

# ABS lifting station Synconta 901 - 902L

Synthetic prefabricated sump, designed as a single or double pumping station for the automatic pumping of wastewater and sewage from locations and areas below the backwash level in accordance with EN 12050-1. Designed as a complete wastewater sump for below-ground installation and for fitting with ABS pumps from the Piranha and AS ranges.



## Features

- Installed with a concrete lid, outside the building in open ground. Synconta is suitable for installations according to EN 124; Group 1 permissible traffic tonnage 5 kN/m<sup>2</sup>. Maximum permissible outside pressure 0.4 bar.
- Stainless steel discharge pipe with 2" external thread.
- Synconta 901: one pump, 902: two pumps. Standard depth version - 1690 mm.
- Synconta 901L: one pump, 902L: two pumps. Maximum depth version - 2190 mm.
- Eight inflow ports (4 x DN 100, 4 x DN 150) for DIN push-on connection. One DN 100 port reserved for venting and use as a cable duct.
- Simple pump installation and maintenance, it is not necessary to enter the sump. The pump seals automatically onto the discharge line when lowered into the high level coupling.
- Pneumatic level control system.
- Maximum allowable temperature of medium 40 °C, short term to 60 °C (max. 5 minutes).

## Materials

| Description           | Material                          |
|-----------------------|-----------------------------------|
| Tank                  | Polyethylene                      |
| <b>AS</b>             |                                   |
| Motor Housing         | Cast iron EN-GJL-250              |
| Rotor Shaft           | Stainless steel 1.4021 (AISI 420) |
| Volute                | Cast iron EN-GJL-250              |
| Impeller/Bottom plate | Cast iron EN-GJL-250              |
| Fasteners             | Stainless steel 1.4401 (AISI 316) |
| <b>Piranha</b>        |                                   |
| Upper Lid *           | Stainless steel 1.4301 (AISI 304) |
| Motor Housing         | Cast iron EN-GJL-250              |
| Rotor Shaft           | Stainless steel 1.4021 (AISI 420) |
| Volute                | Cast iron EN-GJL-250              |
| Impeller **           | Cast iron EN-GJL-250              |
| Fasteners             | Stainless steel 1.4401 (AISI 316) |

\* Piranha 08/09

\*\* Polyamide for Piranha 08



## Tank

Synthetic, corrosion-resistant tank in accordance with EN 12050-1. Supplied as standard with high-level coupling and bracket, ball type non-return valve, shut-off valve and pneumatic level control. Tank cover and pump(s) not included.

Capacity (L): 945 (Synconta 901 & 902)  
1250 (Synconta 901L & 902L)

Weight (kg)\*: 85 / 96 (Synconta 901 / 902 DN 32)  
96 / 121 (Synconta 901 / 902 DN 50)  
116 / 127 (Synconta 901L / 902L DN 32)  
127 / 152 (Synconta 901L / 902L DN 50)

\* Includes installation pipework but not weight of pump

## Motor

Water pressure sealed, squirrel cage 2- and 4-pole induction motor with triple shaft seals and oil chamber. Electronic monitoring of stator temperature and overcurrent.  
Insulation: Class F to 155 °C  
Protection type: IP 68

## Pump Types

- ABS submersible wastewater pump AS. With Contrablock or vortex hydraulics for pumping clear water, wastewater and sewage with large solid particles present. Up to 60 mm solids passage.
- ABS Piranha submersible grinder pump. Shredding system hydraulics which can cut and pump wastewater containing solids through small diameter discharge lines from 1¼".

**Technical Data**

| <b>Pump type:<br/>Std. (no Ex)</b>                   | <b>Piranha<br/>08 W/KS</b> | <b>Piranha<br/>08 D/KS</b> | <b>Piranha<br/>09 W/KS</b> | <b>Piranha<br/>09 D/KS</b> |                            |                            |                            |
|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Pump discharge internal thread                       | G 1¼"                      | G 1¼"                      | G 1¼"                      | G 1¼"                      |                            |                            |                            |
| Hydraulics   | Macerator                  | Macerator                  | Macerator                  | Macerator                  |                            |                            |                            |
| Solids passage (mm)                                  | n.a. <sup>†1</sup>         | n.a. <sup>†1</sup>         | n.a. <sup>†1</sup>         | n.a. <sup>†1</sup>         |                            |                            |                            |
| Motor power * (kW): P <sub>1</sub><br>P <sub>2</sub> | 1.41<br>1.00               | 1.34<br>1.00               | 2.56<br>1.84               | 2.56<br>2.0                |                            |                            |                            |
| Rated current (A)                                    | 6.41                       | 2.71                       | 11.6                       | 4.64                       |                            |                            |                            |
| Rated voltage (V)                                    | 220-240 1~                 | 400 3~                     | 220-240 1~                 | 400 3~                     |                            |                            |                            |
| Speed (r/min)  | 2900                       | 2900                       | 2900                       | 2900                       |                            |                            |                            |
| Cable ** (H07RN-F)                                   | 3G 1.0                     | 4G 1.0                     | 3G 1.0                     | 4G 1.0                     |                            |                            |                            |
| Pump weight (kg)                                     | 18                         | 18                         | 23                         | 23                         |                            |                            |                            |
| <b>Pump type:<br/>Std. &amp; Ex</b>                  | <b>Piranha<br/>S12/2 W</b> | <b>Piranha<br/>S12/2 D</b> | <b>Piranha<br/>S17/2 W</b> | <b>Piranha<br/>S17/2 D</b> | <b>Piranha<br/>S21/2 D</b> | <b>Piranha<br/>S 26/2D</b> |                            |
| Pump discharge internal thread                       | G 1¼"                      | G 1¼"                      | G 1¼"                      | G 1¼"                      | G 1¼"                      | G 1¼"                      |                            |
| Hydraulics   | Macerator                  | Macerator                  | Macerator                  | Macerator                  | Macerator                  | Macerator                  |                            |
| Solids passage (mm)                                  | n.a. <sup>†1</sup>         | n.a. <sup>†1</sup>         | n.a. <sup>†1</sup>         | n.a. <sup>†1</sup>         | n.a. <sup>†1</sup>         | n.a. <sup>†1</sup>         |                            |
| Motor power * (kW): P <sub>1</sub><br>P <sub>2</sub> | 1.77<br>1.20               | 1.69<br>1.20               | 2.36<br>1.65               | 2.31<br>1.70               | 2.79<br>2.10               | 3.43<br>2.60               |                            |
| Rated current (A)                                    | 8.22                       | 3.29                       | 10.60                      | 3.97                       | 4.75                       | 5.64                       |                            |
| Rated voltage (V)                                    | 220-240 1~                 | 400 3~                     | 220-240 1~                 | 400 3~                     | 400 3~                     | 400 3~                     |                            |
| Speed (r/min)  | 2900                       | 2900                       | 2900                       | 2900                       | 2900                       | 2900                       |                            |
| Cable ** (TLO7RN-F)                                  | 4G 1.5                     | 4G 1.5                     | 4G 1.5                     | 4G 1.5                     | 4G 1.5                     | 4G 1.5                     |                            |
| Pump weight (kg)                                     | 32                         | 32                         | 32                         | 32                         | 37                         | 40                         |                            |
| <b>Pump type:<br/>Std. &amp; Ex</b>                  | <b>AS 0530<br/>S12/2 W</b> | <b>AS 0530<br/>S12/2 D</b> | <b>AS 0530<br/>S17/2 D</b> | <b>AS 0530<br/>S26/2 D</b> | <b>AS 0630<br/>S10/4 W</b> | <b>AS 0630<br/>S13/4 D</b> | <b>AS 0630<br/>S22/4 D</b> |
| Pump discharge internal thread / flange              | G 2"                       | G 2"                       | G 2"                       | G 2" /                     | DN 65                      | DN 65                      | DN 65                      |
| Hydraulics   | Vortex                     | Vortex                     | Vortex                     | Vortex                     | Vortex                     | Vortex                     | Vortex                     |
| Solids passage (mm)                                  | 40                         | 40                         | 40                         | 40                         | 60                         | 60                         | 60                         |
| Motor power * (kW): P <sub>1</sub><br>P <sub>2</sub> | 1.77<br>1.20               | 1.69<br>1.20               | 2.31<br>1.70               | 3.43<br>2.60               | 1.69<br>1.00               | 1.93<br>1.30               | 2.88<br>2.20               |
| Rated current (A)                                    | 8.22                       | 3.29                       | 3.97                       | 5.64                       | 7.49                       | 3.60                       | 5.15                       |
| Rated voltage (V)                                    | 220-240 1~                 | 400 3~                     | 400 3~                     | 400 3~                     | 220-240 1~                 | 400 3~                     | 400 3~                     |
| Speed (r/min)  | 2900                       | 2900                       | 2900                       | 2900                       | 1450                       | 1450                       | 1450                       |
| Cable ** (TLO7RN-F)                                  | 4G 1.5                     | 4G 1.5                     | 4G 1.5                     | 4G 1.5                     | 4G 1.5                     | 4G 1.5                     | 4G 1.5                     |
| Pump weight (kg)                                     | 34                         | 34                         | 34                         | 40                         | 37                         | 37                         | 42                         |
| <b>Pump type:<br/>Std. &amp; Ex</b>                  | <b>AS 0631<br/>S12/2 W</b> | <b>AS 0631<br/>S12/2 D</b> | <b>AS 0631<br/>S17/2 W</b> | <b>AS 0631<br/>S17/2 D</b> | <b>AS 0631<br/>S30/2 D</b> | <b>AS 0641<br/>S30/2 D</b> |                            |
| Pump discharge flange                                | DN 65                      | DN 65                      | DN 65                      | DN 65                      | DN 65                      | DN 65                      |                            |
| Hydraulics   | Vortex                     | Vortex                     | Vortex                     | Vortex                     | Vortex                     | Contrablock                |                            |
| Solids passage (mm)                                  | 40                         | 40                         | 40                         | 40                         | 40                         | 45                         |                            |
| Motor power * (kW): P <sub>1</sub><br>P <sub>2</sub> | 1.77<br>1.20               | 1.69<br>1.20               | 2.36<br>1.65               | 2.31<br>1.70               | 3.74<br>3.00               | 3.74<br>3.00               |                            |
| Rated current (A)                                    | 8.22                       | 3.29                       | 10.60                      | 3.97                       | 6.23                       | 6.23                       |                            |
| Rated voltage (V)                                    | 220-240 1~                 | 400 3~                     | 220-240 1~                 | 400 3~                     | 400 3~                     | 400 3~                     |                            |
| Speed (r/min)  | 2900                       | 2900                       | 2900                       | 2900                       | 2900                       | 2900                       |                            |
| Cable ** (TLO7RN-F)                                  | 4G 1.5                     | 4G 1.5                     | 4G 1.5                     | 4G 1.5                     | 4G 1.5                     | 4G 1.5                     |                            |
| Pump weight (kg)                                     | 38                         | 38                         | 38                         | 38                         | 46                         | 42                         |                            |

<sup>†1</sup> Piranha shredding system; \* P<sub>1</sub> = Power at mains, P<sub>2</sub> = Power at motor shaft; \*\* Special rubber compound, free-end cable.

Single phase versions require a start-and-run capacitor when operated without control panel.

When fitting AS 0530 a 2-inch threaded nipple adaptor is required and must be supplied by the customer.

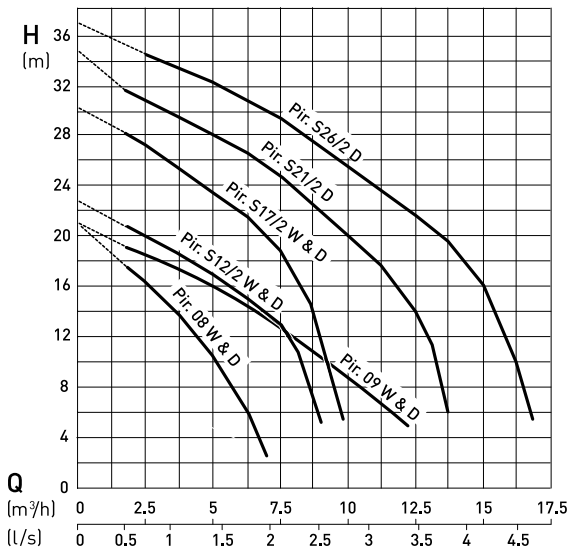
## Technical Data

| Pump type:<br>Std. & Ex            | AS 0830<br>S10/4 W | AS 0830<br>S13/4 D | AS 0830<br>S22/4 D | AS 0840<br>S12/2 W | AS 0840<br>S12/2 D | AS 0840<br>S17/2 D | AS 0840<br>S26/2 D |
|------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Pump discharge flange              | DN 80              | DN 80              | DN 80              | DN 80              | DN 80              | DN 80              | DN 80              |
| Hydraulics                         | Vortex             | Vortex             | Vortex             | Contrablock        | Contrablock        | Contrablock        | Contrablock        |
| Solids passage (mm)                | 60                 | 60                 | 60                 | 30                 | 30                 | 30                 | 30                 |
| Motor power * (kW): P <sub>1</sub> | 1.69               | 1.93               | 2.88               | 1.77               | 1.69               | 2.31               | 3.43               |
| P <sub>2</sub>                     | 1.00               | 1.30               | 2.20               | 1.20               | 1.20               | 1.70               | 2.60               |
| Rated current (A)                  | 7.49               | 3.60               | 5.15               | 8.22               | 3.29               | 3.97               | 5.64               |
| Rated voltage (V)                  | 220-240 1~         | 400 3~             | 400 3~             | 220-240 1~         | 400 3~             | 400 3~             | 400 3~             |
| Speed (r/min)                      | 1450               | 1450               | 1450               | 2900               | 2900               | 2900               | 2900               |
| Cable ** (TLO7RN-F)                | 4G 1.5             | 4G 1.5             | 4G 1.5             | 4G 1.5             | 4G 1.5             | 4G 1.5             | 4G 1.5             |
| Pump weight (kg)                   | 40                 | 40                 | 42                 | 35                 | 35                 | 35                 | 40                 |

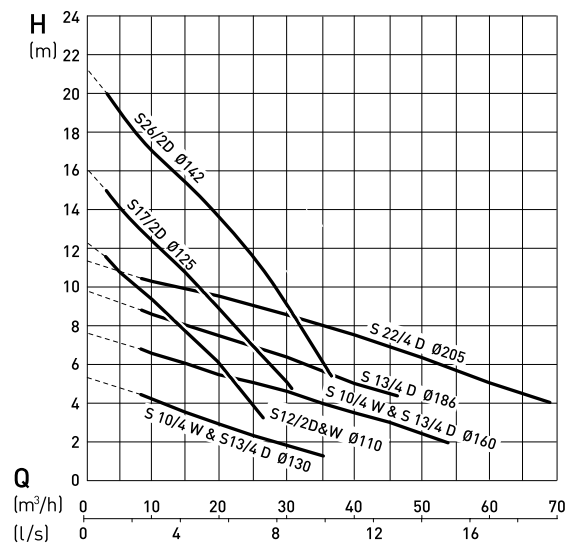
\* P<sub>1</sub> = Power at mains; P<sub>2</sub> = Power at motor shaft; \*\* Special rubber compound, free-end cable.  
Single phase versions require a start-and-run capacitor when operated without control panel.

## Performance Curves 50 Hz

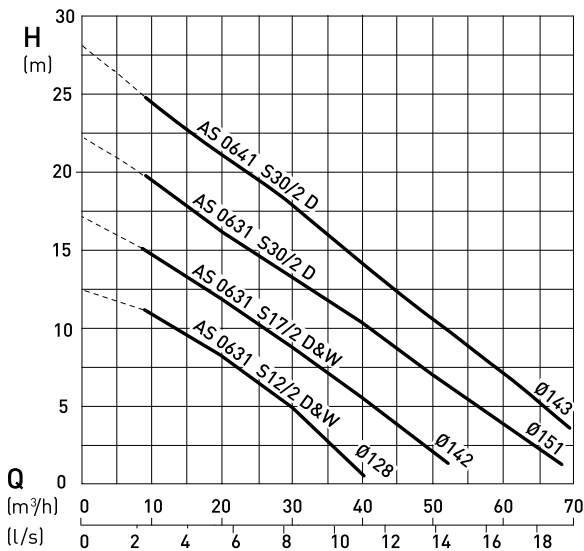
Piranha 08-S26



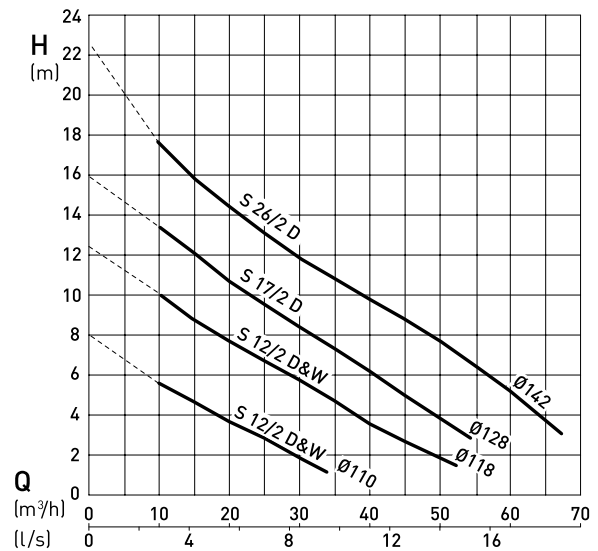
AS 0530, 0630 and 0830



AS 0631 and 0641



AS 0840



H = Total Head Q = Discharge Volume. Curves to ISO 9906 (60 Hz available on request)

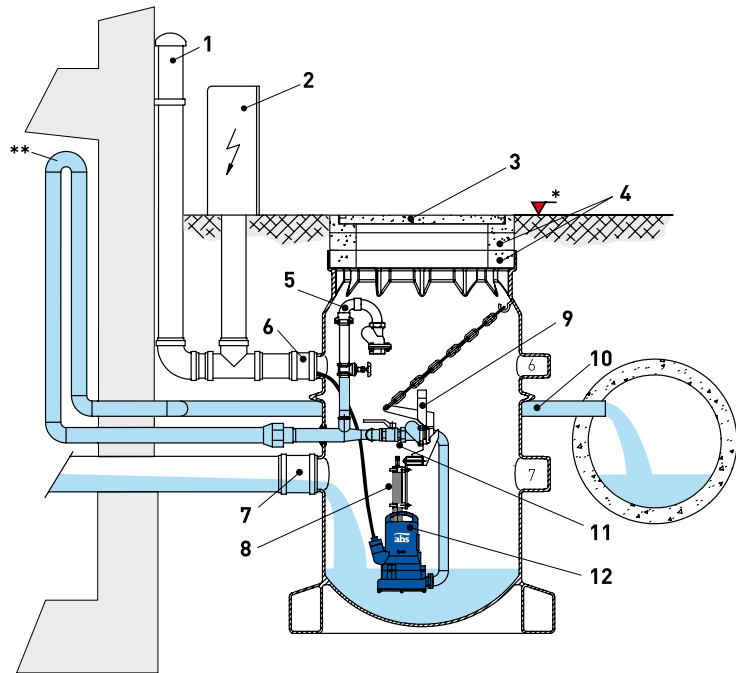
## Installation

Attention to the backwash level is of vital importance for effective dewatering. All outflow points located below the backwash level must be protected against back flow according to standard EN 12056.

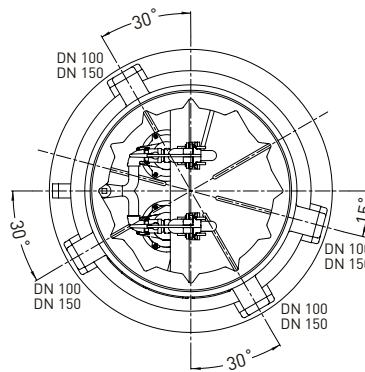
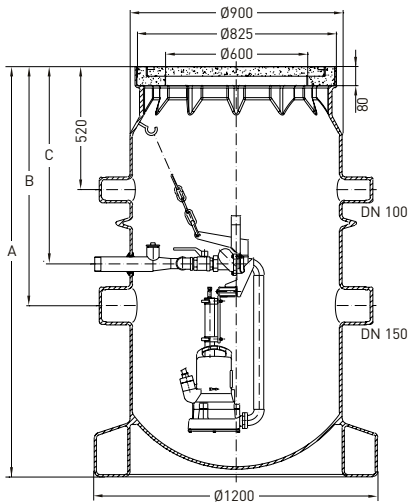
1. Ventilation pipe to be brought above roof level
2. ABS control panel
3. Concrete lid on cast iron frame (not suitable for vehicular traffic)
4. Height adjustment rings (concrete, 80 mm in height)
5. Flushing connection and vacuum breaker
6. DN 100 connection as cable duct / vent
7. DN 150 inlet connection
8. Pressure pipe for pneumatic level control
9. High level coupling supported on cross-beam
10. DN 50 discharge pipe
11. Shut-off and ball type non-return valves
12. ABS submersible pump

\* Backwash level

\*\* Backwash loop with base above the backwash level.

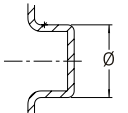


## Dimensions (mm)



## Inlet Diameters

| Ø      | (mm)              |
|--------|-------------------|
| DN 100 | +0.3<br>ø110 -1.0 |
| DN 150 | +0.4<br>ø160 -1.5 |



|                      | A    | B    | C    |
|----------------------|------|------|------|
| Synconta 901 & 902   | 1690 | 1010 | 830  |
| Synconta 901L & 902L | 2190 | 1500 | 1325 |

## Accessories

| Description   | Part No. |
|---|----------|
| <b>Sump Cover</b> - cast iron frame with concrete filling (Class A)                               | 14995000 |
| <b>Height Adjustment Ring</b> - concrete, 80 mm height  | 44505000 |
| <b>Flushing Connection</b> - with discharge line connection, shut-off valve and Geka 1¼" coupling | 61185001 |
| <b>Vacuum Breaker</b> - for DN 32 tank  | 61180521 |
| <b>Control Unit</b> - for internal or external erection available.                                |          |