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.*
- *External pump case, delivery port, suction port, shaft and other components in stainless steel.*
- *Impellers and diffusers in special technopolymer.*
- *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. µF VL 450	Max current		Outlet	Delivery																						
	HP	kW		230 V 1~	400 V 3~	ø	l/min	0	10	20	30	40	50	60	70	80	90	100	110	120	140	160	180	200	240	280	320	360	400
				A	A		m³/h	0	0,6	1,2	1,8	2,4	3	3,6	4,2	4,8	5,4	6	6,6	7,2	8,4	9,6	10,8	12	14,4	16,8	19,2	21,6	24
THETA EX 13	0,5	0,37	16	3,8	1,5	1” 1/4	Manometric head (m)	70	62	46	25																		
THETA EX 19	0,75	0,55	20	5,5	1,9			103	91	67	37																		
THETA EX 26	1	0,75	30	6	2,2			141	125	92	51																		
THETA EX 37	1,5	1,1	40	8,7	3,4			210	177	128	72																		
CROMA EX 8	0,5	0,37	16	4,9	1,5			51	48	43	38	31	21	10															
CROMA EX 13	0,75	0,55	20	5,6	1,9			74	70	62	55	45	31	14															
CROMA EX 19	1	0,75	30	6,4	2,2			110	102	93	81	65	45	20															
CROMA EX 26	1,5	1,1	40	9,2	4,2			150	140	127	111	89	62	27															
CROMA EX 37	2	1,5	50	12,5	5,7			214	199	181	157	127	88	39															
GAMMA EX 13	1	0,75	30	6,4	2,3			75	71	67	61	56	50	44	37	31	25	18											
GAMMA EX 19	1,5	1,1	40	9,7	3,7			110	104	98	89	82	73	64	54	45	36	26											
GAMMA EX 26	2	1,5	50	12,9	4,8			150	142	134	122	112	100	89	75	63	51	36											
KAPPA EX 10	1	0,75	30	5,9	2,1			61			50	46	43	38	34	30	25	21	16	11									
KAPPA EX 16	1,5	1,1	40	9	3,3			93			80	74	68	61	55	48	41	33	25	18									
KAPPA EX 22	2	1,5	50	12,1	4,5			128			110	102	93	84	75	66	56	45	35	25									
KAPPA EX 34	3	2,2	—	—	6,1			198			170	158	144	130	116	102	86	70	54	38									
OMEGA EX 11	1,5	1,1	40	9	3,4	2”		65				56	53	50	48	46	43	40	36	32	25	18	8						
OMEGA EX 17	2	1,5	50	12,7	4,7			100				86	82	77	74	71	66	61	55	52	41	28	18						
OMEGA EX 22	3	2,2	—	—	5,7			130				108	103	98	91	84	78	72	67	61	49	34	22						
SIGMA EX 8	1,5	1,1	40	9,1	3,7			47					42	41	40	39	37	36	34	32	30	26	24	20	12				
SIGMA EX 11	2	1,5	50	11,7	4,8			65					58	57	55	53	51	49	47	45	41	37	33	28	17				
SIGMA EX 16	3	2,2	—	—	6,1			94					84	82	80	77	74	71	68	65	59	53	47	40	24				
IOTA EX 6	1,5	1,1	40	8,1	3,2			28								26	25	24	23	22	21	19	17	16	13	9	6	3	1
IOTA EX 9	2	1,5	50	10,8	4,5			40								34	32	31	29	28	27	26	25	24	20	16	10	6	2
IOTA EX 12	3	2,2	—	—	5,8			56								48	47	46	45	44	42	40	36	34	29	23	17	11	5

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~
THETA EX 13	475	340	340	815	815	3,8	9	9	12,8	12,8
THETA EX 19	610	340	340	950	950	4,9	9	9	13,9	13,9
THETA EX 26	790	340	340	1130	1130	6,2	9	9	15,2	15,2
THETA EX 37	1037	380	380	1417	1417	8,1	10,9	10,9	19	19
CROMA EX 8	363	340	340	703	703	3	9	9	12	12
CROMA EX 13	475	340	340	815	815	3,8	9	9	12,8	12,8
CROMA EX 19	610	340	340	950	950	4,9	9	9	13,9	13,9
CROMA EX 26	790	380	380	1170	1170	6,2	10,9	10,9	17,1	17,1
CROMA EX 37	1037	460	420	1497	1457	8,1	14,7	12,8	22,8	20,9
GAMMA EX 13	540	340	340	880	880	4,2	9	9	13,2	13,2
GAMMA EX 19	705	380	380	1085	1085	5,3	10,9	10,9	16,2	16,2
GAMMA EX 26	920	460	420	1380	1340	6,8	14,7	12,8	21,5	19,6
KAPPA EX 10	460	340	340	800	800	3,7	9	9	12,7	12,7
KAPPA EX 16	622	380	380	1002	1002	5	10,9	10,9	15,9	15,9
KAPPA EX 22	812	460	420	1272	1232	6,2	14,7	12,8	20,9	19
KAPPA EX 34	1140	—	460	—	1600	8,7	—	14,7	—	23,4
OMEGA EX 11	606	380	380	986	986	5	10,9	10,9	15,9	15,9
OMEGA EX 17	861	460	420	1321	1281	6,8	14,7	12,8	21,5	19,6
OMEGA EX 22	1054	—	460	—	1514	8	—	14,7	—	22,7
SIGMA EX 8	632	380	380	1012	1012	5,3	10,9	10,9	16,2	16,2
SIGMA EX 11	800	460	420	1260	1220	6,3	14,7	12,8	21	19,1
SIGMA EX 16	1105	—	460	—	1565	8,1	—	14,7	—	22,8
IOTA EX 6	656	380	380	1036	1036	5,1	10,9	10,9	16	16
IOTA EX 9	890	460	420	1350	1310	6,6	14,7	12,8	21,3	19,4
IOTA EX 12	1149	—	460	—	1609	8,6	—	14,7	—	23,3

A *Hydraulic part*

B *Motor*

C *Electric pump*

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

ATEX marking

II	*Group of apparatus - equipment for surface plants.*
2G	*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.*

4" ATEX electric pumps and 4" ID ATEX electric pumps protection

Ex	*Protection against explosions.*
eb	*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.*
h	*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.*
mb	*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.*
ob	*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.*
IIC	*Subgroup of gas: equipment compatible to be installed with all combustible gas.*
T5/T6	*Class temperature – maximum temperature of the equipment 100 °C . When the mark is T6 the maximum temperature of the machine is 85 °C.*
Gb	*Protection level of equipment compatible to be installed in potentially explosive atmospheres with combustible gas - level b.*