



DISSCHARGE MODULE

Emptying of the tank



HYDROZONE BENEFIT



KRAJOWA
OCENA
TECHNICZA*

* dotyczy urządzeń podczyszczających
oraz korpusów zbiornika



EPM I

Hydrostatic probe



EOG

Control of gravity drain from the
tank

Gravity drainage:

No.	Type	DN discharge pipe [mm]*	Drain control
1	EOG	160	Automatic drain shut-off with drive
2	EOG	200	Automatic drain shut-off with drive
3	EOG	300	Automatic drain shut-off with drive
4	EOG	400	Automatic drain shut-off with drive
5	EOG	500	Automatic drain shut-off with drive

* other diameters available on request

Pressure drainage:

No.	Type	Q [l/s]*	H [m]*	DN piping [mm]*	Pump operation
1	EOP	5	6	50	1+1
2	EOP	10	6	80	1+1
3	EOP	20	6	100	1+1
4	EOP	30	6	100	2+0
5	EOP	40	6	100	2+0
6	EOP	50	6	125	2+0

* possibility to select a pumping system with customised parameters on request

Description:

Due to layout of the sewer network, the outflow from the retention part of the tanks can be carried out:

- by gravity via a discharge pipe or,
- under pressure via a pumping system with appropriate operating parameters.

In the case of tanks where rainwater and snowmelt are stored, it is important to retain the medium in the retention section. From the user's perspective, it is important that such a process is carried out automatically.

Depending on the type of drainage from the tank, it is possible to use a system of:

- EOG – control of gravity discharge from the tank
- EOP - control of pressure drainage from the tank

Automatically operated gate valves are used in the EOG system depending on the diameter of the drain. The hydraulic fittings are mounted directly in the retention chamber of the tank. Access to the gate valve is provided from ground level (enabling operation and maintenance).

The EOP system uses pumping systems. This system consists of submersible pumps mounted on a coupling foot and hydraulic-mechanical fittings consisting of discharge pipes and fittings (non-return valves, gate valves). The diameter of the discharge pipes is selected according to the flow rate and the pump operation scheme.

The table lists pressure drainage systems for the specified hydraulic parameters. In the event that the design parameters differ from those listed in the table, it is also possible to select pumping stations for other parameters and to take individual user requirements into account.

Connections between fittings and pipelines are made in such a way that they can be dismantled at a later date. The ability to automatically control the operation of the pumps and to signal fault conditions is provided by a power supply and control device. To ensure proper operation of the pumping system, system operating parameters such as e.g. water level, flow, pressure, voltage, current and operating time are monitored, as well as signalling the pumping system's operating status.

Based on the data from the EPM measurement system (measurement of the tank fill level) and the weather forecast, a tank emptying control algorithm will be implemented. If the forecast rainfall exceeds the current storage capacity of the tanks or the capacity of the usual drainage system, a procedure for lowering the fill level of the tank will be initiated (opening the automatic closure in the case of the EOG system or switching on the pumps in the case of the EOP system). The process of efficient emptying of the tank is made possible by the EPM tank measurement system and the BUMERANG SMART monitoring and management system.