

SEMISOM

FOR SEWAGE WATER



Electric submersible pumps SEMISOM

for sewage water



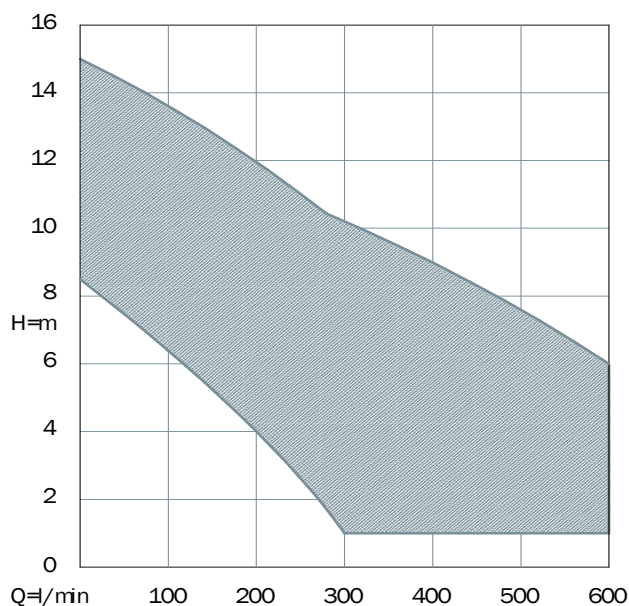
APPLICATION

Electric submersible pumps for installations in domestic, civil and industrial environments. Suitable to convey dirty, waste and sewage water also containing suspended solids whose size is up to 65 mm. They are recommended to transfer water, to drain tanks or flooded spaces, to pump waste water coming from domestic, civil and industrial installations as well as the drainage of septic tanks. They can also be used to pump sewage keeping its biological process unchanged (4 pole version). Some models of this range are also available in 24V DC version.

CHARACTERISTICS

IP rating	IP68
Duty (versions 1~230V - 3~400V)	Continuous S1
Duty (versions 24V DC)	Limited use S2 (60 minutes)
Maximum immersion depth (m)	20
Maximum number of starts per hour	40
Maximum temperature of the liquid pumped versions 1~230V - 3~400V (°C)	50
Maximum temperature of the liquid pumped versions 24V DC (°C)	35
PH of the liquid pumped	6 - 10
Density of the liquid pumped (kg/dm ³)	<1,1
Suitable for inverter drive	Three-phase versions only

APPLICATION RANGE



CONSTRUCTION

1~230V - 3~400V versions: coolant filled, asynchronous, rewindable electric AC motor with short circuit rotor. Insulation Class F. Windings with phase insulators to protect the motor from power peaks, as a guarantee of a highly-trustworthy product.

24V DC versions: with permanent magnets dry electric DC motor. Insulation Class F

Resin-insulated cable kit to prevent penetration of water inside the motor

Shafts machined on ball bearings and mechanical seals location

Double mechanical seal with oil-chamber in-between


MATERIALS


Tie rods, handle, motor casing, bolts and nuts	Stainless Steel AISI304
Shaft	Stainless Steel AISI420B
Cover and volute	Mechanical cast iron EN GJL-250
Impeller	Mechanical cast iron EN GJL-200
Mechanical seal	Silicon carbide and alumina
Packing Ring	NBR rubber
Elastomers	NBR rubber
Cable	Neoprene H07RN8-F; 24V DC: Twin Batt

Electric submersible pumps SEMISOM





for sewage water





PERFORMANCE DATA

Vortex Impeller 	P2		1~230 V		3~400 V	24 V DC	Poles	Ø solid passage (mm)	Q	Flow												
	hp	kW	Max	µF	Max	Max				m³/h	0	6	9	12	15	18	21	24	27	30	36	
			A		A	A					l/min	0	100	150	200	250	300	350	400	450	500	600
SEMISOM 290	0,75	0,55	4,2	16	1,7	28	2	50	H (m)	8,5	7	6,5	5,5	4,5	3,5	2,5	1					
SEMISOM 390	1	0,75	6,3	16	2,4		2	50		10	8,5	8	7	6	5	4	3	2				
SEMISOM 504	1	0,75	6,1	20	2,5		4	50		6,2	6	5,7	5,4	5,1	4,8	4,5	4,2	3,8	3			
SEMISOM 490	1,5	1,1	7,3	20	2,7		2	50		11	9,5	9	8	7,5	6,5	5,5	5	4	3	1		
SEMISOM 590	2	1,5	10,5	31,5	4,1		2	50		14,5	13	12,5	11,5	11	10	9	8	7,5	6,5	5		
NEW SEMISOM 650	2	1,5	12	31,5	4,6		2	65		9	8	7,5	7	6,5	6	5,5	5	4,5	4	3		
NEW SEMISOM 650 H	2	1,5	12	31,5	4,6		2	65		12,8	12	11,6	11,1	10,7	10,2	9,5	8,8	8,1	7,5	6		

Channel impeller 	P2		1~230 V		3~400 V	24 V DC	Poles	Ø solid passage (mm)	Q	Flow											
	hp	kW	Max	µF	Max	Max				m³/h	0	6	9	12	15	18	21	24	27	30	36
			A		A	A					l/min	0	100	150	200	250	300	350	400	450	500
SEMISOM 262	0,75	0,55	4,2	16	1,7	28	2	32	H (m)	10,5	9	8	7	6	4,5	3	1				
SEMISOM 635	1,5	1,1	7,3	20	2,7		2	32		15	13,5	13	12	11	10	9	7,5	6,5	5	2	

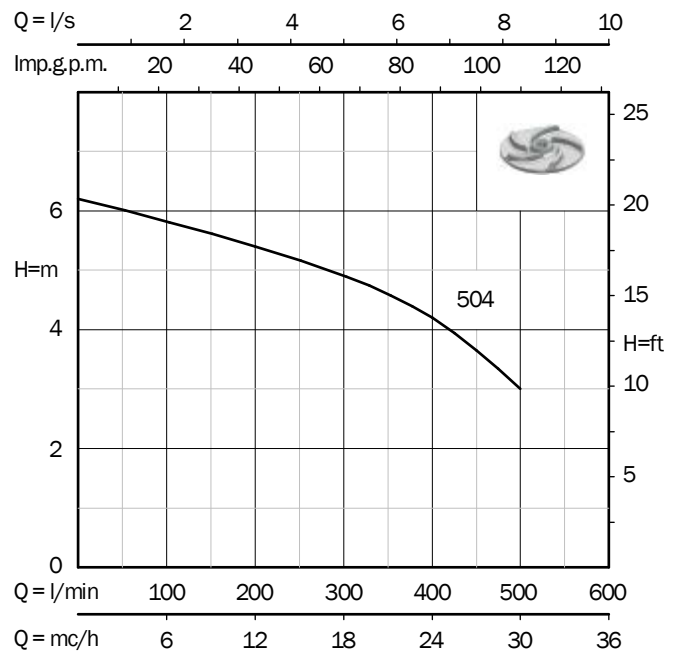
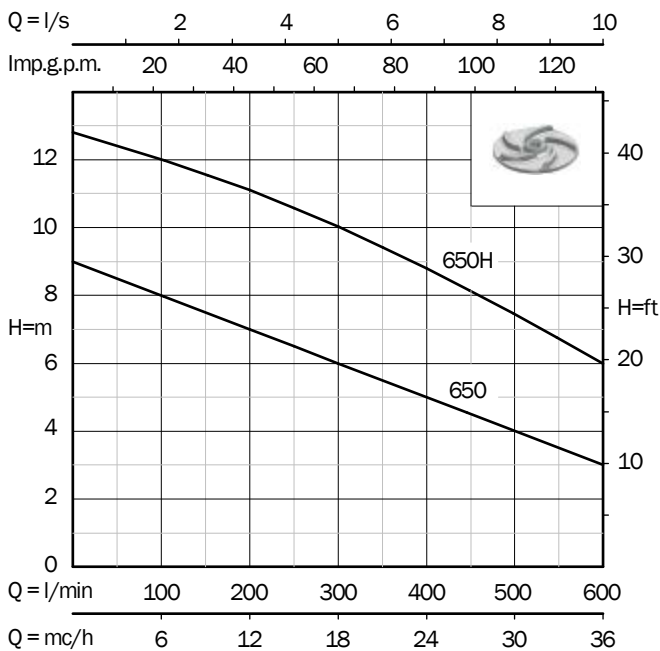
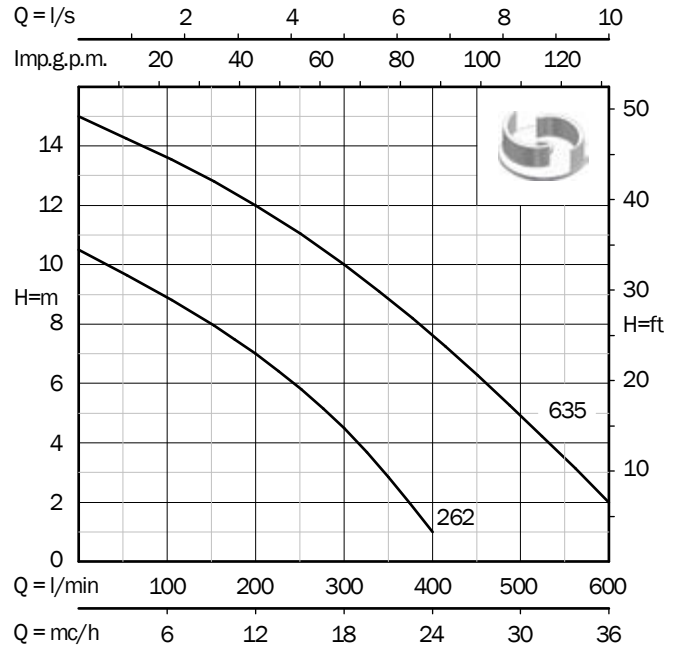
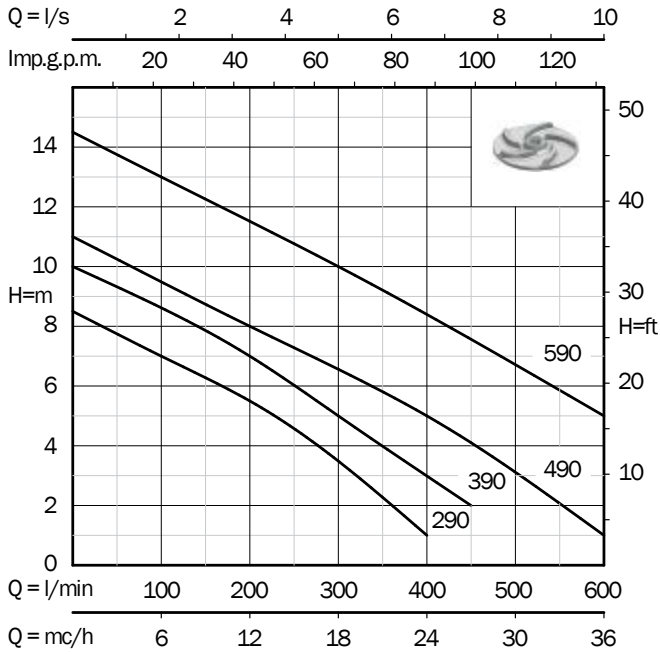
AVAILABLE VERSIONS

Vortex Impeller 	Vertical discharge 	Horizontal discharge 	Flanged discharge 	Single-phase	Single-phase + Float switch	Single-phase + float. and Internal capacitor	Three-phase	Three-phase + float	24 V
	SERIES								
SEMISOM 290	•			VS	VS	VA	VS	VA	VS
		•		HS	HS	HA	HS		
SEMISOM 390	•			VS	VS	VA	VS	VA	
		•		HS	HS	HA	HS		
SEMISOM 504		•		HS	HS		HS		
SEMISOM 490	•			VS	VS	VA	VS	VA	
		•		HS	HS	HA	HS		
SEMISOM 590		•		HS	HS		HS		
NEW SEMISOM 650			•	FS	FS		FS		
NEW SEMISOM 650 H			•	FS	FS		FS		

Channel impeller 	Vertical discharge 	Horizontal discharge 	Flanged discharge 	Single-phase	Single-phase + Float switch	Single-phase + float. and Internal capacitor	Three-phase	Three-phase + float	24 V
	SERIES								
SEMISOM 262	•			VS	VS	VA	VS	VA	VS
	•			VS	VS	VA	VS	VA	
SEMISOM 635		•		HS	HS	HA	HS		


V = Vertical discharge; H = Horizontal discharge; F = Flanged discharge
S = Standard version; A = Automatic version

PERFORMANCE CURVES




Electric submersible pumps SEMISOM series VA

for sewage water, vertical discharge automatics

 Technical documentation available by clicking on the product code

PERFORMANCE DATA 2 poles 50 Hz

Vortex Impeller 	Code	Version		P2		Max A	Flow		Ø solid passage (mm)	DNM (GAS)	Dimensions (mm)				Weight kg
				hp	kW		l/min	m			A	B	C	D	
SEMISOM 290 VA	SM290+G/3	230 V	1-phase+float	0,75	0,55	4,2	100 - 200 - 400	7 - 5,5 - 1	50	2"	492	65	235	162	16,9
	ST290+G/2	400 V	3-phase+float			1,7									18,7
SEMISOM 390 VA	SM390+G/3	230 V	1-phase+float	1	0,75	6,3	100 - 250 - 450	8,5 - 6 - 2	50	2"	502	65	235	162	17,7
	ST390+G/2	400 V	3-phase+float			2,4									19,5
SEMISOM 490 VA	SM490+G/3	230 V	1-phase+float	1,5	1,1	7,3	100 - 250 - 600	9,5 - 7,5 - 1	50	2"	527	65	235	162	19,5
	ST490+G/2	400 V	3-phase+float			2,7									21,3



SUPPLIED WITH

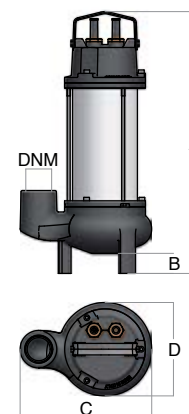
Power cable:
 • 5 meters for single-phase versions
 • 10 meters for three-phase versions




Capacitor and thermal protector put in a separate, easy-accessible, water tight chamber (single-phase versions)



Mini-contactor put in a separate, easy-accessible chamber (three-phase versions)



PERFORMANCE DATA 2 poles 50 Hz

Channel impeller 	Code	Version		P2		Max	Flow		Ø solid passage (mm)	DNM (GAS)	Dimensions (mm)				Weight kg
				hp	kW	A	l/min	m			A	B	C	D	
SEMISOM 262 VA	SM262+G/3	230 V	1-phase+float	0,75	0,55	4,2	30 - 200 - 400	10 - 7 - 1	32	2"	450	60	250	172	19,1
	ST262+G/2	400 V	3-phase+float			1,7									20,9
SEMISOM 635 VA	SM635+G/3	230 V	1-phase+float	1,5	1,1	7,3	30 - 350 - 600	14,5 - 9 - 2	32	2"	484	60	250	172	21,3
	ST635+G/2	400 V	3-phase+float			2,7									23,1

SUPPLIED WITH



Power cable:

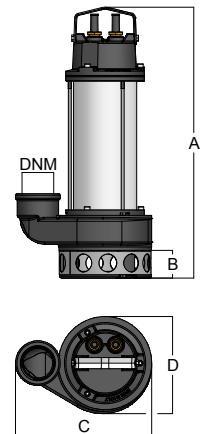
- 5 meters for single-phase versions
- 10 meters for three-phase versions



Capacitor and thermal protector put in a separate, easy-accessible, water tight chamber (single-phase versions)

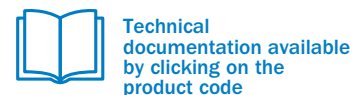


Mini-contactor put in a separate, easy-accessible chamber (three-phase versions)



Electric submersible pumps SEMISOM series VS

for sewage water, vertical discharge



PERFORMANCE DATA 2 poles 50 Hz

Vortex Impeller 	Code	Version		P2		Max A	Flow		Ø solid passage (mm)	DNM (GAS)	Dimensions (mm)				Weight kg
				hp	kW		l/min	m			A	B	C	D	
SEMISOM 290 VS	SM290	230 V	1-phase	0,75	0,55	4,2	100 - 200 - 400	7 - 5,5 - 1	50	2"	440	65	235	162	14,4
	SM290+G	230 V	1-phase+float												14,6
	ST290	400 V	3-phase												1,7
SEMISOM 390 VS	SM390	230 V	1-phase	1	0,75	6,3	100 - 250 - 450	8,5 - 6 - 2	50	2"	450	65	235	162	15,7
	SM390+G	230 V	1-phase+float												15,9
	ST390	400 V	3-phase												2,4
SEMISOM 490 VS	SM490	230 V	1-phase	1,5	1,1	7,3	100 - 250 - 600	9,5 - 7,5 - 1	50	2"	474	65	235	162	16,5
	SM490+G	230 V	1-phase+float												16,7
	ST490	400 V	3-phase												2,7

PERFORMANCE DATA - 24 V Direct current

Vortex Impeller 	Code	Version		P2		P1 kW	Max A	Flow		Ø solid passage (mm)	DNM (GAS)	Dimensions (mm)				Weight kg
				hp	kW			l/min	m			A	B	C	D	
SEMISOM 290 VS	SF290	24 V	DC	0,75	0,55	0,67	28	100 - 200 - 400	7 - 5,5 - 1	50	2"	440	65	235	162	13,4

P1: Max. absorbed power - P2: Nominal power of the motor

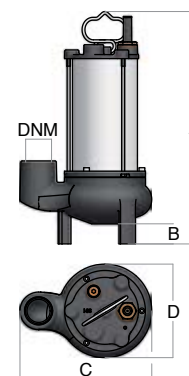


SUPPLIED WITH

5 meters power cable



Control box containing capacitor and amperometric protection (single-phase versions)




ACCESSORIES


Code	Description
02076100	QDC electromechanical direct starter (24 V Direct current versions)



PERFORMANCE DATA 2 poles 50 Hz

Channel impeller 	Code	Version		P2		Max A	Flow		Ø solid passage (mm)	DNM (GAS)	Dimensions (mm)				Weight kg
				hp	kW		l/min	m			A	B	C	D	
SEMISOM 262 VS	SM262	230 V	1-phase	0,75	0,55	4,2	30 - 200 - 400	10 - 7 - 1	32	2"	400	60	250	172	16,7
	SM262+G	230 V	1-phase+float												16,9
	ST262	400 V	3-phase												1,7
SEMISOM 635 VS	SM635	230 V	1-phase	1,5	1,1	7,3	30 - 350 - 600	14,5 - 9 - 2	32	2"	440	60	250	172	19,3
	SM635+G	230 V	1-phase+float												19,5
	ST635	400 V	3-phase												2,7

PERFORMANCE DATA - 24 V Direct current

Channel impeller 	Code	Version		P2		P1	Max A	Flow		Ø solid passage (mm)	DNM (GAS)	Dimensions (mm)				Weight kg
				hp	kW	kW		l/min	m			A	B	C	D	
SEMISOM 262 VS	SF262	24 V	DC	0,75	0,55	0,67	28	30 - 200 - 400	10 - 7 - 1	32	2"	400	60	250	172	15,3

P1: Max. absorbed power - P2: Nominal power of the motor

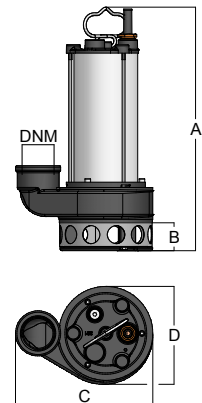


SUPPLIED WITH

5 meters power cable



Control box containing capacitor and amperometric protection (single-phase versions)



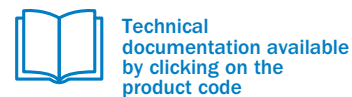
ACCESSORIES

Code	Description
02076100	QDC electromechanical direct starter (24 V Direct current versions)




Electric submersible pumps SEMISOM series HA

for sewage water, horizontal discharge automatics



PERFORMANCE DATA 2 poles 50 Hz

Vortex Impeller 	Code	Version		P2		Max A	Flow		Ø solid passage (mm)	DNM (GAS)	Dimensions (mm)				Weight kg
				hp	kW		l/min	m			A	B	C	D	
SEMISOM 290 HA	SM290+G0/3	230 V	1-phase+float	0,75	0,55	4,2	100 - 200 - 400	7 - 5,5 - 1	50	2"	492	65	198	162	16,4
SEMISOM 390 HA	SM390+G0/3	230 V	1-phase+float	1	0,75	6,3	100 - 250 - 450	8,5 - 6 - 2	50	2"	502	65	198	162	17,5
SEMISOM 490 HA	SM490+G0/3	230 V	1-phase+float	1,5	1,1	7,3	100 - 250 - 600	9,5 - 7,5 - 1	50	2"	526	65	198	162	18,8

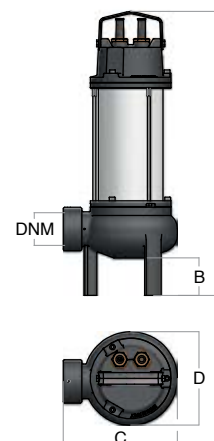


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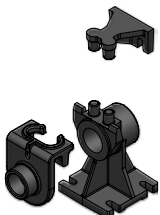
10 meters power cable



Capacitor and thermal protector put in a separate, easy-accessible, water tight chamber




ACCESSORIES

Code	Description
04105043	<p>Guide rail kit male threaded inlet G2" - female threaded outlet G2"</p> <p>(3/4" guide poles are not included)</p> 



PERFORMANCE DATA 2 poles 50 Hz

Channel impeller 	Code	Version		P2		Max	Flow		Ø solid passage (mm)	DNM (GAS)	Dimensions (mm)				Weight
				hp	kW	A	l/min	m			A	B	C	D	kg
SEMISOM 635 HA	SM635+GO/3	230 V	1-phase+float	1,5	1,1	7,3	30 - 350 - 600	14,5 - 9 - 2	32	2"	484	60	220	172	22

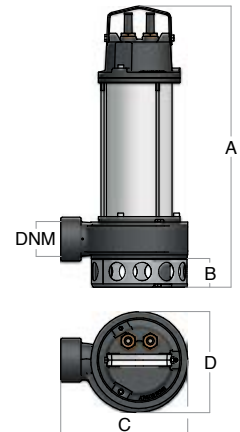


SUPPLIED WITH

10 meters power cable

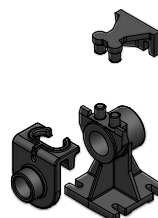


Capacitor and thermal protector put in a separate, easy-accessible, water tight chamber




ACCESSORIES

Code	Description
04105043	Guide rail kit male threaded inlet G2" - female threaded outlet G2" (3/4" guide poles are not included)




Electric submersible pumps SEMISOM series HS

for sewage water, horizontal discharge

 Technical documentation available by clicking on the product code

PERFORMANCE DATA 2 poles 50 Hz

Vortex Impeller 	Code	Version		P2		Max A	Flow		Ø solid passage (mm)	DNM (GAS)	Dimensions (mm)				Weight kg
				hp	kW		l/min	m			A	B	C	D	
SEMISOM 290 HS	SM2900	230 V	1-phase	0,75	0,55	4,2	100 - 200 - 400	7 - 5,5 - 1	50	2"	440	65	198	162	14,4
	SM290+G0	230 V	1-phase+float												14,6
	ST2900	400 V	3-phase												1,7
SEMISOM 390 HS	SM3900	230 V	1-phase	1	0,75	6,3	100 - 250 - 450	8,5 - 6 - 2	50	2"	450	65	198	162	15,7
	SM390+G0	230 V	1-phase+float												15,9
	ST3900	400 V	3-phase												2,4
SEMISOM 490 HS	SM4900	230 V	1-phase	1,5	1,1	7,3	100 - 250 - 600	9,5 - 7,5 - 1	50	2"	474	65	198	162	16,5
	SM490+G0	230 V	1-phase+float												16,7
	ST4900	400 V	3-phase												2,7
SEMISOM 590 HS	SM5900	230 V	1-phase	2	1,5	10,5	100 - 300 - 600	13 - 10 - 5	50	2"	496	65	198	162	18,2
	SM590+G0	230 V	1-phase+float												18,4
	ST5900	400 V	3-phase												4,1

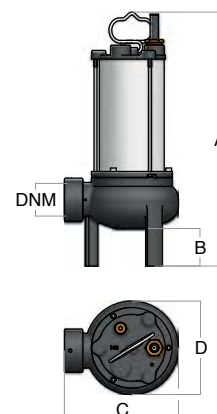


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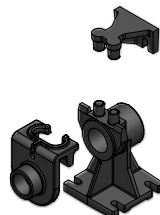
10 meters power cable



Control box containing capacitor and amperometric protection (single-phase versions)




ACCESSORIES

Code	Description
04105043	<p>Guide rail kit male threaded inlet G2" - female threaded outlet G2"</p> <p>(3/4" guide poles are not included)</p> 



PERFORMANCE DATA 4 poles 50 Hz

Vortex Impeller 	Code	Version		P2		Max A	Flow		Ø solid passage (mm)	DNM (GAS)	Dimensions (mm)				Weight kg
				hp	kW		l/min	m			A	B	C	D	
SEMISOM 504 HS	SM5040	230 V	1-phase	1	0,75	6,1	100 - 300 - 500	6 - 4,8 - 3	50	2"	498	50	225	171	20,2
	SM504+G0	230 V	1-phase+float												20,4
	ST5040	400 V	3-phase												2,5

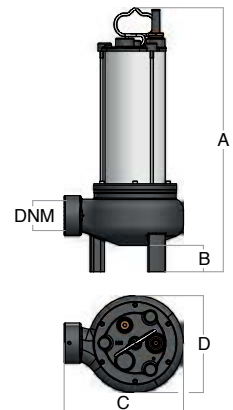


SUPPLIED WITH

10 meters power cable

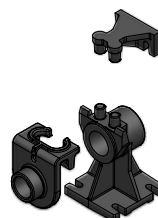


Control box containing capacitor and amperometric protection (single-phase versions)




ACCESSORIES

Code	Description
04105043	Guide rail kit male threaded inlet G2" - female threaded outlet G2" (¾" guide poles are not included)




Electric submersible pumps SEMISOM series HS

for sewage water, horizontal discharge

 Technical documentation available by clicking on the product code

PERFORMANCE DATA 2 poles 50 Hz

Channel impeller 	Code	Version		P2		Max A	Flow		Ø solid passage (mm)	DNM (GAS)	Dimensions (mm)				Weight kg
				hp	kW		l/min	m			A	B	C	D	
SEMISOM 635 HS	SM6350	230 V	1-phase	1,5	1,1	7,3	30 - 350 - 600	14,5 - 9 - 2	32	2"	440	60	220	172	20,1
	SM635+GO	230 V	1-phase+float												20,3
	ST6350	400 V	3-phase												2,7

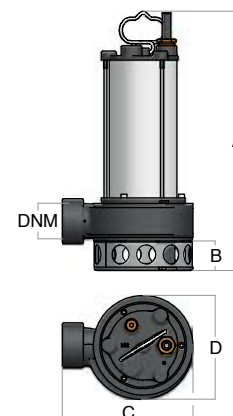


SUPPLIED WITH

10 meters power cable



Control box containing capacitor and amperometric protection (single-phase versions)



ACCESSORIES

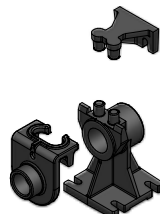
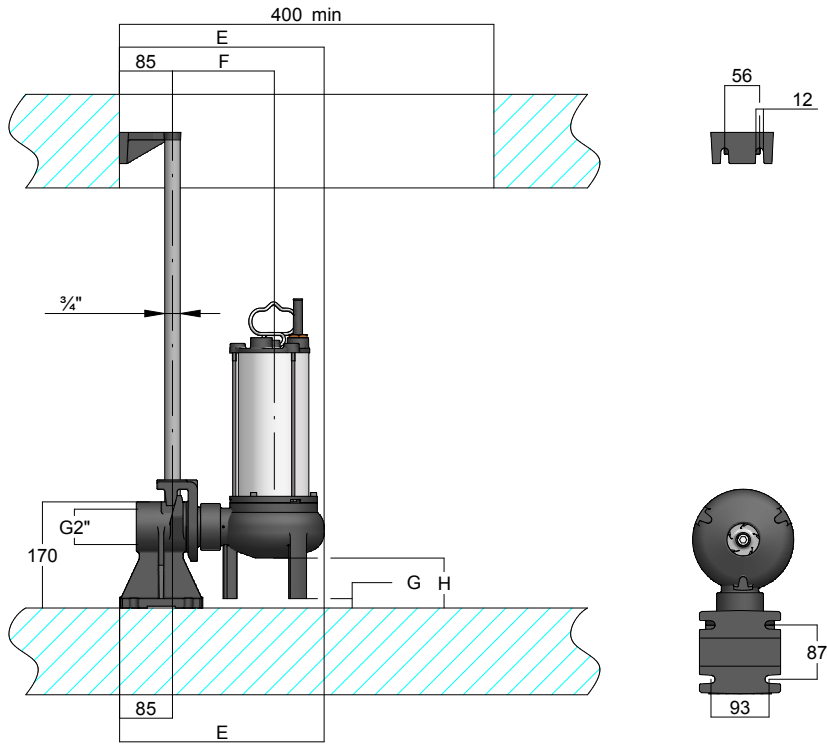
Code	Description
04105043	<p>Guide rail kit male threaded inlet G2" - female threaded outlet G2"</p> <p>(3/4" guide poles are not included)</p> 



ILLUSTRATION OF AN INSTALLATION WITH GUIDE RAIL KIT




To be installed on	Dimensions (mm)			
	E	F	G	H
SEMISOM HS - HA	328	163	15	80
SEMISOM 635 HS - HA	348	180	47	97




Electric submersible pumps SEMISOM series FS

for sewage water with horizontal flanged discharge

 Technical documentation available by clicking on the product code

PERFORMANCE DATA 2 poles 50 Hz

Vortex Impeller 	Code	Version		P2		Max A	Flow		Ø solid passage (mm)	DNM (GAS)	Dimensions (mm)				Weight kg
				hp	kW		l/min	m			A	B	C	D	
NEW SEMISOM 650 FS	SM650/1	230 V	1-phase	2	1,5	12	100 - 300 - 600	8 - 6 - 3	65	65	511	65	245	195	24,4
	SM650+G/1	230 V	1-phase+float												24,7
	ST650/1	400 V	3-phase												4,6
NEW SEMISOM 650H FS	SM650H/1	230 V	1-phase	2	1,5	12	100 - 300 - 600	12 - 10,2 - 6	65	65	516	65	245	195	24,4
	SM650H+G/1	230 V	1-phase+float												24,7
	ST650H/1	400 V	3-phase												4,6



SUITABLE FOR SYSTEMS CERTIFIED ACCORDING TO THE STANDARD UNI EN 12050-1

Designed for very heavy-duty applications with the aim of avoiding clogging and obstructions. Thanks to its 65 mm solids handling and the low-vane vortex impeller, the pump has brilliantly passed the tests listed in the UNI EN 12050-1 regulation (Wastewater lifting plants for buildings and sites).



SUPPLIED WITH

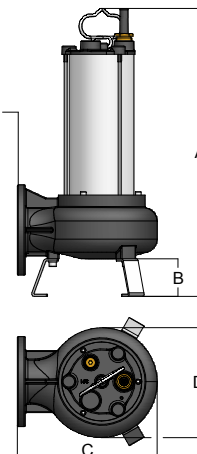
10 meters power cable



Control box containing capacitor and amperometric protection (single-phase versions)



UNI EN 1092-1
DN65 PN6



ACCESSORIES

Codice	Descrizione	
05135011	Threaded flange inlet flange UNI EN 1092-1 DN65 PN6 - female threaded outlet G2" ¹ / ₂ + screws and rubber packing	
01205031	Pipe union inlet flange UNI EN 1092-1 DN65 PN6 - male threaded outlet G3" + screws and rubber packing	
04105052	Guide rail kit inlet flange UNI EN 1092-1 DN65 PN6 - outlet flange UNI EN 1092-1 DN65 PN40 (1" ¹ / ₄ guide poles not included)	

ILLUSTRATION OF AN INSTALLATION WITH GUIDE RAIL KIT

