

SPECIFICATIONS

Function

Equalising Basins are fundamental in most VEMAR plants. They balance daily and/or weekly peak charges and build up a homogenous quality of sewage. One or more time scheduled submersible pumps will create a constant flow of "normalized sewage" into the Activated Sludge Reactor (DFA module), where steady processes of oxidation and sedimentation are essential to guarantee those rest water parameters, for which a given plant is designed. Micro-bubble air diffusers in Equalising Basins provide a pre-oxygenation of the sewage to further improve the processes of bacterial digestion and nitrification in the Activated Sludge Reactor.

Description

Externals:

VEMAR Equalising Basins come as fully equipped one-piece cylindrical modules in GRP with appropriately sized reinforcing rings to resist underground installation. Pedestrian safe covers correspond in size to the module diameters (Ø 160 to 243 cm) and can be fully removed for easy and secure access to the inside. Covers come with two inspection lids (Ø 10 and 40 cm) and slots for safe locking. The sewage level will be at a nominal 30,5 cm to 31,5 cm below ground level.

Internals, equipment and electrical devices:

Low consumption blowers come with a manual timer, are silent and highly reliable. Air pipes are in PVC (PN16), with descending pipes and fittings (1" and 1½") in stainless steel; all joints are threaded. Descending air pipes can be dismantled from above easily to facilitate maintenance works.

Each descending air pipe has a valve to regulate and close the air flow.

Large diameter EPDM membrane air-diffusers are laser micro-perforated, long-lasting, self-cleaning and have a check valve.

All piping is appropriately anchored to the tank structure on GRP profiles.

Galvanized cylindrical wire baskets (grid 1 x 2 cm) hold and protect up to two submersible sewage pumps (standard: 0,55 kW/220 V).

Wire baskets come reinforced on a T-iron frame and show the same height as the respective tank.

Pumps are attached to a stainless steel bar at the top of the basket with nylon ropes.

A 1½" flexible Airlex™ pipe leads from the pump outlet to a flow adjustment device, which consists of a valve and a tee-fitting with plug.

The plug is to be removed, when a low-regulation with the valve alone is not sufficient.

Product quality:

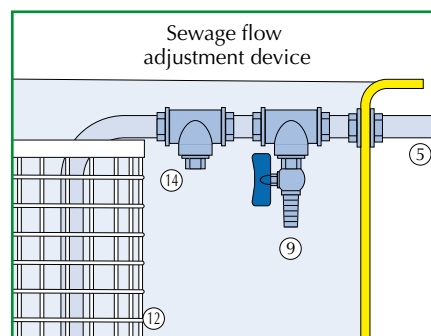
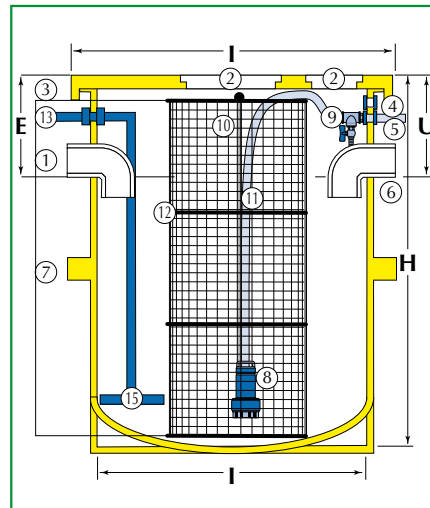
All VEMAR GRP products are made of ISO 9001:2000 guaranteed prime materials with layers of mats and tissues of diversified basis weight.

All parts in GRP will undergo a post-polymerization process, i.e. are "baked" for 10 h at 90°C.

This, among other, guarantees long term reliability and is evidenced in a certificate issued by a SINAL accredited laboratory (www.sinal.it/eng), which proves the absence or non-traceability of monomer styrene.



EQUALISING BASIN (Buffer Tank) vertical, aerated



- 1 - Sewage inlet
- 2 - Inspection lids (from Ø 160)
- 3 - Pedestrian safe cover
- 4 - Biogas vent
- 5 - Sewage lifting pipe
- 6 - Overflow
- 7 - Reinforcing ribs
- 8 - Submersible pump
- 9 - Flow adjustment valve
- 10 - Stainless steel bar
- 11 - Nylon rope
- 12 - Galvanized wire basket
- 13 - Air pipe
- 14 - Tee-fitting with plug
- 15 - Air diffuser

model	nominal volume liters	Ø nominal cm	H total height cm	E h cm inlet and overflow	U max width Ø cm	I submersible pumps n	Blower W - V	pipe inlet and overflow Ø cm
VEQV031G	3.000	160	161	30,5	174	1	53 - 220	12,5
VEQV030G	3.000	160	161	30,5	174	2	53 - 220	12,5
VEQV041G	4.000	160	208	30,5	174	1	64 - 220	12,5
VEQV040G	4.000	160	208	30,5	174	2	64 - 220	12,5
VEQV051G	5.000	160	261	30,5	174	1	114 - 220	12,5
VEQV050G	5.000	160	261	30,5	174	2	114 - 220	12,5
VEQV061H	6.000	200	205	31,5	217	1	114 - 220	12,5
VEQV060H	6.000	200	205	31,5	217	2	114 - 220	12,5
VEQV081I	8.000	230	234	31,5	250	1	141 - 220	12,5
VEQV080I	8.000	230	234	31,5	250	2	141 - 220	12,5
VEQV101L	10.000	243	247	31,5	263	1	141 - 220	12,5
VEQV100L	10.000	243	247	31,5	263	2	141 - 220	12,5
VEQV121L	12.000	243	290	31,5	263	1	141 - 220	12,5
VEQV120L	12.000	243	290	31,5	263	2	141 - 220	12,5

Tank volumes from 8'000 to 12'000 liters have a rounded base.

Remarks

Always install properly tuned overload cutout devices to the submersible pumps (one for each pump). VEQ modules have no special equipment for sludge disposal. For underground installation carefully follow Vemar Instructions.

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Function

Equalising Basins are fundamental in most VEMAR plants. They balance daily and/or weekly peak charges and build up a homogenous quality of sewage. One or more time scheduled submersible pumps will create a constant flow of "normalized sewage" into the Activated Sludge Reactor (DFA module), where steady processes of oxidation and sedimentation are essential to guarantee those rest water parameters, for which a given plant is designed. Micro-bubble air diffusers in Equalising Basins provide a pre-oxygenation of the sewage to further improve the processes of bacterial digestion and nitrification in the Activated Sludge Reactor.

Description

Externals:

VEMAR Equalising Basins come as fully equipped one-piece cylindrical modules in GRP with appropriately sized reinforcing rings to resist underground installation. Conveniently dimensioned manholes (nominal Ø 80 cm, H 30 cm) give easy and secure access to the inside and have pedestrian safe covers with slots for safe locking. The sewage level will be at a nominal 57 cm below ground level.

Internals, equipment and electrical devices:

Low consumption blowers are silent and highly reliable.

Air pipes are in PVC (PN16), with descending pipes and fittings (1" and 1½") in stainless steel; all joints are threaded.

Descending air pipes can be dismantled from above easily to facilitate maintenance works.

Each descending air pipe has a valve to regulate and close the air flow.

Large diameter EPDM membrane air-diffusers are laser micro-perforated, long-lasting, self-cleaning and have a check valve.

All piping is appropriately anchored to the tank structure on GRP profiles.

Galvanized cylindrical wire baskets (grid 1 x 2 cm) hold and protect up to two submersible sewage pumps (standard: 0,55 kW/220 V).

Wire baskets come reinforced on a T-iron frame and show the same height as the respective tank.

Pumps are attached to a stainless steel bar at the top of the basket with nylon ropes.

A 1½" flexible Airlex™ pipe leads from the pump outlet to a flow adjustment device, which consists of a valve and a tee-fitting with plug. The plug is to be removed, when a low-regulation with the valve alone is not sufficient.

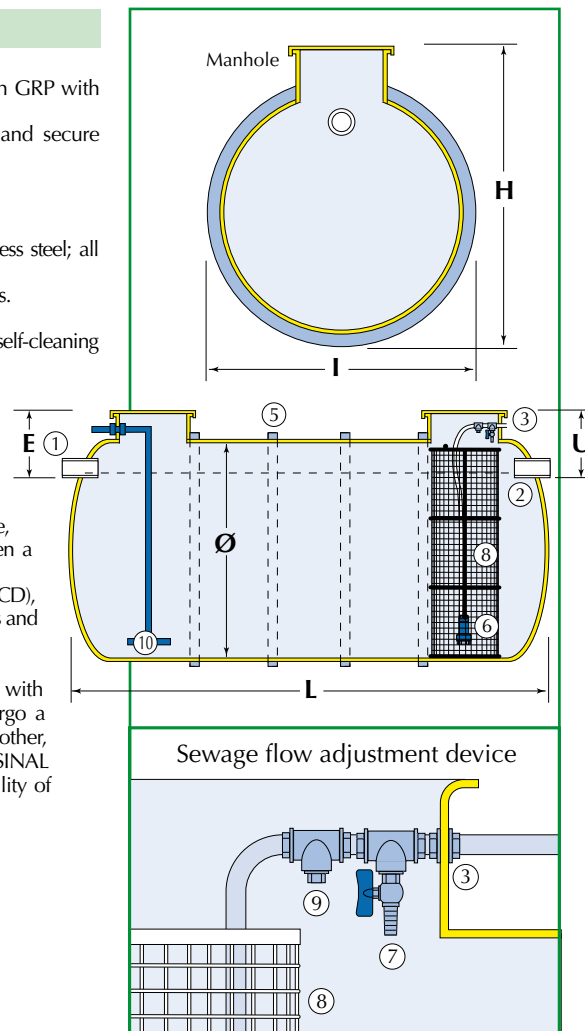
Control panels are certified CE and IP65 and come with Residual current device (RCD), Overload cutout device, Auxiliary automatic switch, Solenoid starter, Stop/Run pilot lights and Programmable logic controller (PLC).

Product quality:

All Vemar GRP products are made of ISO 9001:2000 guaranteed prime materials with layers of mats and tissues of diversified basis weight. All parts in GRP will undergo a post-polymerization process, i.e. are "baked" for 10 h at 90°C. This process, among other, guarantees long term reliability and is evidenced in a certificate issued by a SINAL accredited laboratory (www.sinal.it/eng), which proves the absence or non-traceability of monomer styrene.



EQUALISING BASIN (Buffer Tank) horizontal, aerated



model	nominal volume liters	Ø nominal cm	H total height cm	L length cm	E-U h cm inlet and overflow	I max width cm	Ø pipe inlet and overflow cm	submersible pumps n	Blower kW / V	Man-hole n
VEQO151I	15.000	230	274	400	57	252	12,5	1	0,28/220	2
VEQO150I	15.000	230	274	400	57	252	12,5	2	0,28/220	2
VEQO201I	20.000	230	274	520	57	252	12,5	1	0,28/220	2
VEQO200I	20.000	230	274	520	57	252	12,5	2	0,28/220	2
VEQO251I	25.000	230	274	640	57	252	12,5	1	0,32/220	2
VEQO250I	25.000	230	274	640	57	252	12,5	2	0,32/220	2
VEQO301I	30.000	230	274	760	57	252	16	1	0,55/220	2
VEQO300I	30.000	230	274	760	57	252	16	2	0,55/220	2
VEQO351I	35.000	230	274	882	57	252	16	1	0,55/220	2
VEQO350I	35.000	230	274	882	57	252	16	2	0,55/220	2
VEQO401I	40.000	230	274	1002	57	252	16	1	0,55/220	3
VEQO400I	40.000	230	274	1002	57	252	16	2	0,55/220	3
VEQO501L	50.000	243	287	1116	57	265	16	1	1,1/380	3
VEQO500L	50.000	243	287	1116	57	265	16	2	1,1/380	3
VEQO601L	60.000	243	287	1332	57	265	16	1	1,1/380	4
VEQO600L	60.000	243	287	1332	57	265	16	2	1,1/380	4

- 1 - Sewage inlet
- 2 - Overflow
- 3 - Sludge lifting pipe
- 4 - Pedestrian safe top lid
- 5 - Reinforcing rings
- 6 - Submersible pump
- 7 - Flow adjustment valve
- 8 - Coarse screening basket
- 9 - Tee-fitting with plug
- 10 - Membrane air diffuser

Remarks

Always install properly tuned overload cutout devices to the submersible pumps (one for each pump).

VEQ modules have no special equipment for sludge disposal.

For underground installation carefully follow Vemar Instructions.