



CESI CERTIFICATO
CERTIFICATO DI ESAME CE DEL TIPO
 Apparecchiature destinate ad essere utilizzate in atmosfere potenzialmente esplosive
 Direttiva 94/9/CE

(1) Numero del Certificato di Esame del tipo: **CESI 09 ATEX 047 X**

(2) Apparecchiatura: **Elettropompe sommerse centrifughe multistadio serie "V" EX**

(3) Costruttore: **Officine di Trevi S.p.A.**

(4) Indirizzo: **SS n. 3 Flametal, km. 145 06032 Trevi - PG**

(7) Questa apparecchiatura e le sue eventuali varianti accettabili sono descritte nell'allegato al presente certificato e nei documenti descrittivi pure riportati in esso.

(8) Il CESI certifica che questa apparecchiatura è conforme ai requisiti essenziali di sicurezza e potenzialmente esplosive, definiti nell'Allegato II della Direttiva 94/9/CE del Consiglio dell'Unione Europea del 23 Marzo 1994.

(9) Le verifiche ed i risultati di prova sono registrati nel rapporto a carattere riservato n. EX-A0623616.

(10) La conformità ai Requisiti Essenziali di Sicurezza e Salute è assicurata dalla conformità alle: **EN 60079-0: 2006 EN 60079-18: 2004 EN 13463-1: 2009 EN 13463-5: 2003** condizioni speciali per un utilizzo sicuro, specificate nell'allegato al presente certificato.

(11) Il simbolo "X" posto dopo il numero del certificato indica che l'apparecchiatura è soggetta a condizioni speciali per il suo utilizzo sicuro, specificate nell'allegato al presente certificato.

(12) Questo CERTIFICATO DI ESAME DEL TIPO è relativo soltanto al progetto, all'esame ed alla prova dell'apparecchiatura specificata in accordo con la Direttiva 94/9/CE. Ulteriori requisiti di questa Direttiva si applicano al processo di produzione e fornitura dell'apparecchiatura. Questi requisiti non sono oggetto del presente certificato.

(13) L'apparecchiatura deve riportare i seguenti contrassegni:
 oppure
 oppure

Questo certificato, allegato incluso, può essere riprodotto solo integralmente e senza alcuna variazione.

Data di emissione 28 agosto 2009

Elaborato: *Tiziano Cola*
 Verificato: *Milko Balaz*
 Approvato: *Florento Bregani*

CESI S.p.A. Divisione Energia "Atex Tecnica Certificazione" Il Responsabile

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CESI CERTIFICATE
TYPE EXAMINATION CERTIFICATE
 Equipment intended for use in potentially explosive atmospheres
 Directive 94/9/EC

(1) Type Examination Certificate number: **CESI 09 ATEX 047 X**

(2) Equipment: **Submersible centrifugal multistage electrical pumps series "V" EX**

(3) Manufacturer: **Offices di Trevi S.p.A.**

(4) Address: **SS n. 3 Flametal, km. 145 06032 Trevi - PG**

(7) This equipment and any acceptable variation thereon is specified in the schedule to this certificate and the documents therein referred to.

(8) CESI certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design of equipment intended for use in potentially explosive atmospheres given in Annex II to the European Union Directive 94/9/EC of 23 March 1994.

(9) The examination and test results are recorded in confidential report n. EX-A0623616.

(10) Compliance with the Essential Health and Safety Requirements has been assured by: **EN 60079-0: 2006 EN 60079-18: 2004 EN 13463-1: 2009 EN 13463-5: 2003**

(11) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(12) This TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment in accordance with the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(13) The marking of the equipment shall include the following:
 or

This certificate may only be reproduced in its entirety and without any change, schedule included.

Date 28th August 2009 - Translation issued on August 28th 2009

Prepared: *Tiziano Cola*
 Verified: *Milko Balaz*
 Approved: *Florento Bregani*

CESI S.p.A. Divisione Energia "Atex Tecnica Certificazione" Il Responsabile

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CESI CERTIFICATO
CERTIFICATO DI ESAME CE DEL TIPO
 Apparecchiature destinate ad essere utilizzate in atmosfere potenzialmente esplosive
 Direttiva 94/9/CE

(1) Numero del Certificato di Esame del tipo: **CESI 07 ATEX 055 X**

(2) Apparecchiatura: **Elettropompe sommerse per drenaggio serie "Derby EX"**

(3) Costruttore: **Officine di Trevi S.p.A.**

(4) Indirizzo: **SS n. 3 Flametal, km. 145 06032 Trevi - PG**

(7) Questa apparecchiatura e le sue eventuali varianti accettabili sono descritte nell'allegato al presente certificato e nei documenti descrittivi pure riportati in esso.

(8) Il CESI certifica che questa apparecchiatura è conforme ai requisiti essenziali di sicurezza e potenzialmente esplosive, definiti nell'Allegato II della Direttiva 94/9/CE del Consiglio dell'Unione Europea del 23 Marzo 1994.

(9) Le verifiche ed i risultati di prova sono registrati nel rapporto a carattere riservato n. EX-A7026691.

(10) La conformità ai Requisiti Essenziali di Sicurezza e Salute è assicurata dalla conformità alle: **EN 60079-0: 2006 EN 60079-18: 2004 EN 13463-1: 2001 EN 13463-5: 2003** condizioni speciali per un utilizzo sicuro, specificate nell'allegato al presente certificato.

(11) Questo CERTIFICATO DI ESAME DEL TIPO è relativo soltanto al progetto, all'esame ed alla prova dell'apparecchiatura specificata in accordo con la Direttiva 94/9/CE. Ulteriori requisiti di questa Direttiva si applicano al processo di produzione e fornitura dell'apparecchiatura. Questi requisiti non sono oggetto del presente certificato.

(12) L'apparecchiatura deve riportare i seguenti contrassegni:
 oppure
 oppure

Questo certificato, allegato incluso, può essere riprodotto solo integralmente e senza alcuna variazione.

Data di emissione 5 novembre 2007

Elaborato: *Tiziano Cola*
 Verificato: *Milko Balaz*
 Approvato: *Florento Bregani*

CESI S.p.A. Divisione Energia "Atex Tecnica Certificazione" Il Responsabile

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CESI CERTIFICATE
TYPE EXAMINATION CERTIFICATE
 Equipment intended for use in potentially explosive atmospheres
 Directive 94/9/EC

(1) Type Examination Certificate number: **CESI 07 ATEX 055 X**

(2) Equipment: **Submersible electric pumps for drainage series "Derby EX"**

(3) Manufacturer: **Offices di Trevi S.p.A.**

(4) Address: **SS n. 3 Flametal, km. 145 06032 Trevi - PG**

(7) This equipment and any acceptable variation thereon is specified in the schedule to this certificate and the documents therein referred to.

(8) CESI certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design of equipment intended for use in potentially explosive atmospheres given in Annex II to the European Union Directive 94/9/EC of 23 March 1994.

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(13) The marking of the equipment shall include the following:
 or

This certificate may only be reproduced in its entirety and without any change, schedule included.

Date 5th November 2007 - Translation issued the 5th November 2007

Prepared: *Tiziano Cola*
 Verified: *Milko Balaz*
 Approved: *Florento Bregani*

CESI S.p.A. Divisione Energia "Atex Tecnica Certificazione" Il Responsabile

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APPLICATIONS

Collecting of leachate in storage tanks, pumping of industrial waste water from wells or collecting reservoirs.

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

FEATURES

- Open impeller in cast iron to avoid obstruction from mud and other suspended small solids.
- Electric pumps produced with 5 m electric cable included.
- Temperature of pumped liquid: max +40 °C.
- Available the version for permanent immersion in hydrocarbons (our ID EX series).

MOTOR

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

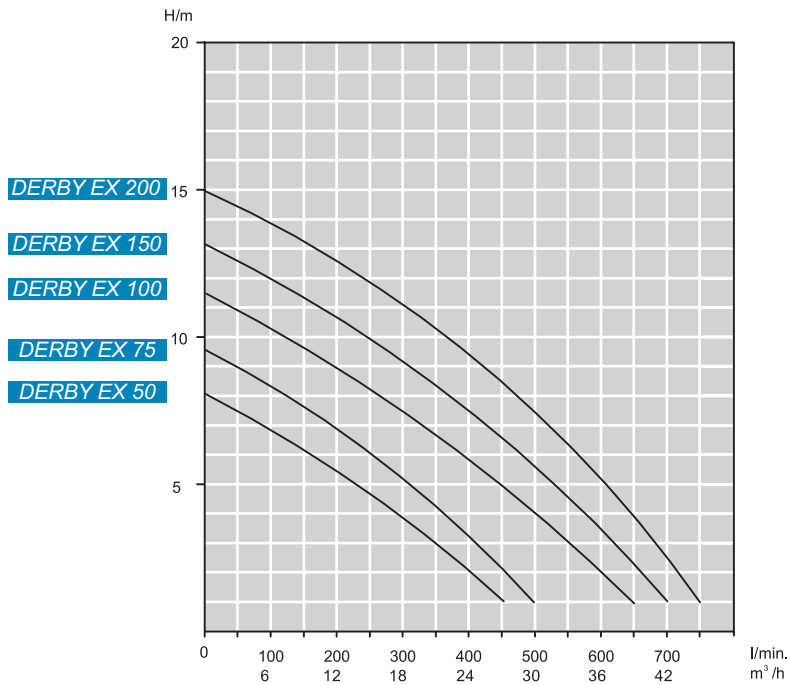
ACCESSORIES

- 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.
- Electric cable to combine according to the chosen version and the liquid to pump.

Technical specifications

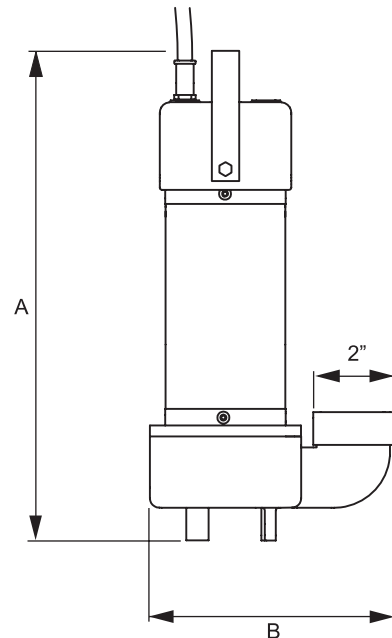
Pump type	Motor		Max current		Outlet Ø	Delivery																	
	HP	kW	230 V 1~	400 V 3~		l/min	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	
			A	A			m³/h	0	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45
DERBY EX 50	0,5	0,37	4,3	1,5	2"	Manometric head (m)	8	7,3	6,5	6	5,5	4,7	3,7	3	2	1							
DERBY EX 75	0,75	0,55	5,1	1,7			9,5	9	8,2	7,5	6,8	6	5,2	4,2	3,2	2	1						
DERBY EX 100	1	0,75	7	2,5			11,5	10,9	10,2	9,6	9	8,2	7,5	6,6	5,8	5	4	3	2	1			
DERBY EX 150	1,5	1,1	10,5	3,1			13,1	12,5	12	11,5	10,8	10	9,1	8,2	7,3	6,5	5,5	4,3	3,2	2,1	1		
DERBY EX 200	2	1,5	12,5	3,8			15	14,5	13,9	13,2	12,5	11,9	11	10,2	9,5	8,3	7,2	6,2	5,1	4	2,4	1	

Performance curves



Dimensions and weights

Pump type	Dimensions		Weight
	mm		
	A	B	kg
DERBY EX 50	445	230	16,7
DERBY EX 75	445	230	16,7
DERBY EX 100	475	230	18,1
DERBY EX 150	505	250	20,6
DERBY EX 200	520	250	21,8





APPLICATIONS

Pumping of liquids in landfill, drainage of liquids from piezometric wells, sampling of fluids in contaminated sites and groundwater.

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

FEATURES

- Multistage centrifugal electric submersible pumps **for 3" wells**.
- External pump case, delivery port, suction port, shaft and other components in AISI 316 stainless steel.
- Impellers and diffusers in special technopolymer.
- Temperature of pumped liquid: max +40 °C.
- **Available the version with Maxi-filter 90 or with Slope Riser.**

MOTOR

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

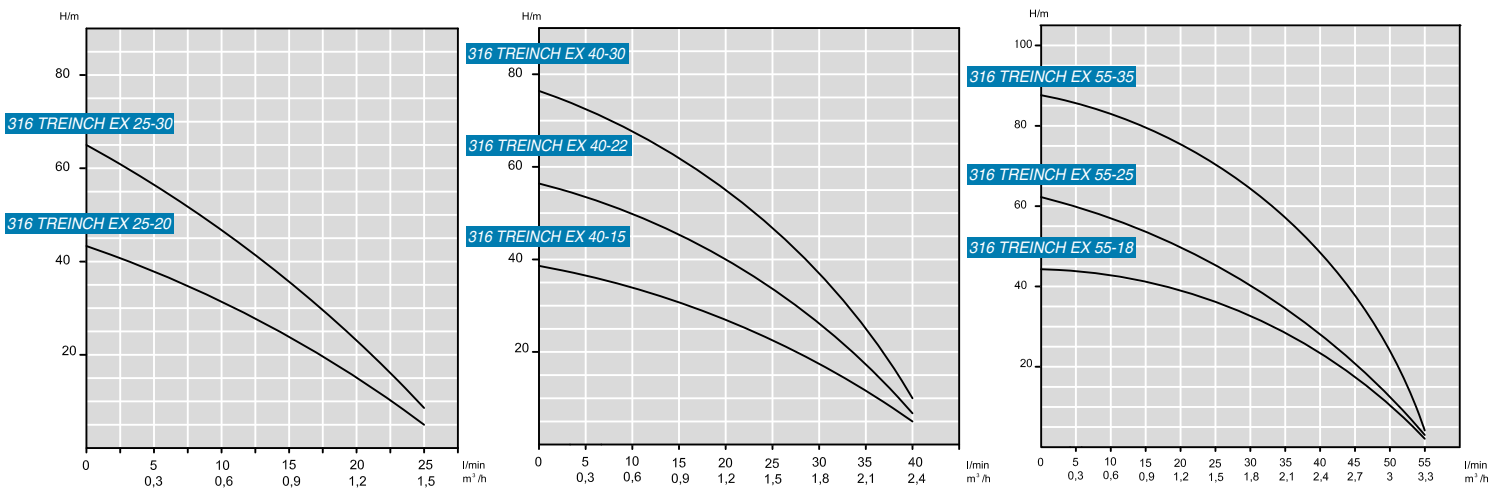
ACCESSORIES

- Control panel.
- Intrinsically safe module with ATEX supply circuit.
- ATEX electronic level transmitter.
- TPE-E 4G1,5 composed cable.

Technical specifications

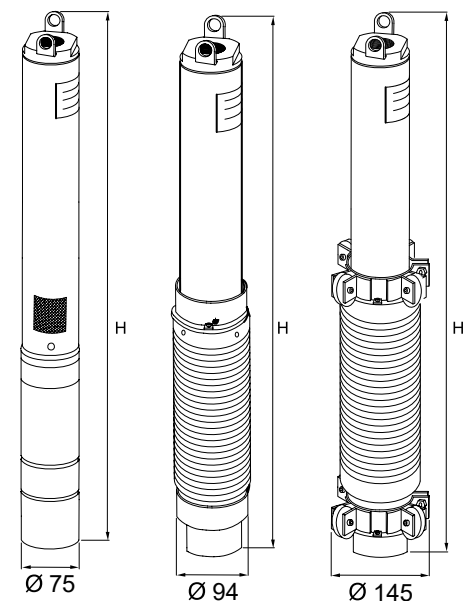
Pump type	Motor		Cap. µF VL 450	Max current		Outlet Ø	Delivery													
	HP	kW		230 V 1~	400 V 3~		l/min	0	10	15	20	25	30	35	40	45	50	55		
								m³/h	0	0,6	0,9	1,2	1,5	1,8	2,1	2,4	2,7	3	3,3	
316 TREINCH EX 25-20	0,5	0,37	16	3,7	2,3	1"	Manometric head (m)	43	32	24	16	5								
316 TREINCH EX 25-30	0,75	0,55	20	4,5	2,6			63	46	35	22	6								
316 TREINCH EX 40-15	0,5	0,37	16	3,7	2,3			39	36	33	30	26	21	14	5					
316 TREINCH EX 40-22	0,75	0,55	20	4,5	2,6			56	51	45	40	34	28	18	7					
316 TREINCH EX 40-30	1	0,75	25	6	3,2			76	69	62	55	46	38	24	10					
316 TREINCH EX 55-18	0,75	0,55	20	4,5	2,6			46	44	42	39	37	34	30	25	18	10	2		
316 TREINCH EX 55-25	1	0,75	25	6	3,2			62	60	56	54	50	46	40	32	24	12	3		
316 TREINCH EX 55-35	1,5	1,1	—	—	3,5			87	84	79	75	70	65	56	45	33	17	4		

Performance curves



Dimensions and weights

Pump type	Dimensions		Weight					
	mm		kg					
	H		316 TREINCH EX		316 TREINCH EX MAXIFILTER 90		316 TREINCH EX SLOPE RISER	
	230 V 1~	400 V 3~	230 V 1~	400 V 3~	230 V 1~	400 V 3~	230 V 1~	400 V 3~
316 TREINCH EX 25-20	1039	1039	11,6	11,6	14,8	14,8	15,3	15,3
316 TREINCH EX 25-30	1329	1309	13,4	12,9	16,6	16,1	17,1	16,6
316 TREINCH EX 40-15	922	922	10,7	10,7	13,9	13,9	14,4	14,4
316 TREINCH EX 40-22	1106	1086	12,3	11,8	15,5	15	16	15,5
316 TREINCH EX 40-30	1349	1349	13,9	13,4	17,1	16,6	17,6	17,1
316 TREINCH EX 55-18	1059	1039	11,7	11,2	14,9	14,4	15,4	14,9
316 TREINCH EX 55-25	1297	1277	13,5	13	16,7	16,2	17,2	16,7
316 TREINCH EX 55-35	—	1558	—	14,9	—	18,1	—	18,6





APPLICATIONS

Raising from wells or tanks of water free from solid sediments, pumping of **liquids contaminated and with traces of heavy metals**, sampling of fluids in contaminated sites, hydraulic barriers.

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 3" wells with suction from below**: the hydraulic part is located under the motor cooled externally by the pumped liquid.
- External pump case, motor case, motor support and other components in **AISI 316 stainless steel**.
- Impellers and diffusers in special technopolymer.
- The check valve installed inside the electric pumps.
- Electric pumps produced directly with the meters of SK 4G1,5 electric cable required without electrical junctions.
- The pumps can not operate in dry conditions.
- Electric pumps submerged for at least 15 cm provided that the pumps have been preloaded.
- Temperature of the pumped liquid: max +40 °C.
- Maximum immersion depth: 20 m.

MOTOR

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

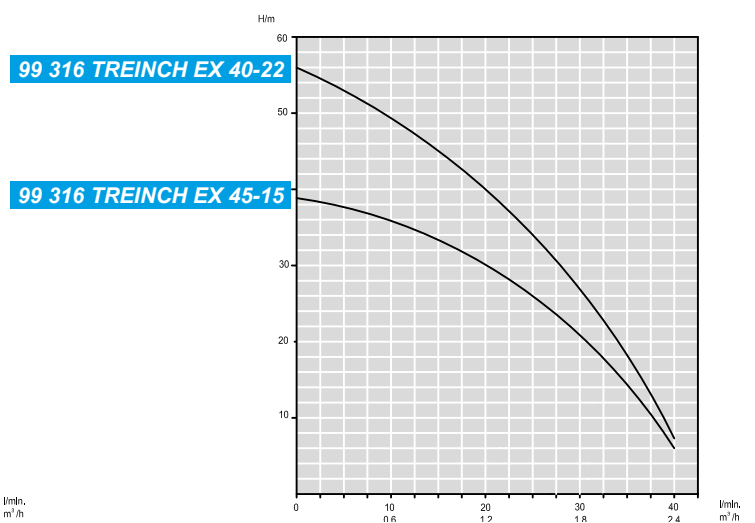
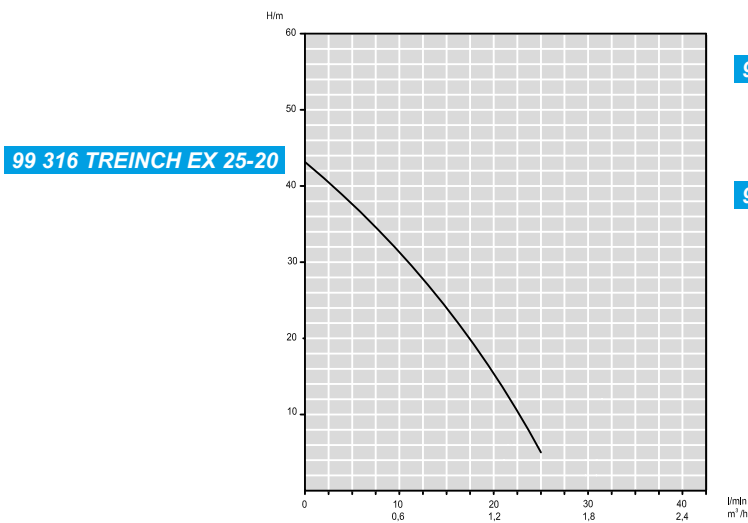
ACCESSORIES

- 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.
- SK 4G1,5 round cable or ID 4G1,5 round cable.

Technical specifications

Pump type	Motor		Cap. μ F VL 450	Max current		Outlet \emptyset	Delivery									
	HP	kW		230 V	400 V		l/min	0	10	15	20	25	30	35	40	
				1~	3~											A
99 316 TREINCH EX 25-20	0,5	0,37	16	3,8	2,4	1"	Manometric head (m)	43	32	24	16	5				
99 316 TREINCH EX 40-15	0,5	0,37	16	3,8	2,4			39	36	33	30	26	21	14	6	
99 316 TREINCH EX 40-22	0,75	0,55	—	—	2,6			56	51	45	40	34	28	18	7	

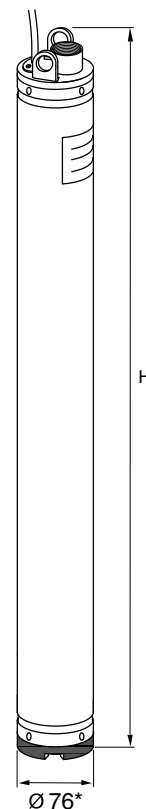
Performance curves



Dimensions and weights

Pump type	Dimensions		Weight	
	mm		kg	
	H		230 V	400 V
	230 V	400 V	1~	3~
99 316 TREINCH EX 25-20	1008	1008	11,6	11,6
99 316 TREINCH EX 40-15	890	890	10,7	10,7
99 316 TREINCH EX 40-22	—	1055	—	11,8

* On request diameter 74 mm.





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.

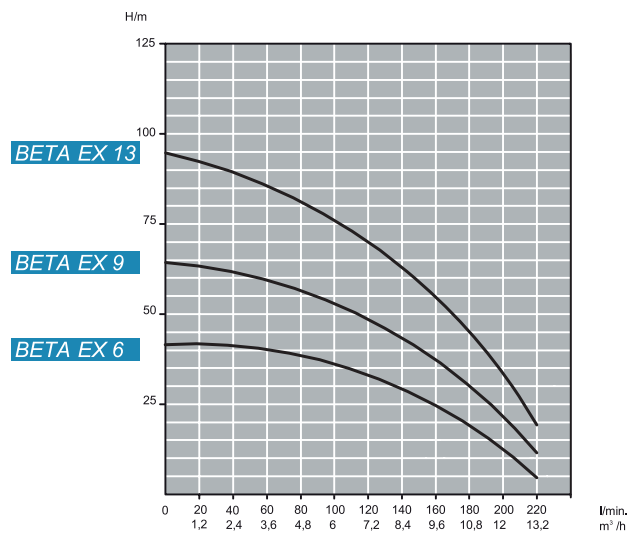
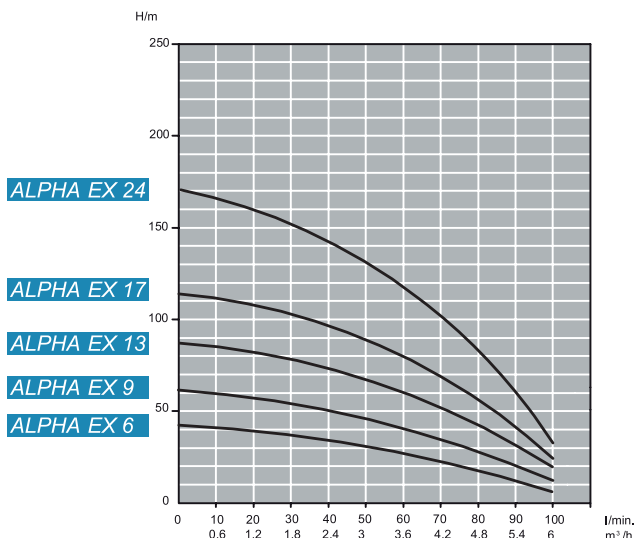
ACCESSORIES

- 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

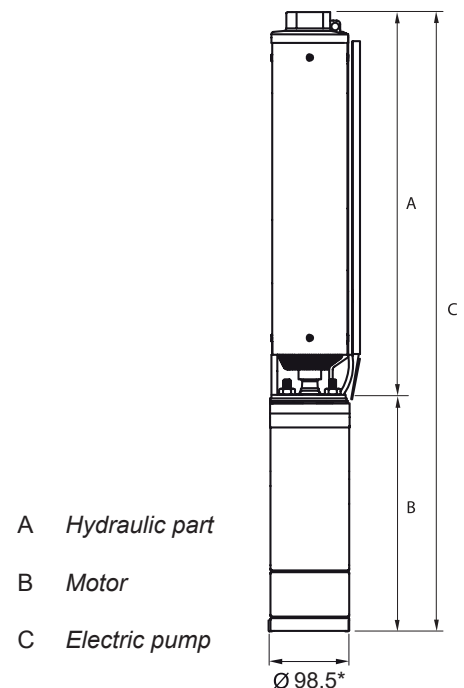
Pump type	Motor		Cap. μF VL 450	Max current		Outlet \varnothing	Delivery										
	HP	kW		230 V	400 V		l/min	0	40	60	80	100	120	140	180	200	220
				1~	3~			m^3/h	0	2,4	3,6	4,8	6	7,2	8,4	10,8	12
ALPHA EX 6	0,75	0,55	20	5,6	1,9	1" 1/4	Manometric head (m)	43	37	31	19	7					
ALPHA EX 9	1	0,75	30	6,6	2,3			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.



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, impellers and diffusers in stainless steel.
- 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.

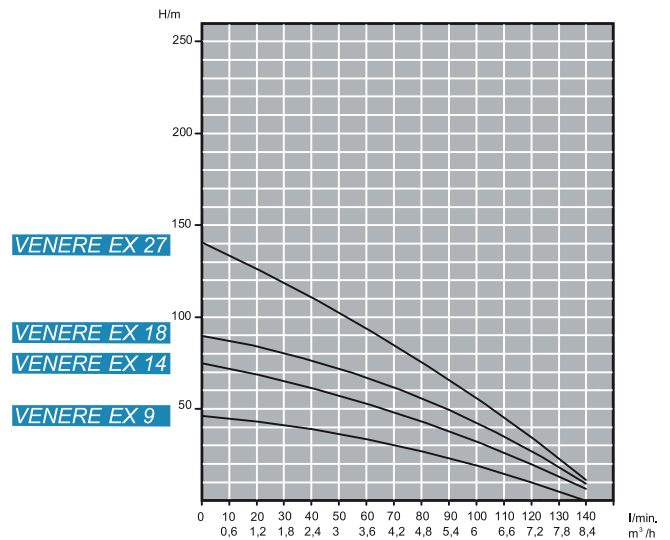
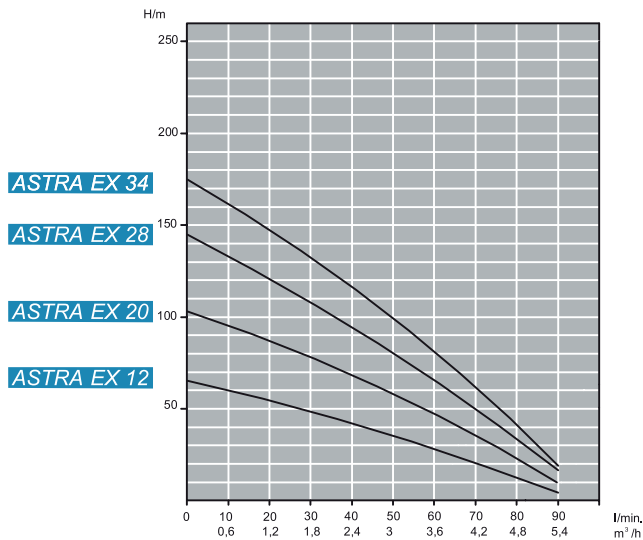
ACCESSORIES

- 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

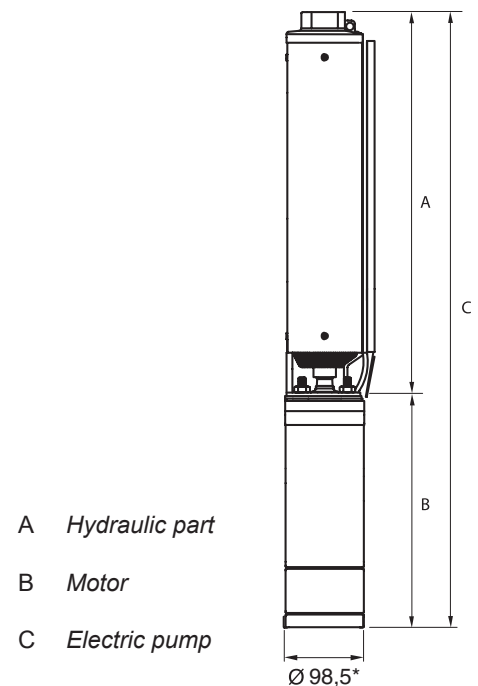
Pump type	Motor		Cap. μ F VL 450	Max current		Outlet \varnothing	Delivery									
	HP	kW		230 V	400 V		l/min	0	20	40	60	80	90	100	120	140
				1~	3~			m^3/h	0	1,2	2,4	3,6	4,8	5,4	6	7,2
ASTRA EX 12	1	0,75	30	5,3	1,8	1" 1/4	Manometric head (m)	66	53	41	29	15	6			
ASTRA EX 20	1,5	1,1	40	9	3,3			103	88	68	48	25	10			
ASTRA EX 28	2	1,5	50	11,4	4,7			144	123	95	67	35	14			
ASTRA EX 34	3	2,2	—	—	5,3			175	150	116	82	42	17			
VENERE EX 9	1	0,75	30	6,3	1,9			45	41	37	32	26	21	16	9	3
VENERE EX 14	1,5	1,1	40	9,3	3,5			74	67	60	52	44	39	34	18	6
VENERE EX 18	2	1,5	50	11,5	4,7			90	81	72	64	54	50	45	24	8
VENERE EX 27	3	2,2	—	—	5,5			140	124	108	94	74	65	56	29	10

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~	
ASTRA EX 12	405	340	340	745	745	5,2	9	9	14,2	14,2
ASTRA EX 20	550	380	380	930	930	7,3	10,9	10,9	18,2	18,2
ASTRA EX 28	715	460	420	1175	1135	9,3	14,7	12,8	24	22,1
ASTRA EX 34	822	—	460	—	1282	10,6	—	14,7	—	25,3
VENERE EX 9	391	340	340	731	731	4,9	9	9	13,9	13,9
VENERE EX 14	495	380	380	875	875	6,3	10,9	10,9	17,2	17,2
VENERE EX 18	585	460	420	1045	1005	7,4	14,7	12,8	22,1	20,2
VENERE EX 27	806	—	460	—	1266	10,2	—	14,7	—	24,9



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



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.

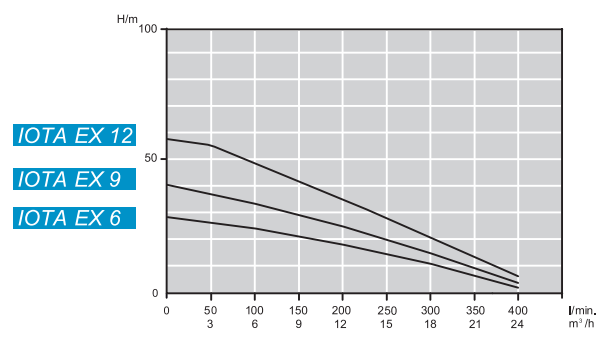
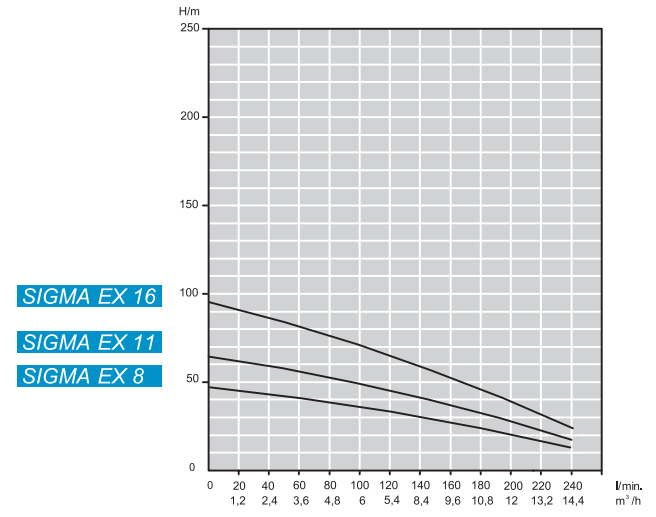
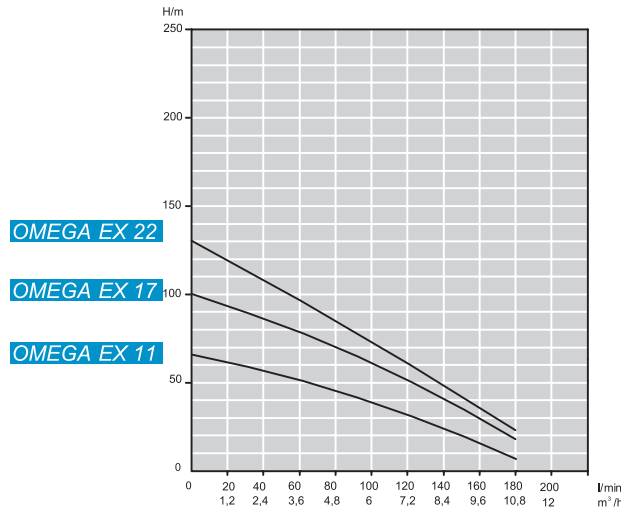
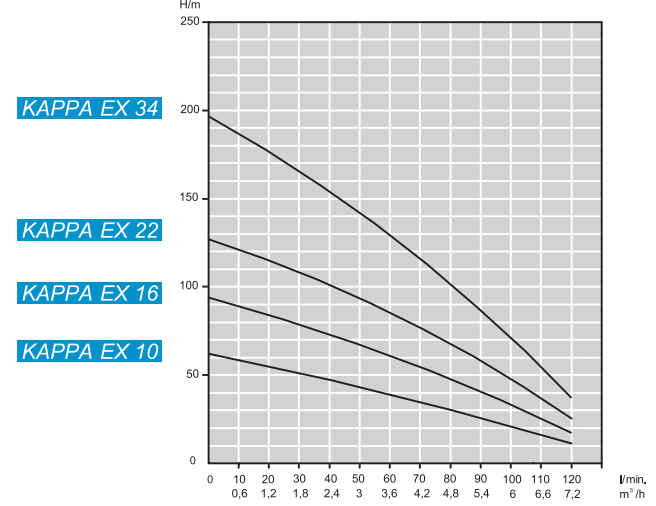
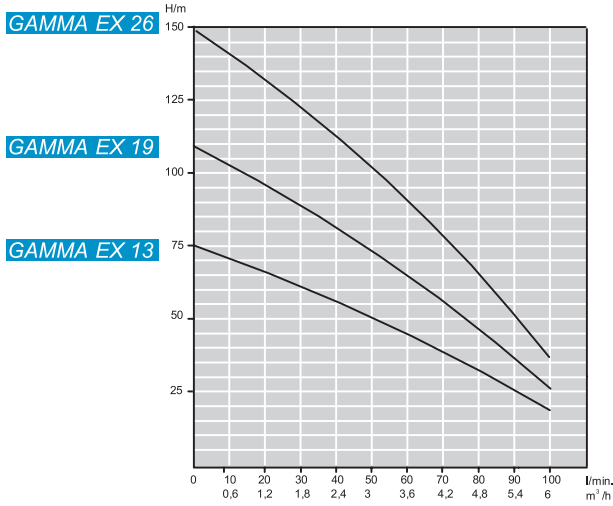
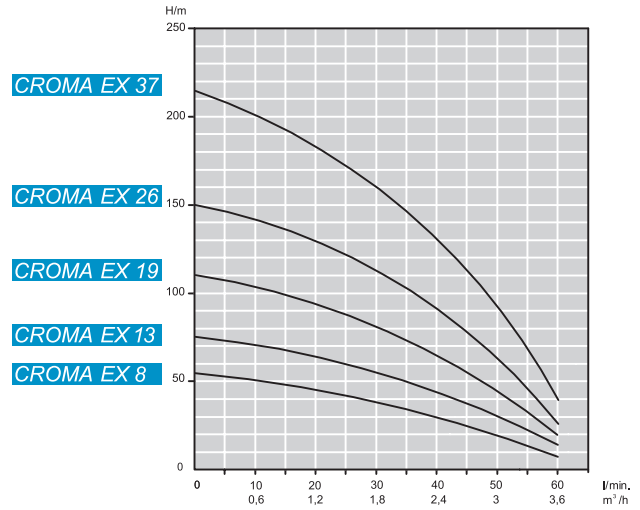
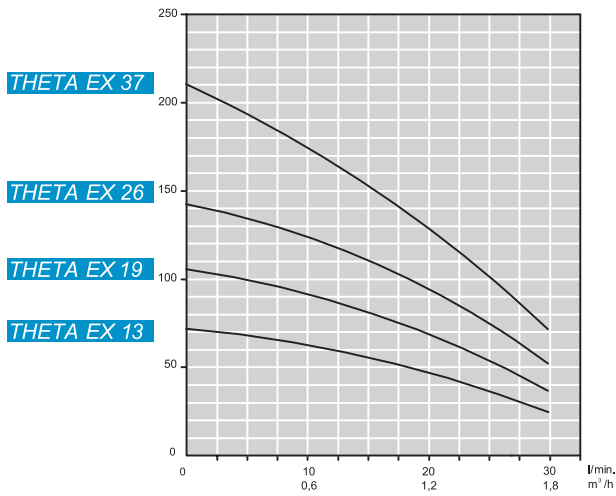
ACCESSORIES

- 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

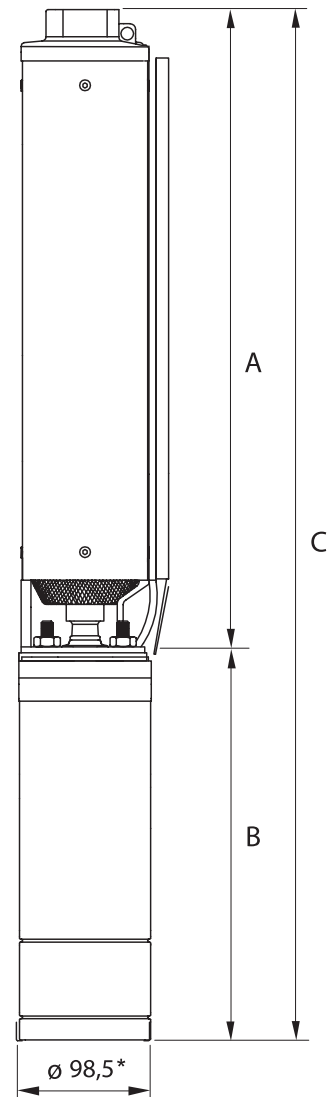
Pump type	Motor		Cap. μ F VL 450	Max current		Outlet \varnothing	Delivery																									
	HP	kW		230 V 1~	400 V 3~		l/min																									
								A	A	0	10	20	30	40	50	60	70	80	90	100	110	120	140	160	180	200	240	280	320	360	400	
						m ³ /h	0	0,6	1,2	1,8	2,4	3	3,6	4,2	4,8	5,4	6	6,6	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	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									
	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 refers to the solution with ME4DK flat cable. With different cables the diameter can change.