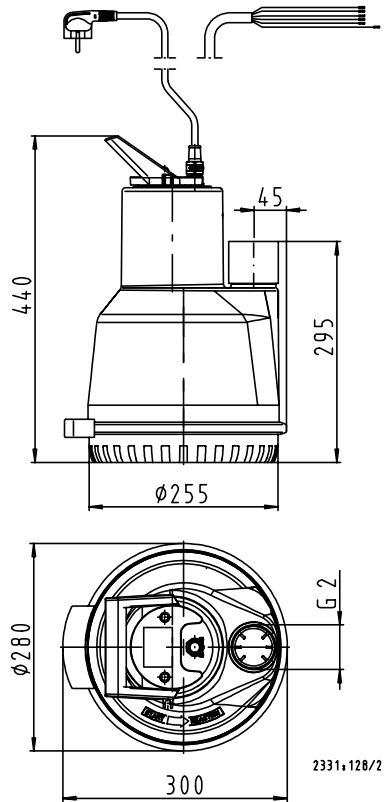
			<b>Ama-Drainer R 5.. ../10 K</b>	<b>Ama-Drainer R 522 ../11</b>
Pump casing			Chrome nickel steel (1.4301)	Cast iron EN-GJL-250
Suction cover			Chrome nickel steel (1.4301)	Cast iron EN-GJL-250
Volute			Acrylonitrile-butadiene-styrene copolymer (ABS)	-
Impeller			Polyamide (PA)	Polyamide (PA)
Foot			Polypropylene (PP)	Polypropylene (PP)
O-rings			Fluoro carbon rubber (FPM)	Fluorocarbon rubber (FPM)
Mechanical seal			Silicon carbide (SiC/SiC)	Silicon carbide (SiC/SiC)
Stator case			Chrome nickel steel (1.4301)	Chrome nickel steel (1.4301)
Rotor shaft			Chrome steel (1.4021)	Chrome steel (1.4021)
Motor connection cable			Polyurethane (PUR)	Polyurethane (PUR)
Float			Polypropylene (PP)	Polypropylene (PP)
Cooling jacket			Polyoxymethylene (POM)	-
Oil supply			Liquid paraffin (environmentally friendly)	Liquid paraffin (environmentally friendly)

\*) **Caution:** Check accessories for corrosion resistance

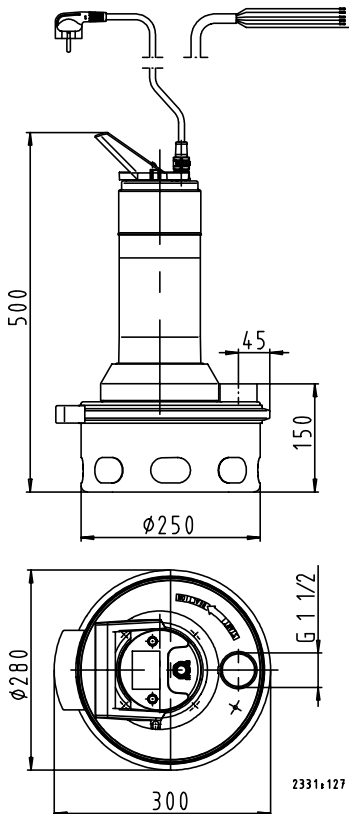
Ama-Drainer 4../10 without cooling jacket



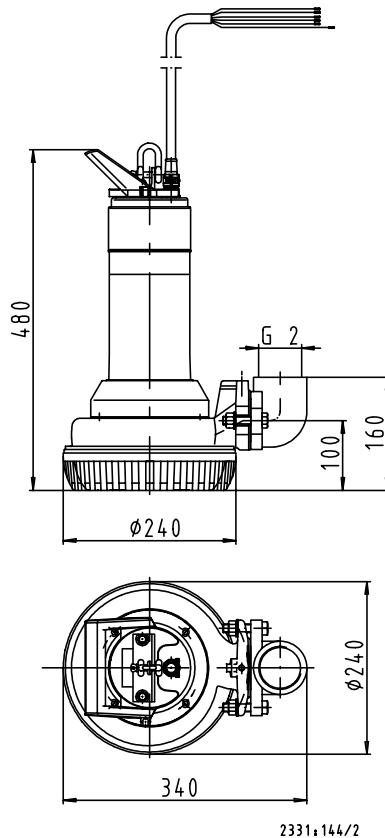
Ama-Drainer 5../10 K with cooling jacket



Ama-Drainer 4../35 without cooling jacket

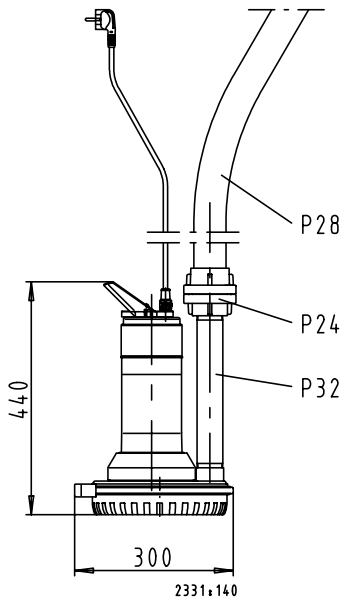


Ama-Drainer 522/11 without cooling jacket

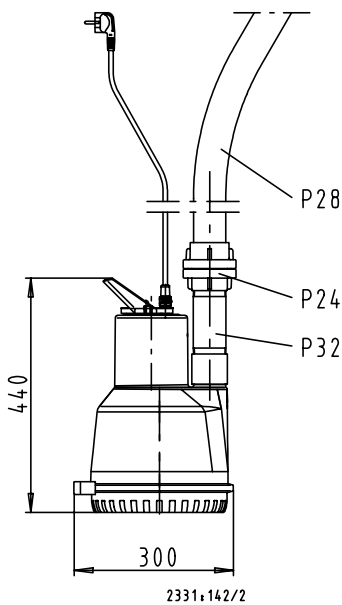


**Examples of portable version**

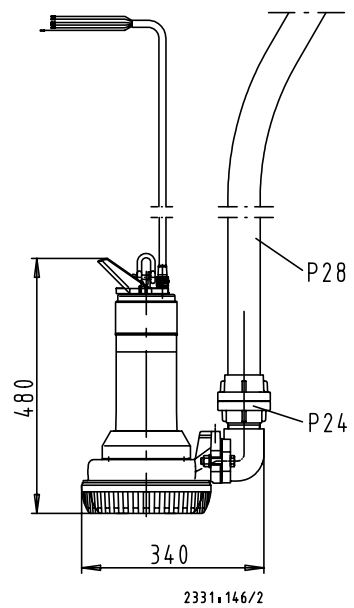
**4.. NE/10 without cooling jacket**



**5.. NE/10 K with cooling jacket**



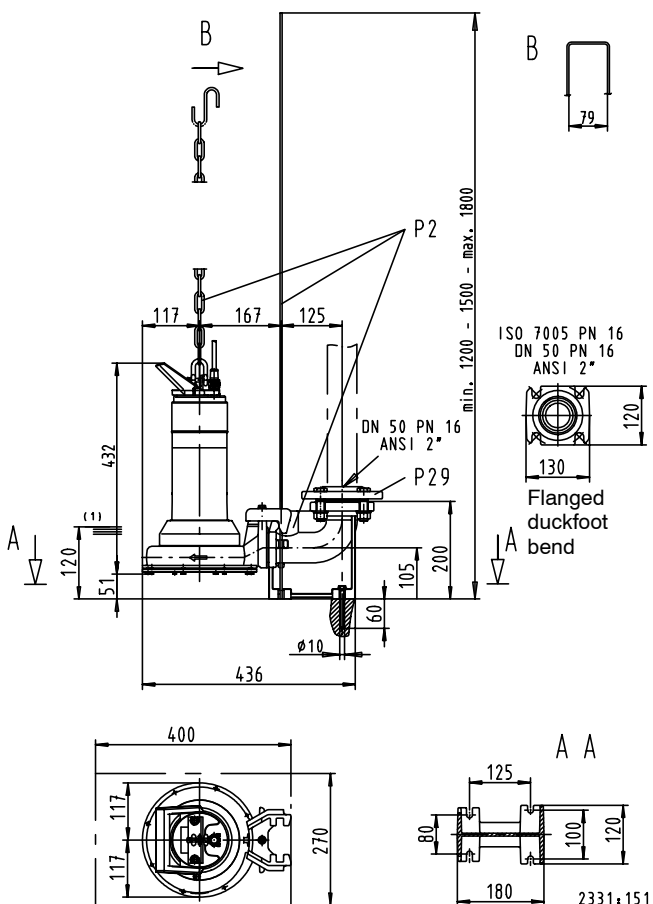
**522 ND/11 without cooling jacket**



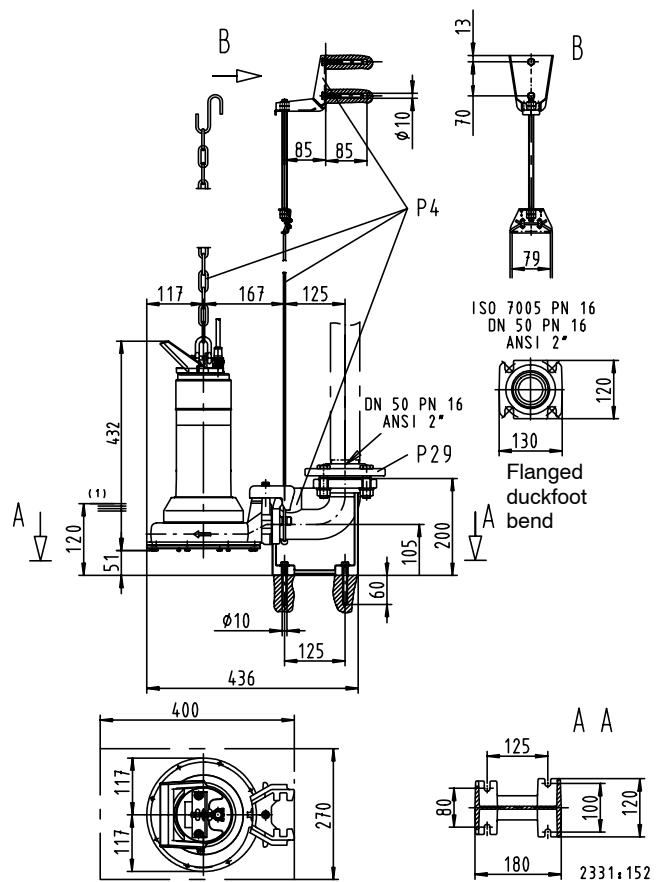
- P 24 Storz rigid coupling
- P 28 Plastic hose
- P 32 Pipe extension

**Stationary installation**

**Ama-Drainer 522 ND/11 with hoop**



**Ama-Drainer 522 ND/11 with guide wire**



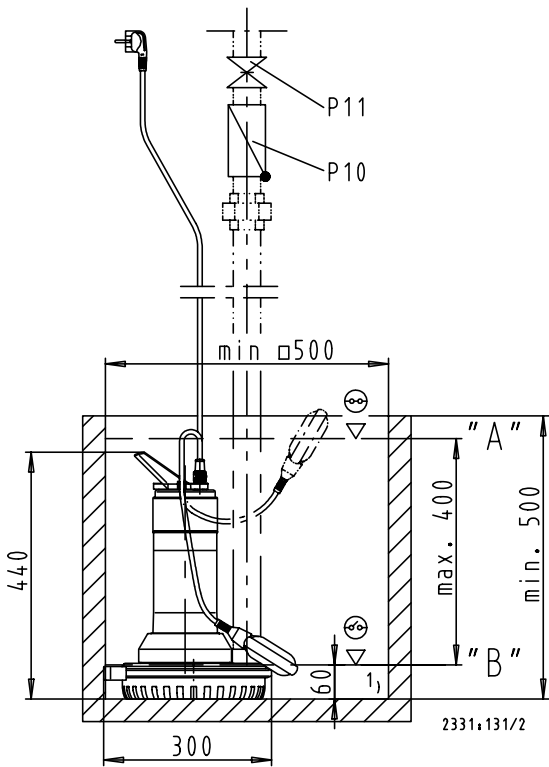
(1) lowest shut-off point for automatic operation

(1) lowest shut-off point for automatic operation

- P 2 Hoop arrangement
- P 4 Wire arrangement
- P 29 Screwed flange

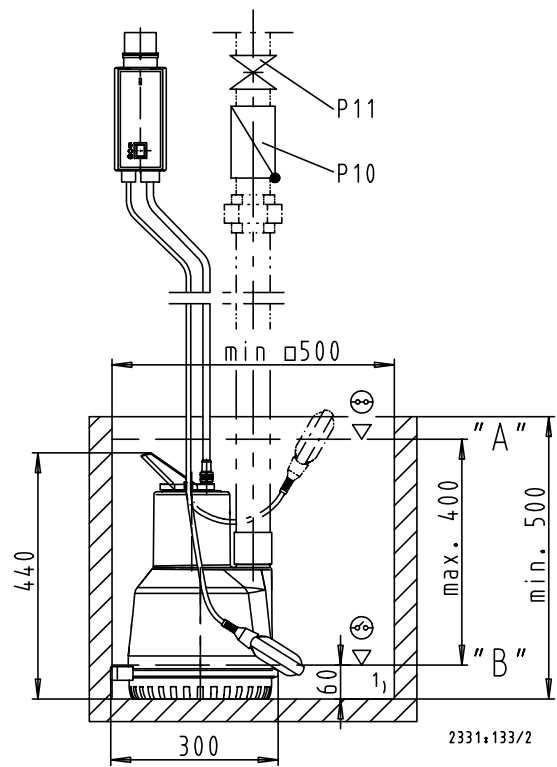
Outline Drawings of Single Pumps

Ama-Drainer 4..SE /10 without cooling jacket



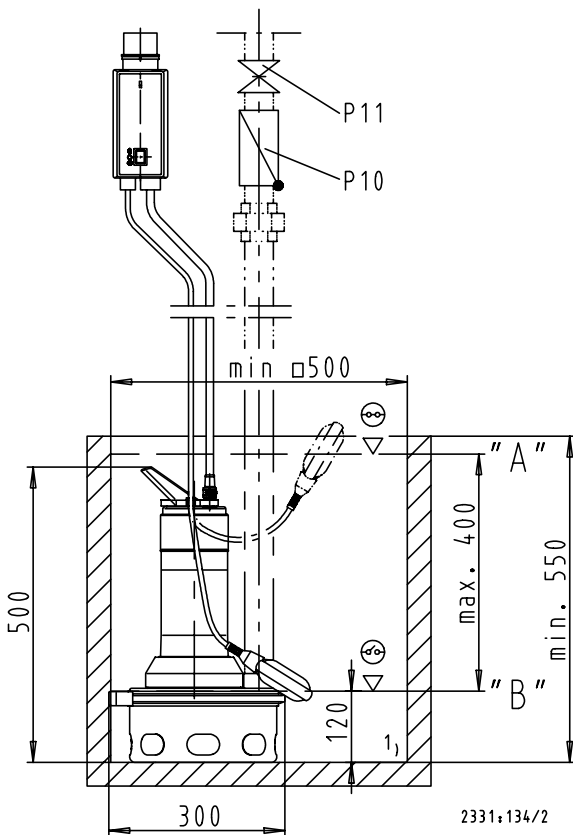
1) Residual water level

Ama-Drainer 5.. SD/10 K with cooling jacket



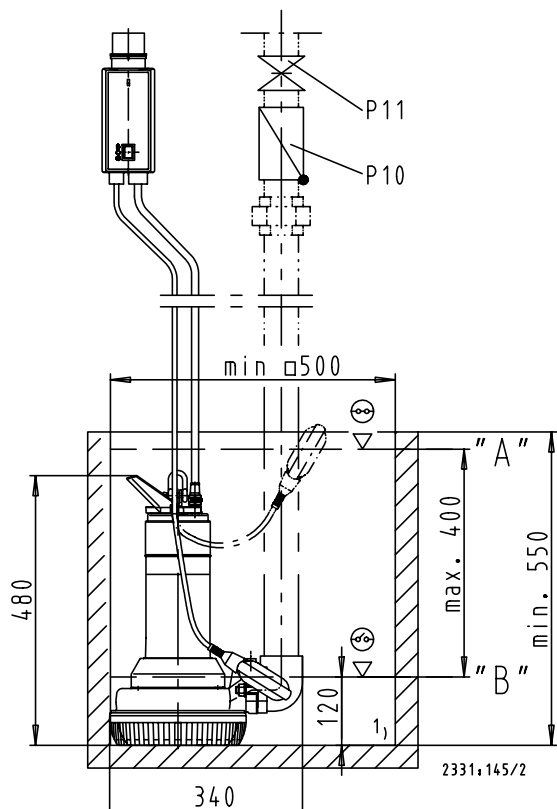
1) Residual water level

Ama-Drainer 4.. SD/35 without cooling jacket



1) Residual water level

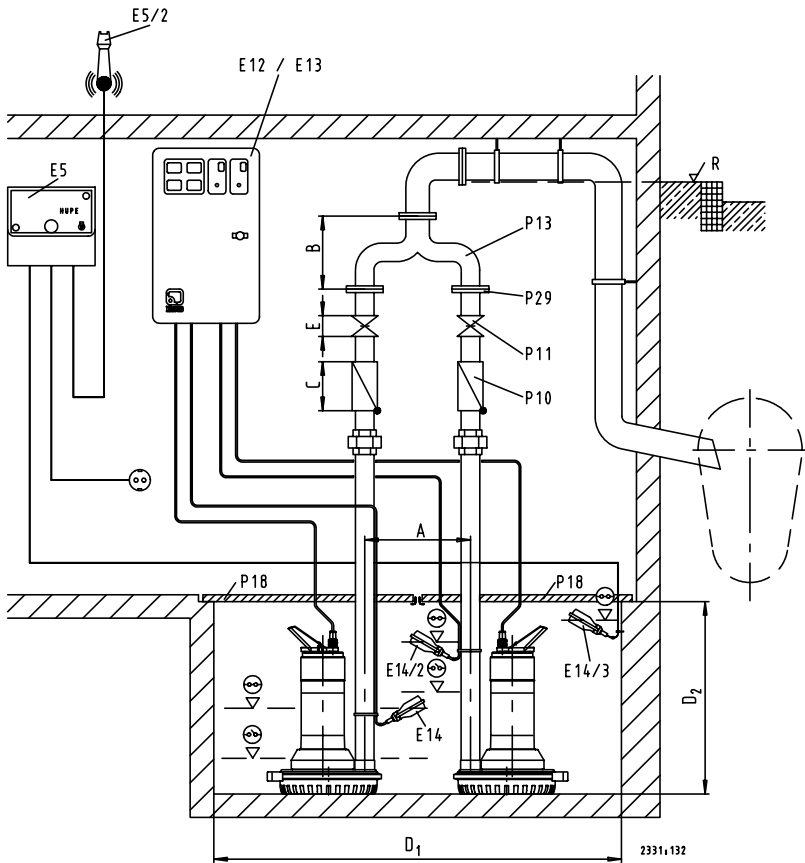
Ama-Drainer 522 SD/11 without cooling jacket



1) Residual water level

P 10 Swing check valve  
P 11 Gate valve

**Typical Arrangement of Twin Pumping Station**  
**Ama-Drainer 405 ... 422 NE/ND / 505 ... 522 NE/ND**



- P 10 Swing check valve
- P 11 Gate valve
- P 13 Y-pipe
- P 18 Cover plate
- P 29 Screwed flange
- E 5 AS 5 alarm switchgear
- E 5/2 Horn
- E 12/E 13 Switchgear
- E 14 Float switch, normal water level
- E 14/2 Float switch, high water level
- E 14/3 Alarm contactor
- R Backwash level

**Dimensions and Weights**

Ama-Drainer	A	B	C	D <sub>1</sub>	D <sub>2</sub>	E	~kg
4../10	275	190	130	1060 x 500	500	55	16
4../35	275	190	130	1060 x 500	550	60	17
5../10 K	300	210	130	1060 x 500	500	55	17
522/11	300	210	130	1060 x 500	550	55	24





