# ABS LIFTING STATION SANIMAT 1501S to 3702S

CE
DIN/EN 12050-1

***Flood-proof faecal lifting stations for the automatic removal of sewage from areas below the backwash level in accordance with DIN/EN 12056. Ideal for effective sewage removal from apartment blocks, large buildings, hotels and suitable both for new structures or for renovation of old buildings.***


## Applications

For the pumping of sewage from buildings and sites in accordance with DIN/EN 12056, e.g. apartment buildings, large hotels, hospitals, shopping centres, government buildings, airports, parking areas, where the sewage outflow is located below the backwash level.

- Sanimat 1501S and 1502S for houses with one or two living units including surface dewatering.
- Sanimat 2501S and 2502S for apartment blocks, office buildings, trading and industrial buildings.
- Sanimat 3702S for large apartment blocks, hotels, hospitals, department stores, office blocks and schools.

**Medium pumped**
Domestic sewage containing faecal matter, textiles or fibrous matter. The max. medium temperature is 40 °C; intermittent usage to 60 °C (max. 5 minutes).

## Construction

Collection tank with one or two submersible pumps, level control switching and splash-proof control unit with alarm and direction of rotation indicator.

**Tank**
Gas and odour-tight to DIN/EN 12050-1, with a range of inlet ports at different heights and of different diameters stepped DN 100/150/200.

**Motor**
3-phase 400 V 3 ~, 50 Hz, 2-pole (2900 $min^{-1}$) or 4-pole (1450 $min^{-1}$), insulation class F with AS and standard AFP, class H with AFP(K) version, protection type IP 68, designed for optimum heat transfer.

**Motor shaft**
Motor shaft supported in lubricated-for-life maintenance-free ball bearings.

**Shaft sealing**
Motor side: lip seal.
Medium side: high quality sealing unit with silicon carbide faces, independent of direction of rotation and resistant to temperature shock.

**Discharge outlet**
Flange DN 80 or DN 100

**Hydraulic**
Contrablock system consisting of spiral bottom plate with waved shearing inlet and open ABS channel type impeller prevents blocking of the impeller where large proportions of solid or fibrous materials are present.

**Sealing monitoring system**
DI-System with a sensor in the oil chamber to give an indication that an inspection is due if leakage at the motor shaft sealing occurs (from AFP 0841 S13/4).

**Temperature sensors**
**TCS** (Thermo Control System) with thermal sensors in the motor winding to give a warning and switch off the motor in the event of excessive temperatures occurring. Switches on automatically after cooling down. (from AFP 0841 S13/4).

- ☐ **Robust and corrosion resisting synthetic collection tank of compact design.**
- ☐ **Easy to transport, small dimensions, passes through a standard door opening (from 800 mm).**
- ☐ **A range of inflow ports at different heights and stepped in different diameters, designed for DIN push-on sleeve connection system.**
- ☐ **Odour and flood proof (except control box).**
- ☐ **Cooling jacket as option (AFP motor).**

**Controls**
Reliable automatic operation by control panel built to VDE and DIN/EN standards, including level control and potential-free fault indicating system.

**Materials**

| | |
|---|---|
| Tank | Polyethylene |
| Motor housing | Cast Iron EN-GJL-250 |
| Motor shaft | Steel 1.4021 (AISI 420) |
| Volute | Cast Iron EN-GJL-250 |
| Impeller | Cast Iron EN-GJL-250 |

# ABS LIFTING STATION SANIMAT 1501S TO 3702S

## Technical Data

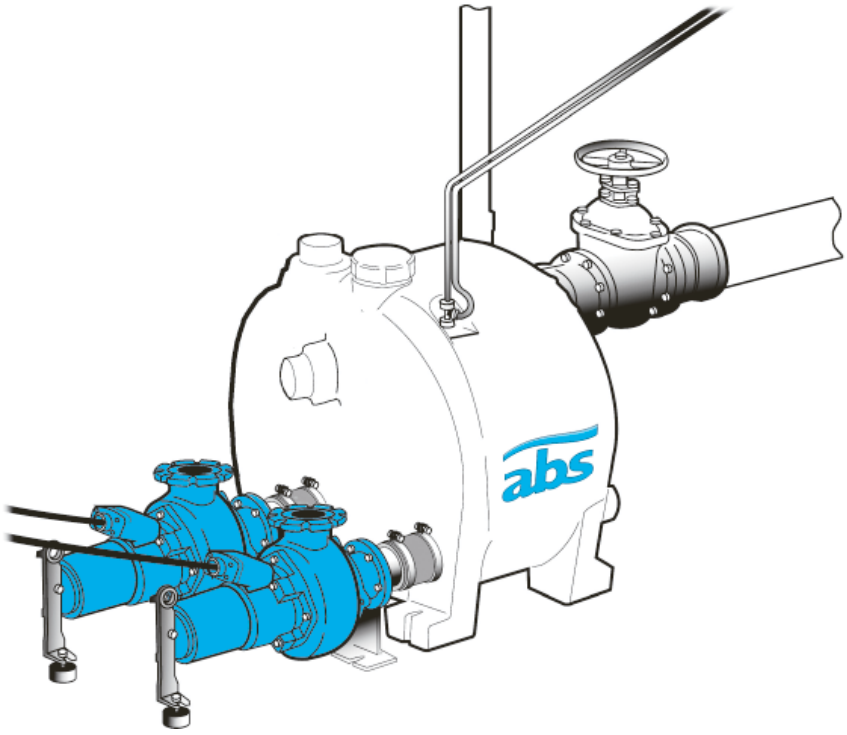
| Pump type | | | Discharge connection DIN-flange | Motor power* | | Speed at 50 Hz | Rated voltage | Rated current | Cable type** | | Weight*** per pump | Weight of tank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sanimat | Hydraulics | Motor | DND | $P_1$ kW | $P_2$ kW | min$^{-1}$ | V | A | starting DOL | Y Δ | kg | kg |
| **1501S / 1502S** | AS 0840 | S17/2 | 80 | 2.3 | 1.7 | 2900 | 400 3 ~ | 4.0 | (1) | | 35 | 21 |
| | AS 0840 | S26/2 | 80 | 3.4 | 2.6 | 2900 | 400 3 ~ | 5.6 | (1) | | 40 | 21 |
| | AFP 0841 | S13/4 | 80 | 1.9 | 1.3 | 1450 | 400 3 ~ | 3.6 | (1) | | 56 | 21 |
| | AFP 0841 | S22/4 | 80 | 2.9 | 2.2 | 1450 | 400 3 ~ | 5.2 | (1) | | 80 | 21 |
| | AFP 1041 | M22/4 | 100 | 2.88 | 2.2 | 1450 | 400 3 ~ | 5.15 | (2) | | 78 | 21 |
| **2501S / 2502S** | AS 0840 | S17/2 | 80 | 2.3 | 1.7 | 2900 | 400 3 ~ | 4.0 | (1) | | 35 | 26 |
| | AS 0840 | S26/2 | 80 | 3.4 | 2.6 | 2900 | 400 3 ~ | 5.6 | (1) | | 40 | 26 |
| | AFP 0841 | S13/4 | 80 | 1.9 | 1.3 | 1450 | 400 3 ~ | 3.6 | (1) | | 56 | 26 |
| | AFP 0841 | S22/4 | 80 | 2.9 | 2.2 | 1450 | 400 3 ~ | 5.2 | (1) | | 80 | 26 |
| | AFP 1041 | M22/4 | 100 | 2.88 | 2.2 | 1450 | 400 3 ~ | 5.15 | (2) | | 78 | 26 |
| | AFP 1041 | M30/4 | 100 | 3.95 | 3.0 | 1450 | 400 3 ~ | 7.0 | (2) | | 80 | 26 |
| **2502S** | AFP 1042 | M40/4 | 100 | 5.0 | 4.0 | 1450 | 400 3 ~ | 8.9 | | (3) | 107 | 26 |
| | AFP 1042 | M60/4 | 100 | 7.22 | 6.0 | 1450 | 400 3 ~ | 12.5 | | (3) | 100 | 26 |
| **3702S** | AFP 0841 | S13/4 | 80 | 1.9 | 1.3 | 1450 | 400 3 ~ | 3.6 | (1) | | 56 | 32 |
| | AFP 0841 | S22/4 | 80 | 2.9 | 2.2 | 1450 | 400 3 ~ | 5.2 | (1) | | 80 | 32 |
| | AFP 1041 | M22/4 | 100 | 2.88 | 2.2 | 1450 | 400 3 ~ | 5.15 | (2) | | 78 | 32 |
| | AFP 1041 | M30/4 | 100 | 3.95 | 3.0 | 1450 | 400 3 ~ | 7.0 | (2) | | 80 | 32 |
| | AFP 1042 | M40/4 | 100 | 5.0 | 4.0 | 1450 | 400 3 ~ | 8.9 | | (3) | 107 | 32 |
| | AFP 1042 | M60/4 | 100 | 7.22 | 6.0 | 1450 | 400 3 ~ | 12.5 | | (3) | 110 | 32 |

*$P_1$ = Power taken from mains
*$P_2$ = Power at motor shaft

** = Cable type: (1) = HO7RN-F4G1.5
(2) = HO7RN-F7G1.5
(3) = HO7RN-F10G1.5
Cable length 10 m

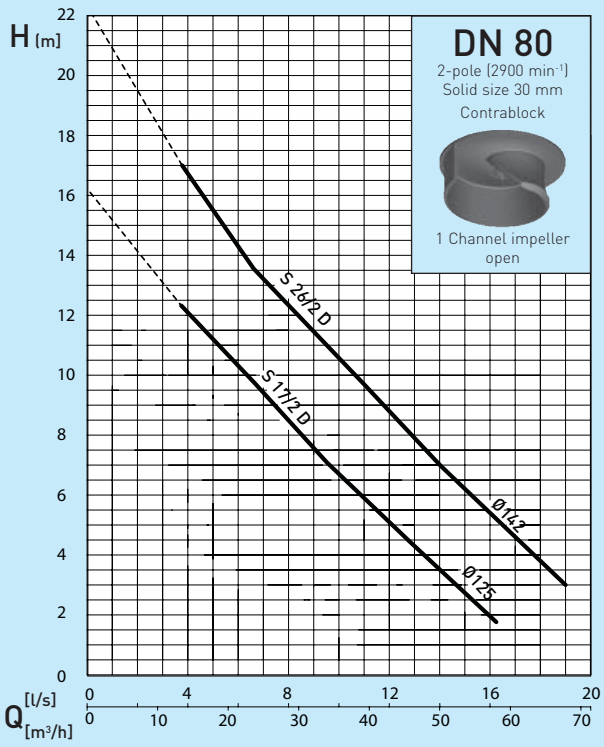
*** = additional weight of the hand operated membrane pump = 13 kg. For twin units the same pump data applies as for the corresponding single unit.

Sanimat 2502S with installation accessories

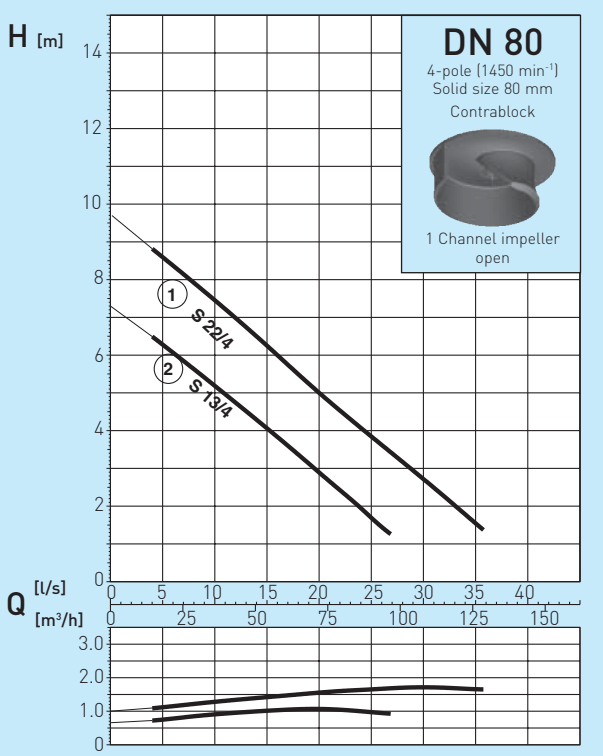


## Performance Curves 50 Hz

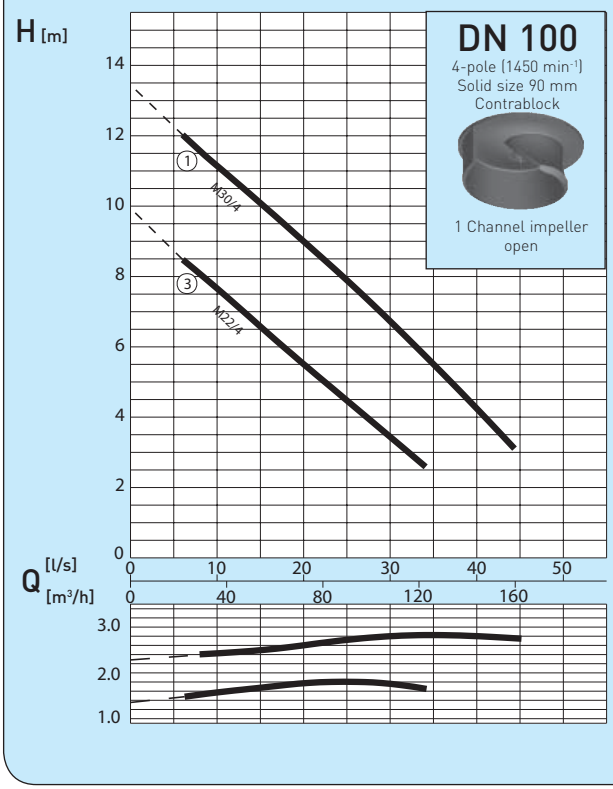
### AS 0840 S17/2 and S26/2



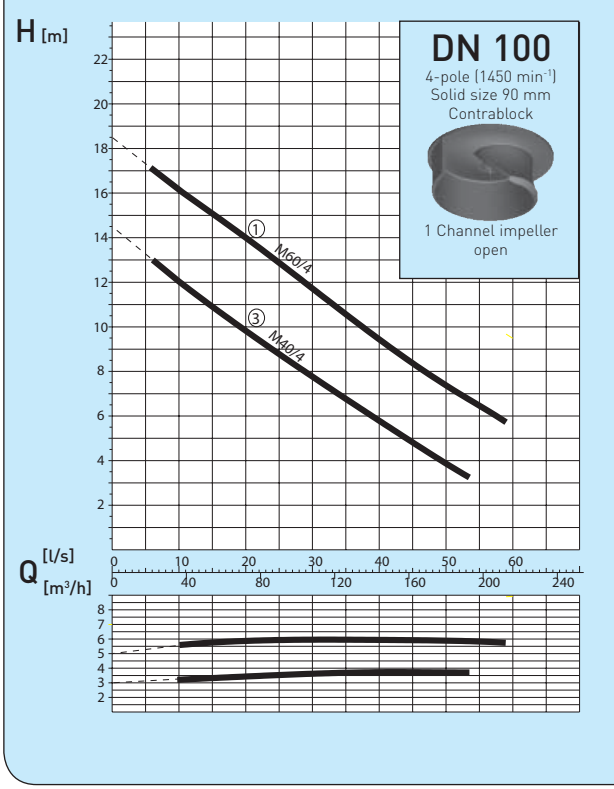

### AFP 0841 S13/4 and S22/4




### AFP 1041 M22/4 and M30/4




### AFP 1042 M40/4 and M60/4



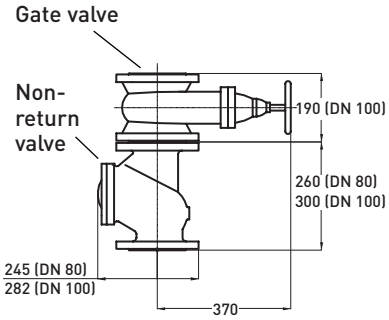

Performance curves for 60 Hz are available on request.

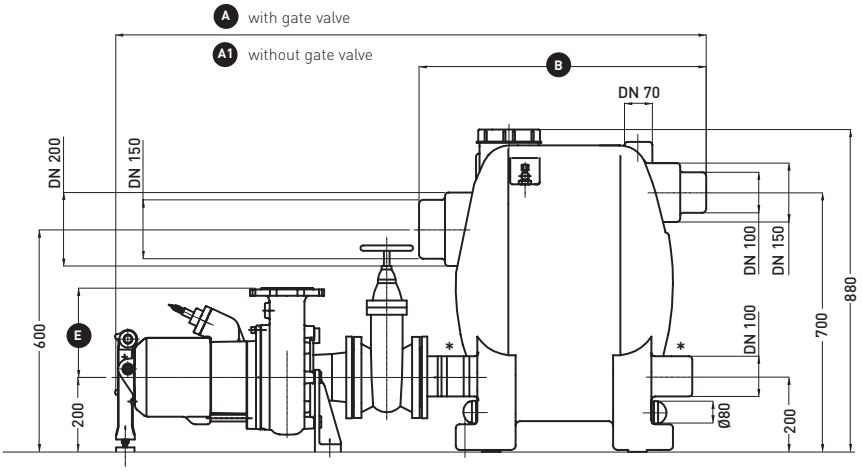
**H** = Total head, **Q** = Discharge volume, Curves to ISO 9906

# ABS LIFTING STATION SANIMAT 1501S TO 3702S

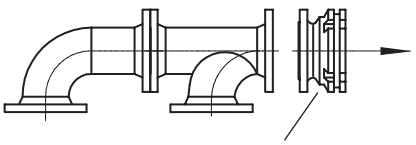
## Technical data

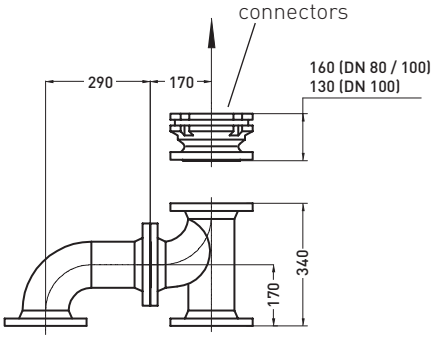
| Tank | Pump type | | Pump discharge | Dimensions (mm) | | | | | | | Volume (L) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sanimat | Hydraulics | Motor | DN | A | A1 | B | C | D | E | F | Tank | Switching |
| 1501S / 1502S | AS 0840 | S17/2 | 80 | 1247 | 1057 | 590 | 142.5 | 468 | 130 | 680 | 143 | 75 |
| | AS 0840 | S26/2 | 80 | 1259 | 1069 | 590 | 142.5 | 480 | 130 | 680 | 143 | 75 |
| | AFP 0841 | S13/4 | 80 | 1350 | 1160 | 590 | 205 | 590 | 240 | 765 | 143 | 75 |
| | AFP 0841 | S22/4 | 80 | 1350 | 1160 | 590 | 205 | 590 | 240 | 765 | 143 | 75 |
| | AFP1041 | M22/4 | 100 | 1421 | 1231 | 590 | 193 | 626 | 265 | 811 | 143 | 75 |
| 2501S / 2502S | AS 0840 | S17/2 | 80 | 1467 | 1277 | 810 | 142.5 | 468 | 130 | 680 | 244 | 125 |
| | AS 0840 | S26/2 | 80 | 1479 | 1289 | 810 | 142.5 | 480 | 130 | 680 | 244 | 125 |
| | AFP 0841 | S13/4 | 80 | 1570 | 1380 | 810 | 205 | 590 | 240 | 765 | 244 | 125 |
| | AFP 0841 | S22/4 | 80 | 1570 | 1380 | 810 | 205 | 590 | 240 | 765 | 244 | 125 |
| | AFP1041 | M22/4 | 100 | 1641 | 1451 | 810 | 193 | 626 | 265 | 811 | 244 | 125 |
| | AFP1041 | M30/4 | 100 | 1641 | 1451 | 810 | 193 | 626 | 265 | 811 | 244 | 125 |
| 2502S | AFP1042 | M40/4 | 100 | 1766 | 1576 | 810 | 246 | 744 | 265 | 840 | 244 | 125 |
| | AFP1042 | M60/4 | 100 | 1766 | 1576 | 810 | 246 | 744 | 265 | 840 | 244 | 125 |
| 3702S | AFP 0841 | S13/4 | 80 | 1820 | 1630 | 1060 | 205 | 590 | 240 | 765 | 348 | 182 |
| | AFP 0841 | S22/4 | 80 | 1820 | 1630 | 1060 | 205 | 590 | 240 | 765 | 348 | 182 |
| | AFP1041 | M22/4 | 100 | 1891 | 1701 | 1060 | 193 | 626 | 265 | 811 | 348 | 182 |
| | AFP1041 | M30/4 | 100 | 1891 | 1701 | 1060 | 193 | 626 | 265 | 811 | 348 | 182 |
| | AFP1042 | M40/4 | 100 | 2016 | 1826 | 1060 | 246 | 744 | 265 | 840 | 348 | 182 |
| | AFP1042 | M60/4 | 100 | 2016 | 1826 | 1060 | 246 | 744 | 265 | 840 | 348 | 182 |



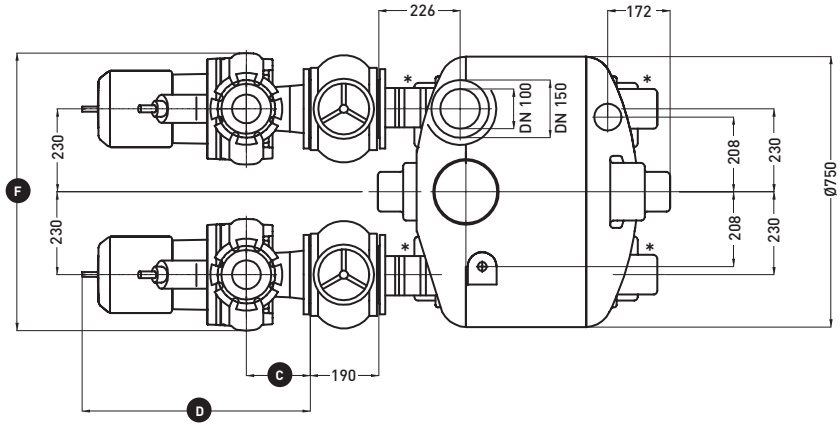




Junction piece



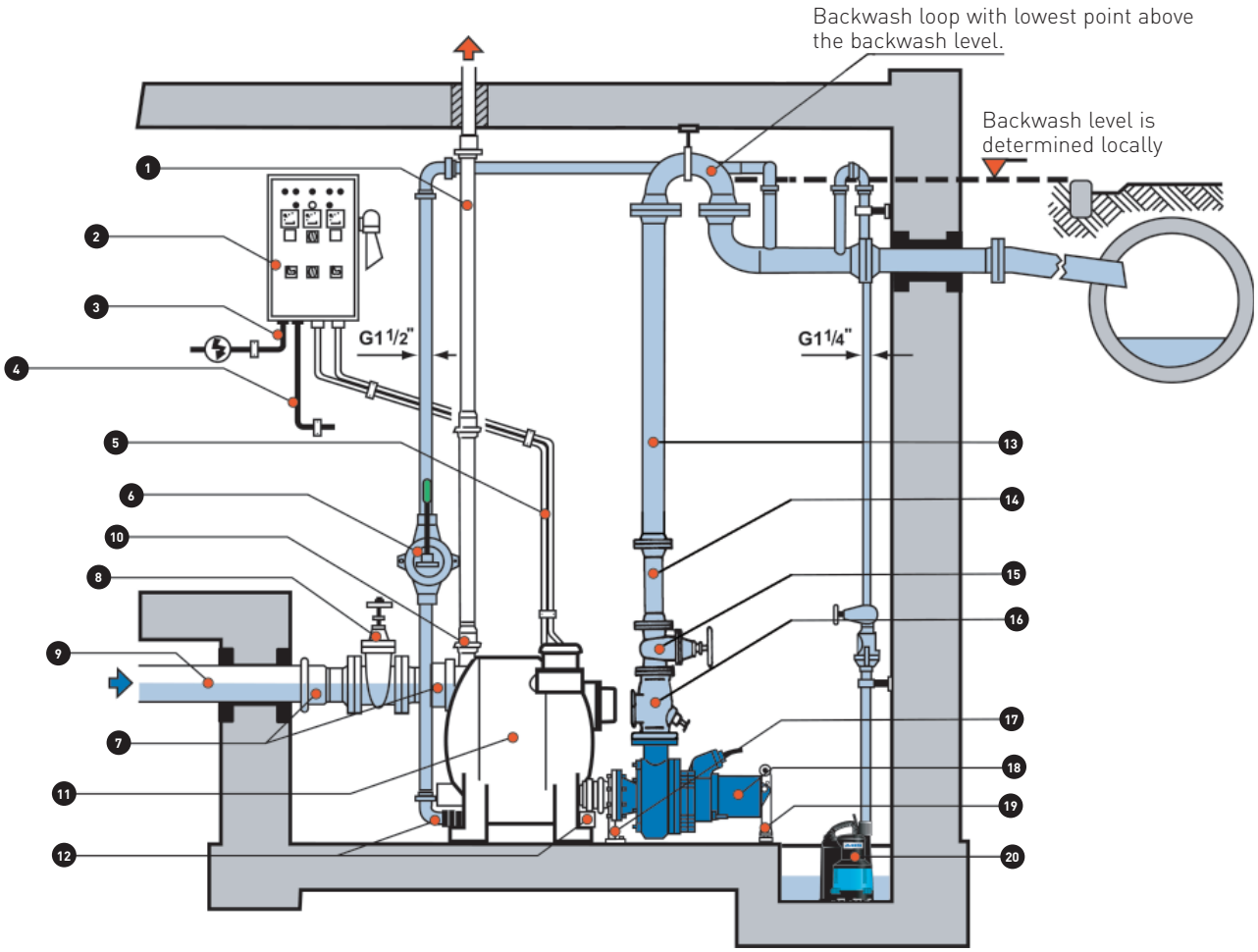



*These connection points are only suitable for the fitting of pumps and are not suitable for effluent inlet to the tank.




dimensions in mm

## Installation Example




1. Vent pipe (DN 70) to extend above roof level
2. Control unit with level control system
3. Power supply 400 V 3
4. Motor cable
5. Twin control line for level control system must have constant rise
6. Hand membrane pump
7. Flanged sleeve
8. Gate valve (Cast iron)
9. Sewage inflow (e.g. DN 150)
10. Double sleeve
11. Sanimat collection tank
12. Hand membrane pump connection — fitting on opposite side is also possible
13. Discharge line
14. Pipe bend or junction piece for twin units
15. Shut-off valve
16. Non-return valve
17. Volute support
18. ABS submersible sewage pump
19. Pump head support
20. Pump sump and dewatering pump with built-in non-return valve e.g. Robusta/TS or Coronada/KS

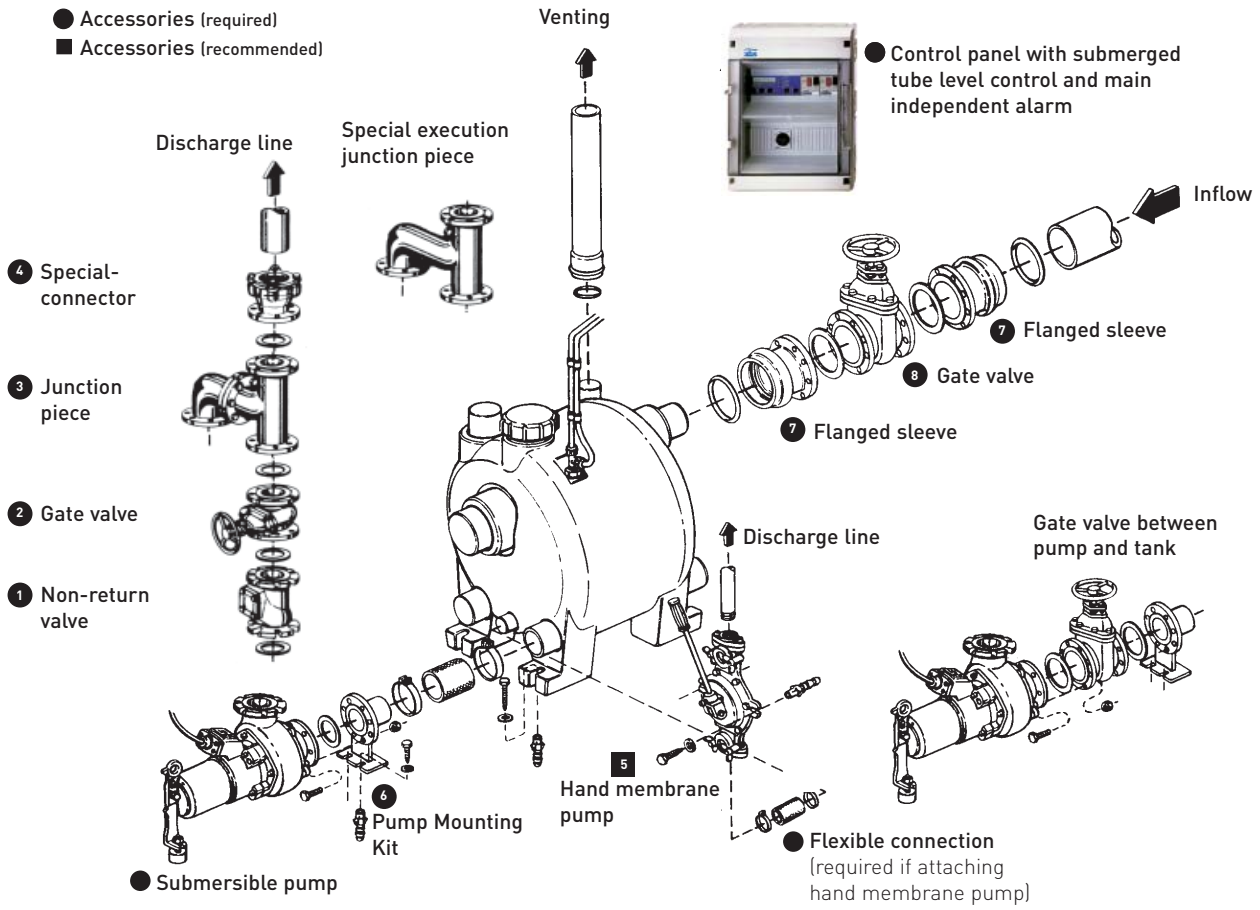
In order to ensure effective pumping away of the sewage, it is essential that the installation of pipelines and the erection of the lifting station complies with the newest DIN/EN regulations.

Rooms for sewage lifting stations must be large enough that a working area of at least 0.6 m width and height is available around all parts which have to be operated or maintained. A pump sump should be provided for dewatering of the room itself.

Attention to the backwash level is of vital importance for effective dewatering. A backwash occurs if the sewer lines are filled up completely due to heavy rainfall. In this case the lines used for the dewatering of buildings and sites are filled up to the backwash level.
All outflow points located below the backwash level must be protected against back flow. According to standard (EN 12056) the backwash level is determined by the Local Authorities. If no information is available then in the case of level ground the street surface at the connection point may be taken as the backwash level. By street surface we mean the roadway including paths, hard shoulder, etc.

# ABS LIFTING STATION SANIMAT 1501S TO 3702S

## Accessories




| | Description (Materials) | Size | Part No. |
|---|---|---|---|
| | **Discharge line** | | |
| 1 | **Non-return valve** (EN-GJL-250) with inspection opening and venting mechanism, including 1 set of bolts and 1 gasket, flanges to PN 16 | DN 80<br>DN 100 | 61400534<br>61400535 |
| 2 | **Gate valve** (EN-GJL-250) including handwheel, 1 set of bolts and 1 gasket, flanges to PN 16 | DN 80<br>DN 100 | 61420500<br>61420501 |
| 3 | **Junction piece** (St. 37) to join the two discharge lines in the case of a twin-pump station, flanges to PN16 | DN 80/80/80<br>DN 100/100/100 | 62610025<br>62610026 |
| 4 | **Special connection piece** (EN-GJL-250) for the flexible connection of the discharge line | DN 80/80<br>DN 80/100<br>DN 100/100 | 62550008<br>62550009<br>62550007 |
| 5 | **Hand membrane pump** (EN-GJL-250) with integral non-return valve, flexible connection piece with clamps for connection to tank and fixing material for mounting on to a wall | G1½" | 14990028 |
| 6 | **Pump Mounting Kit** includes clamps, gaskets, seals, adapter flange and head support | AS - DN 80<br>AFP - DN 80<br>AFP S - DN 80<br>AFP - DN 100 | 62665108<br>62660033<br>62665174<br>62660043 |

| | Description (Materials) | Size | Part No. |
|---|---|---|---|
| | **Inflow line** | | |
| 7 | **Flanged sleeve E-KS** (EN-GJL-250) transition piece DIN flange push-on sleeve, 1 set of fasteners, 1 flat gasket (2 needed for each valve) | DN 100<br>DN 150 | 62540025<br>62540026 |
| 8 | **Gate valve** (EN-GJL-250) including hand wheel, one set of bolts and one gasket, flanges PN 16 | DN100<br>DN 150 | 61420501<br>61420503 |
| | **Electrical accessories** | | |
| | **Alarm unit** (mains-independent) supplied with loading unit for mains-independent operating, battery, potential-free fault output. Can be integrated into control unit.<br>Contact ABS for further information. | | |