



## APPLICATIONS

Pumping of liquids and extraction of leachate in landfill, drainage of contaminated fluids and groundwater.

The ATEX pumps in conformity with 2014/34/UE Directive can be installed in potentially explosive atmospheres according to the marking explained hereafter.

## FEATURES

- Multistage centrifugal electric submersible pumps for 4" wells characterized by a **floating impellers system** that allows the pumping of leachate and charged liquid with small solid bodies.
- External pump case, delivery port, suction port, shaft and other components in stainless steel.
- Impellers and diffusers in special technopolymer with ceramic inserts at wear point.
- The check valve made of stainless steel is installed in the delivery head.
- Temperature of pumped liquid: max +40 °C.
- **Available the version for permanent immersion in hydrocarbons (our ID EX series).**
- **Available in AISI 316 version.**

## MOTOR

- 2 poles asynchronous motor, 50 Hz, 2850 rpm.
- Class F insulation.
- IP68 protection.
- Working voltage: single-phase 230 V, three-phase 400 V.

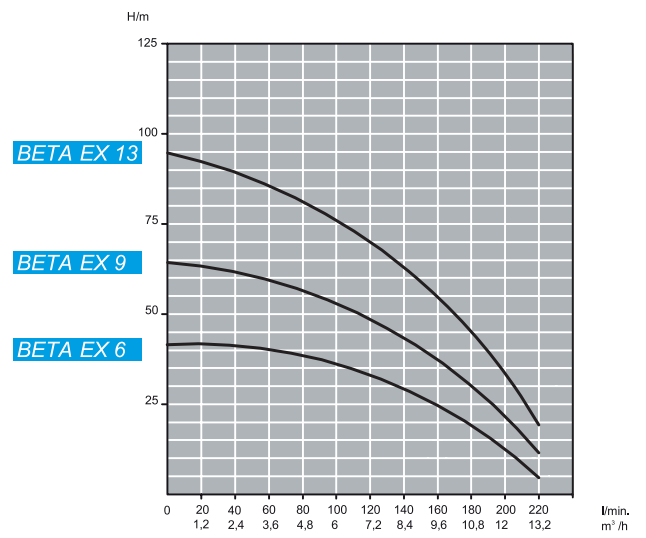
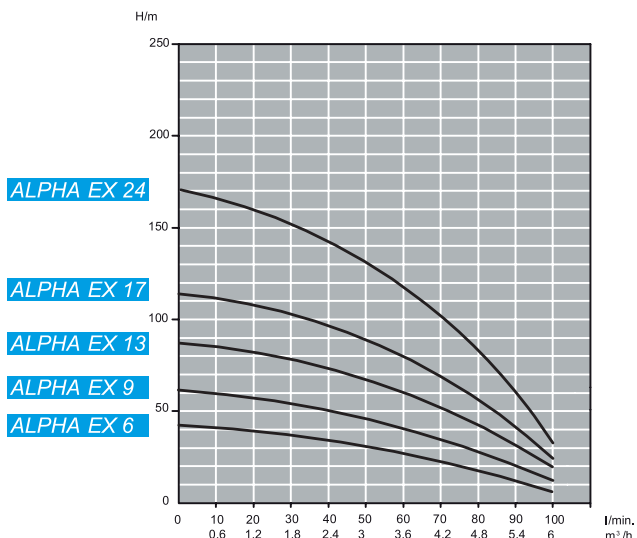
## ACCESSORIES

- Control panel.
- Intrinsically safe module with ATEX supply circuit.
- ATEX level regulator with 5, 10 or 20 m of electric cable.
- ATEX electronic level transmitter.
- Maxifilter 142.
- Maxifilter 170, available also with slope riser for oblique wells.
- Electric cable to combine according to the chosen version and the liquid to pump.

## Technical specifications

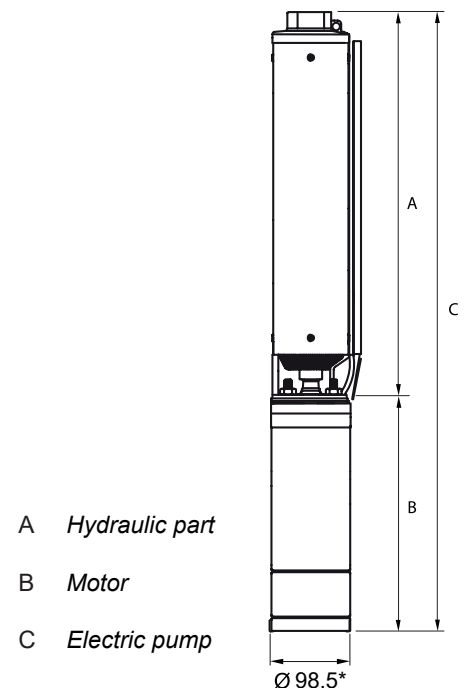
Pump type	Motor		Cap. $\mu\text{F}$ VL 450	Max current		Outlet $\varnothing$	Delivery											
	HP	kW		230 V	400 V		l/min	0	40	60	80	100	120	140	180	200	220	
				1~	3~			$\text{m}^3/\text{h}$	0	2,4	3,6	4,8	6	7,2	8,4	10,8	12	13,2
ALPHA EX 6	0,75	0,55	20	5,6	1,9	1" 1/4	Manometric head (m)	43	37	31	19	7						
ALPHA EX 9	1	0,75	30	6,6	2,3			65	55	46	28	11						
ALPHA EX 13	1,5	1,1	40	9,5	3,3			95	80	67	45	18						
ALPHA EX 17	2	1,5	50	12	4,2			122	106	88	60	21						
ALPHA EX 24	3	2,2	—	—	5,9			185	153	130	89	30						
BETA EX 6	1,5	1,1	40	9,5	3,4	2"		35			31	29	27	24	17	11	4	
BETA EX 9	2	1,5	50	12	4,2			53			44	42	40	36	25	17	9	
BETA EX 13	3	2,2	—	—	5,9			78			65	61	57	52	38	28	16	

## Performance curves



## Dimensions and weights

Pump type	Dimensions					Weight				
	mm					kg				
	A	B		C		A	B		C	
		230 V 1~	400 V 3~	230 V 1~	400 V 3~		230 V 1~	400 V 3~	230 V 1~	400 V 3~
ALPHA EX 6	358	340	340	698	698	2,8	9	9	11,8	11,8
ALPHA EX 9	443	340	340	783	783	3,4	9	9	12,4	12,4
ALPHA EX 13	557	380	380	937	937	4,2	10,9	10,9	15,1	15,1
ALPHA EX 17	671	460	420	1131	1091	4,8	14,7	12,8	19,5	17,6
ALPHA EX 24	894	—	460	—	1354	6,5	—	14,7	—	21,2
BETA EX 6	493	380	380	873	873	4,2	10,9	10,9	15,1	15,1
BETA EX 9	646	460	420	1106	1066	4,6	14,7	12,8	19,3	17,4
BETA EX 13	850	—	460	—	1310	6	—	14,7	—	20,7



\* The max diameter refers to the solution with ME4DK flat cable. With different cables the diameter can change.

## **ATEX marking**

<b>II</b>	<i>Group of apparatus - equipment for surface plants.</i>
<b>2G</b>	<i>Category - equipment compatible to be installed in potentially explosive atmospheres with gas, steams and vapours (area 1); this equipment is suitable for area 1 and area 2.</i>
<b>4" ATEX electric pumps and 4" ID ATEX electric pumps protection</b>	
<b>Ex</b>	<i>Protection against explosions.</i>
<b>eb</b>	<i>Type of protection applied to electrical motor – increased safety “e”, level “b” – type of protection applied to electrical apparatus in which additional measures are applied so as to give increased safety against the possibility to excessive temperature and of the occurrence of ark and sparks in normal service or under specified abnormal conditions.</i>
<b>h</b>	<i>Type of protection applied to hydraulic part – constructional safety “k” – ignition protection where constructional measures are applied so as to protect against the possibility of ignition from hot surfaces, sparks and adiabatic compression generated by moving parts.</i>
<b>mb</b>	<i>Type of protection applied to connection facility to external circuits – encapsulation “m”, level “b” – type of protection whereby parts that are capable of igniting an explosive atmosphere by either sparking or heating are fully enclosed in a compound or other non-metallic enclosure with adhesion in such a way as to avoid ignition of a dust layer or explosive atmosphere under operating or installation conditions.</i>
<b>ob</b>	<i>Type of protection applied to electrical motor – liquid immersion “o”, level “b” – type of protection in which the electrical equipment or parts of the electrical equipment are immersed in a protective liquid in such a way that an explosive gas atmosphere which may be above the liquid or outside the enclosure cannot be ignited.</i>
<b>IIC</b>	<i>Subgroup of gas: equipment compatible to be installed with all combustible gas.</i>
<b>T5/T6</b>	<i>Class temperature – maximum temperature of the equipment 100 °C . When the mark is T6 the maximum temperature of the machine is 85 °C.</i>
<b>Gb</b>	<i>Protection level of equipment compatible to be installed in potentially explosive atmospheres with combustible gas - level b.</i>