

max 45°C



APPLICATIONS

Pumping of leachate according to the explanatory note hereafter.

FEATURES

- Multistage monobloc electric submersible pumps **with the hydraulic part located under the electric motor cooled by the pumped liquid.**
- Electric pumps produced with 5 m of SK 4G1,5 electric cable included.
- External pump case, motor case, shaft, impellers and diffusers in stainless steel.
- **Viton seals.**
- Threaded delivery port 1" 1/2 from kW 1,5 up to kW 3. Flanged delivery port PN25 DN32 UNI 6083/67 from kW 4 up to kW 5,5.
- The pumps are equipped with a strainer that must be free from sediments and does not allow the pumping of liquids with solid particles larger than 1 mm.

MOTOR

- 2 poles asynchronous motor, 50 Hz, 2850 rpm.
- Class F insulation.
- IP68 protection.
- Working voltage: single-phase 230 V, three-phase 400 V.
- Electric motor cooled by non-toxic, non-polluting liquid.

OPERATING CONDITIONS

- The pump can not operate in dry conditions.
- Pump body submerged for half of its height.
- Temperature of pumped liquid: min 0 °C – max 45 °C.
- Frost free location.
- Vertical operating position (on request special execution for oblique operating position).
- Maximum immersion depth: 120 m.
- Maximum number of starts per hour: 20.

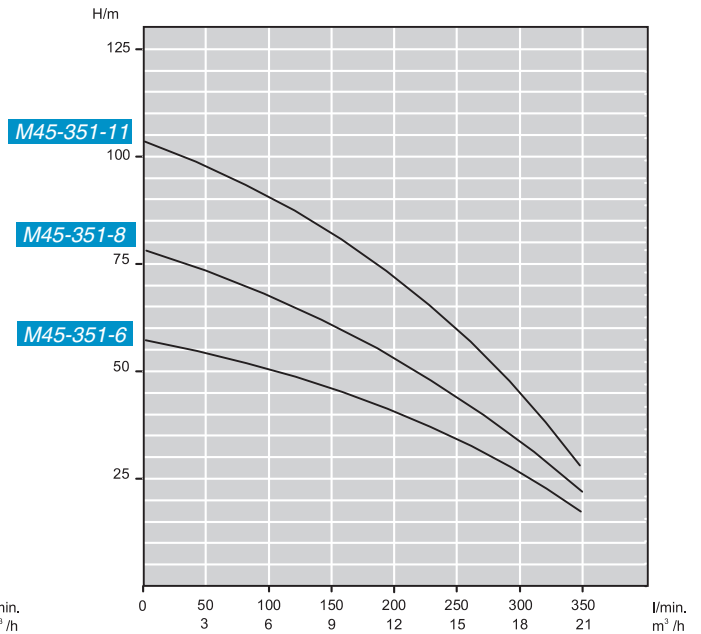
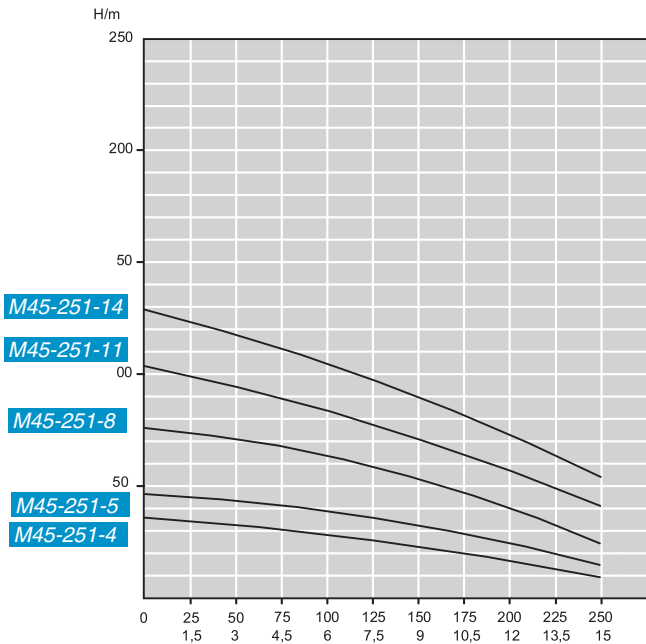
ACCESSORIES

- Control panel.
- Level regulator.
- BE electronic level transmitter.
- Topfilter 170, available also with slope riser for oblique wells.
- SK 4G1,5 round cable or ID 4G1,5 round cable.

Technical specifications

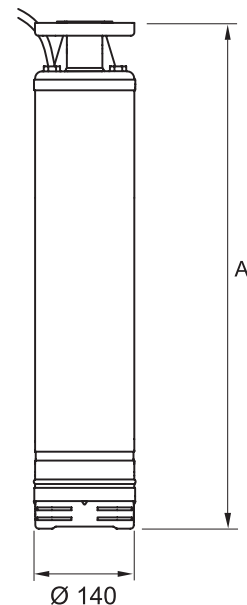
Pump type	Motor		Cap. μ F VL 450	Max current		Outlet \varnothing	Delivery								
	HP	kW		230 V 1~	400 V 3~		l/min	0	50	100	150	200	250	300	350
				A	A			m^3/h	0	3	6	9	12	15	18
M45-251-4	2	1,5	40	8,4	3,4	1" 1/2 UNI 6083/67 PN25 DN32	Manometric head (m)	36	32	27	22	16	10		
M45-251-5	3	2,2	—	—	4			49	45	40	34	26	18		
M45-251-8	4	3	—	—	6,3			77	71	63	55	42	27		
M45-251-11	5,5	4	—	—	8,5			104	95	84	72	56	40		
M45-251-14	7,5	5,5	—	—	12,1			130	120	108	95	75	53		
M45-351-6	4	3	—	—	6,3	1" 1/2		56	53	48	43	38	33	25	16
M45-351-8	5,5	4	—	—	9	UNI 6083/67 PN25 DN32		78	73	67	61	54	47	38	23
M45-351-11	7,5	5,5	—	—	12,4			104	98	90	81	72	63	50	29

Performance curves



Dimensions and weights

Pump type	Dimensions	Weight
	mm	kg
	A	
M45-251-4	772	25,2
M45-251-5	872	30,7
M45-251-8	1007	35,7
M45-251-11	1171	41,7
M45-251-14	1356	50,7
M45-351-6	991	34,2
M45-351-8	1090	39,2
M45-351-11	1284	46,7



LEACHATE EXPLANATORY NOTE

Leachate is the liquid that drains or leaches from a landfill or from waste decomposition. It is also the result of the progressive compression of waste.

Leachate that comes from controlled municipal solid waste landfills is sewage with organic and inorganic polluting agents which comes from biologic and physico-chemical processes in the landfill sites.

According to the law, leachate must be collected and opportunely handled in the landfill site itself or transferred in suited treatment locations.

The generation of leachate is caused by different factors such as the meteorology of the area of the landfill: rainfall, temperature and windiness influence the processes of leachate origin. The high rain rises the infiltration of water in the landfill producing much more leachate, on the contrary the low temperature can reduce the biological processes.

Another factor that influences the quantity of leachate production is the average feature of waste: the most important parameters are the waste average humidity and the grade of compactness. High humidity will increase production of leachate whereas high compactness will reduce it.

The factors of leachate production can be listed as controllable and uncontrollable: uncontrollable factor is the leachate production and it is strictly connected to the waste degradation.

Leachate can have chemical composition in relation to the different parameters including the type of waste and the age of the landfill site. Usually the peculiarities of leachate are valued through the measure of pH, Biochemical oxygen demand, Chemical oxygen demand and the contents of metals.

In the controlled municipal solid waste landfills the young phase of leachate is characterized by the production of acid leachate with 4,5 up to 7,5 pH that turns the metal in solution with water: in old phase the pH rises up to 7,5-9 and the concentration of metal falls.

The organoleptic properties of leachate are the brown colour depending on the concentration, the viscous consistence and disagreeable odour.

Officine di Trevi developed a series of electric pumps with good resistance to hydrocarbons and general oils and that can be used with success in liquids with pH from 4,5 to 13 and maximum quantity of hydrochloric acid not more than 0,5%.

The pumps can be used in liquids with suspended solid particles not more than 250 gr/m³ and granules with diameter not more than 1 mm.

In case of high concentration or combination of chemical substances or the use of the pumps in potentially explosive atmosphere (ATEX Directives) our Technical Department remain at your disposal to check the compatibility.