



ADVANCED WATER TECHNOLOGY
PETER TABOADA
TECNOLOGÍA AVANZADA DEL AGUA



TECHNICAL SPECIFICATIONS



2 A - 685 - TF



A - 685 - TF



A - 385 - TF



ADVANCED WATER TECHNOLOGY
PETER TABOADA
TECNOLOGÍA AVANZADA DEL AGUA



MODELS:

- ❑ A-385-TF
- ❑ A-685-TF
- ❑ 2A-685-TF

The anti-biological growth and anti-corrosive system PETION® is, nowadays, the most and suitable process for maintaining seawater circuits. Totally designed and built by PETER TABOADA'S Research and Development Department, the PETION® system brings about the ideal solution, applying the highest technology in electrolysis . With this technique a main objective is reached: the protection against biological growth and corrosion in the whole system where the seawater flows, either in pipelines, valves or any other machinery.

Copper and aluminium electrodes of the highest purity are mounted in a 316 stainless steel tank. It is not necessary to install them in the seawater inlet, since the system injects the copper and aluminium directly from the tank to the seawater inlet. Consequently the whole seawater circuit is protected from the very beginning. For replacing the electrodes, it is not necessary to take the vessel aground or to close the seawater circuit valve. The electrodes can be replaced or checked at any time by closing the inlet and outlet valves to the tank.

This system takes the maximum efficiency out of the electrodes (90 %) before their substitution. It produces the exact necessary dose of copper and aluminium, so that the electrodes do not become worn due to the erosion of the seawater flow. The discharges from the tank to the seawater inlet are dosed by means of adjustable flow-regulating valves. Accordingly with the flow rate, each intake will take the copper and aluminium oxide ions.



STANDARD FEATURES AND COMPONENTS

CONTROL PANEL:

Watertight frame including:

- Transformer-rectifier.
- Starter lamp button.
- Electro-pump thermal relay with alarm light showing possible problems.
- Outer setting potentiometers (2 for A-385-TF, 2 for A-685-TF and 4 for 2A-685-TF).
- 2 Al-Cu intensity selection switches (2 in A-385-TF, 2 in A-685-TF and 4 in 2A-685-TF).
- Analogue measure box with IP-54 tightness.
- Entrapped air renewed by means of a ventilator and a low voltage extractor, both protected by a stainless grating.
- All the electronic components at hand reach.
- Wiring with numbered nomenclature for a better identification of each wire.

ELECTROLYTIC TANK:

- Polished and manufactured in 316L stainless steel.
- Safety valve in the upper side for avoiding damages in case of overpressure. It includes automatic air bleed for the air to exit when water is entering.
- Hooking ring in its upper side for being easily moved.
- Glycerine-filled pressure gauge in the upper side informing about the inside water pressure.
- Discharge manifold with general shut-off valve and relief outlets.
- In the manifold end, there is one rapid connection for cleaning the pipes by means of compressed air.
- Bleed in the lower side of the tank (only in A-685-TF and 2A-685-TF, of 1" and 1 ¼", respectively).
- Automatic air bleed (only in A-685-TF and 2A-685-TF).
- Lid for easy cleaning in A-385-TF and A-685-TF, and lateral clamp in 2A-685-TF).
- Rounded design in lower and upper sides, offering an extraordinary resistance (only in 2A-685-TF).

ELECTRODES:

- Highest purity electrodes with quadruple tightness (patented system).
- Al with 99.7 % purity.
- Cu with 99.95 % purity.

PUMP:

- CHI 4-30 of 1.08 kW electro-pump in models A-385-TF and A-685-TF, and CHI 12/25 of 2.8 kW in model A-685-TF.
- 2.860 rpm, 50 Hz motor in A-385-TF and A-685-TF; 2,890 rpm motor in 2A-685-TF, F-class insulation, IP55 protection.
- Pump casing, impeller, diffuser and driving shaft in AISI 316 stainless steel.

SPECIAL TOOLS:

PETION® system does not need any special tools.

TESTING:

The equipment is tested in PETER TABOADA® installations in Redondela before being sent. The tests include: Electric and electronic operation, hydraulic operation, performance with different temperatures and different feed water qualities, operation under extreme conditions applying the maximum pressures, product water quality, security systems, etc.

GUARANTEE:

- **SYSTEM:** 1 year.
- **ELECTRODES:** 1 year.
- **PUMP:** 1 year.

NOTE: PETION® systems and the quadruple watertight electrodes are protected by the Invention Patents N° 9.402.109 and 9.602.236.



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PETER TABOADA
TECNOLOGÍA AVANZADA DEL AGUA

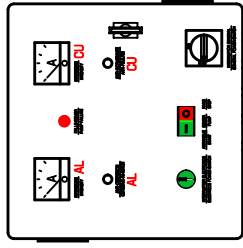


PETIÓN® SPECIFICATIONS

MODEL	MAXIMUM POWER (kW)	ELECTRO-PUMP	MAXIMUM WATER TREATMENT	NOISE LEVEL	APPROX. DRY WEIGHT	CONNECTIONS
A-385-TF	1.08 kW	220 V --- 3.2 A 380 V --- 1.8 A	250 m ³ /hour	75 db (A)	71 kg	Pump suction: 1 1/2" Pump outlet to tank: 1 1/4" Manifold discharge: 1/2"
A-685-TF	1.08 kW	220 V --- 3.2 A 380 V --- 1.8 A	750 m ³ /hour	75 db (A)	116 kg	Pump suction: 1 1/2" Pump outlet to tank: 1 1/4" Manifold discharge: 1/2"
2A-685-TF	2.80 kW	220 V --- 9 A 380 V --- 5.2 A	1500-2000 m ³ /hour	78 db (A)	211 kg	Pump suction: 2" Pump outlet to tank: 1 1/2 " Manifold discharge: 1"

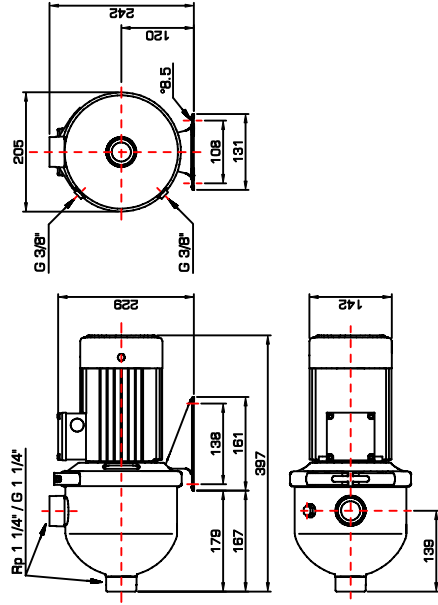
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**CONTROL PANEL
PANEL DE CONTROL**



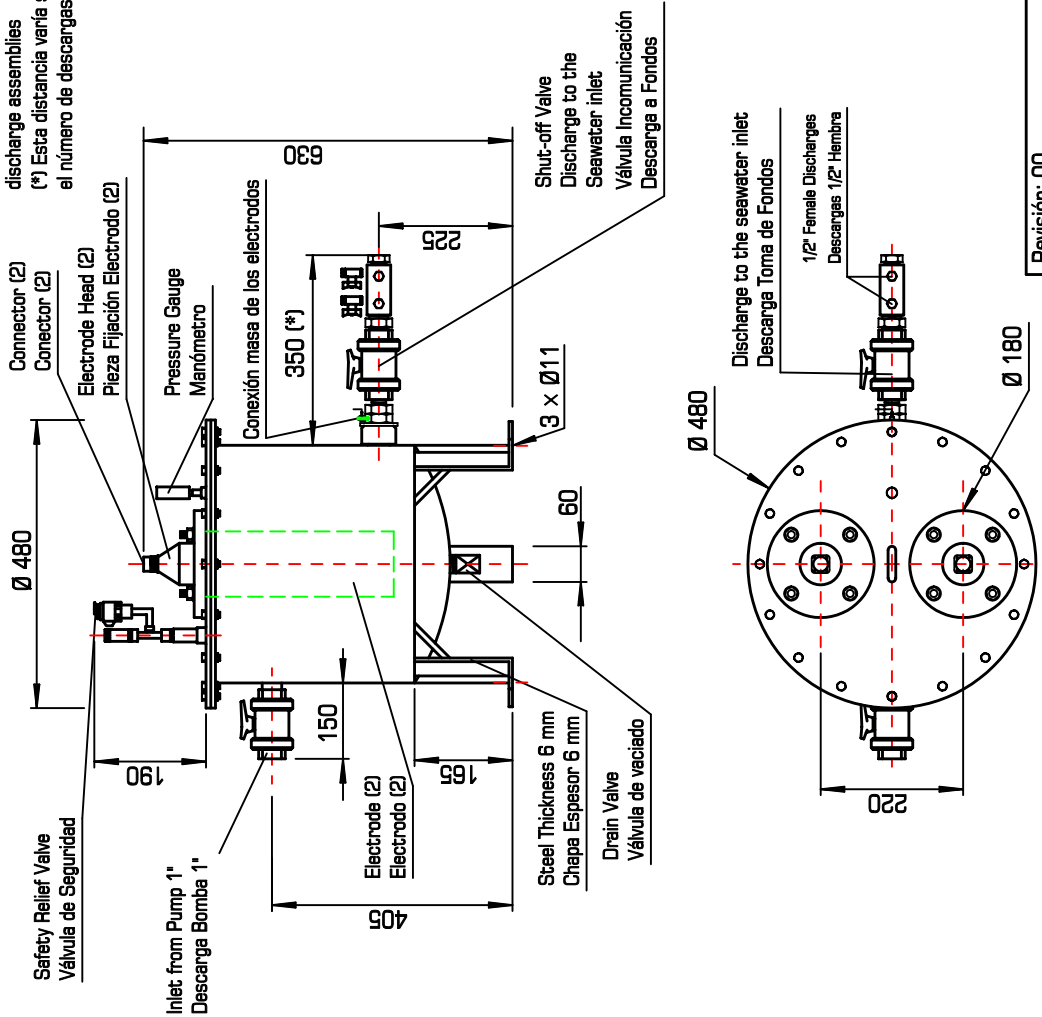
DIMENSIONES: 400 x 400 x 210 mm.

**PUMP TYPE CHI 4-40
BOMBA TIPO CHI 4-40**



(*) This distance depends on the needed discharge assemblies

(**) Esta distancia varía según el número de descargas necesarias



PETION

Modelo: A-385-TF
Capacidad: 250 m³/h
Potencia: 1,08 KW
Dimensiones en milímetros



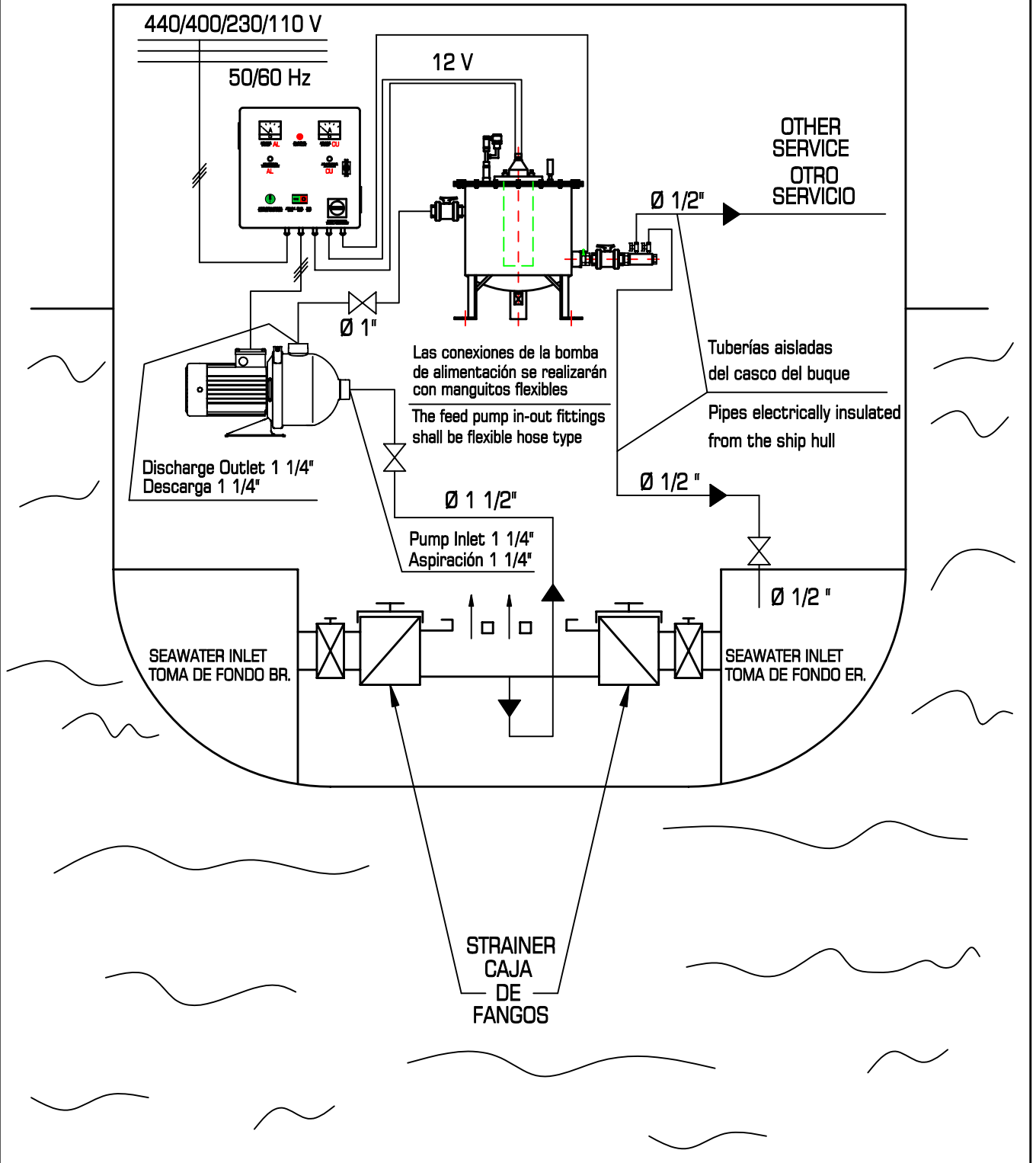
Revisión: 00	Compro.: Fernando X. Fecha: 15/10/07	Aprobado: Jesús T. Fecha: 15/10/07
Dibujado: Fernando X. Fecha: 15/10/07		

**ELECTROLYSIS TANK
CUBA ELECTROLÍTICA**

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ALWAYS INSTALL PUMP BELOW THE WATER LINE.

HACER LA INSTALACIÓN DE LA BOMBA, SIEMPRE, BAJO LA LÍNEA DE FLOTACIÓN.



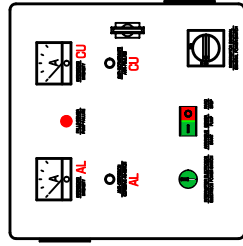
Revisión: 00						
Dibujado: Fernando X. Fecha: 15/10/07	Compro.: Fernando X. Fecha: 15/10/07	Aprobado: Jesús T. Fecha: 15/10/07				
			001	ADVANCED WATER TECHNOLOGY PETER TABOADA Tecnología Avanzada del Agua	Modelo: A-385-TF Esquema de instalación en buque	

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Safety Relief Valve
Válvula de Seguridad

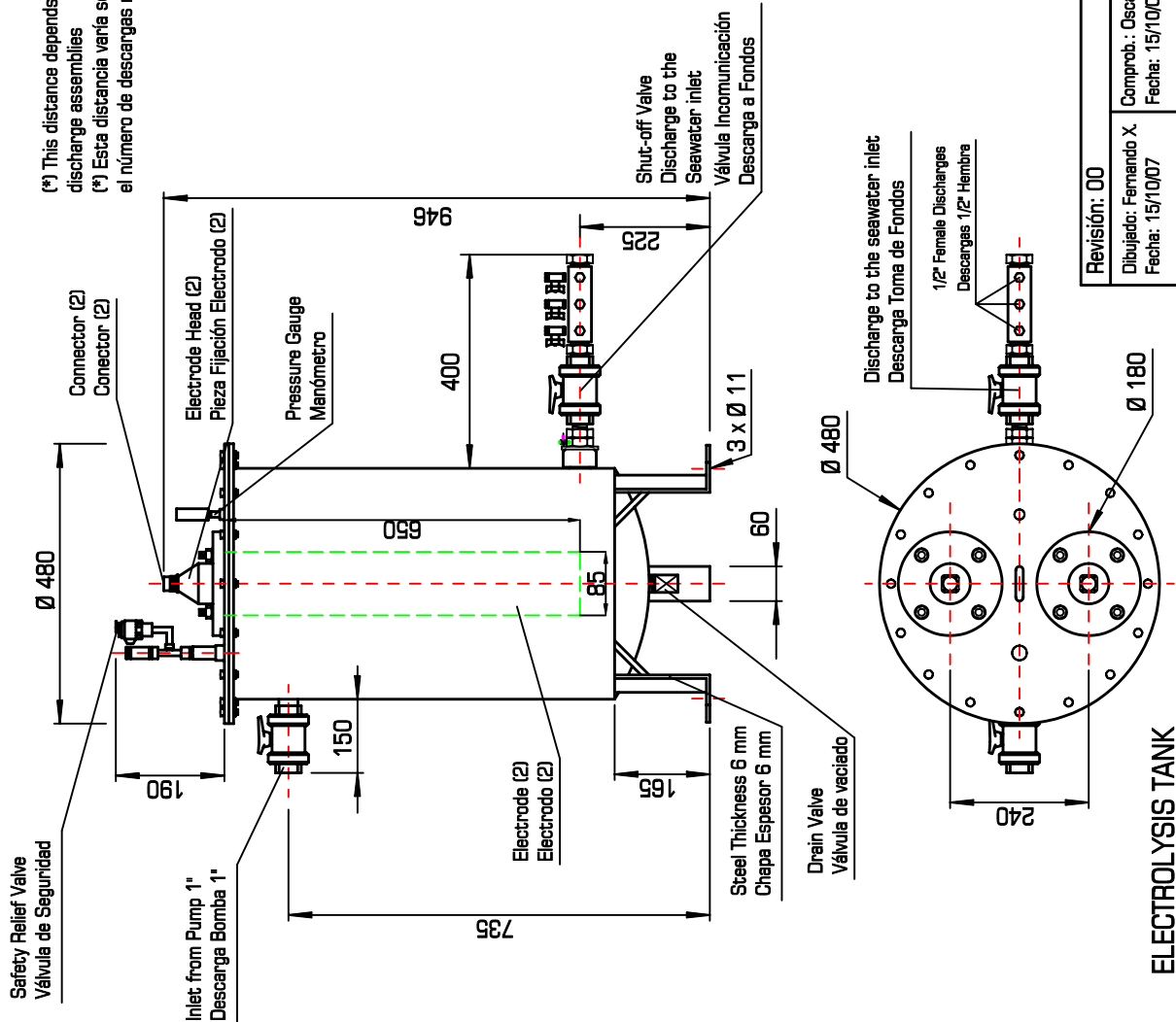
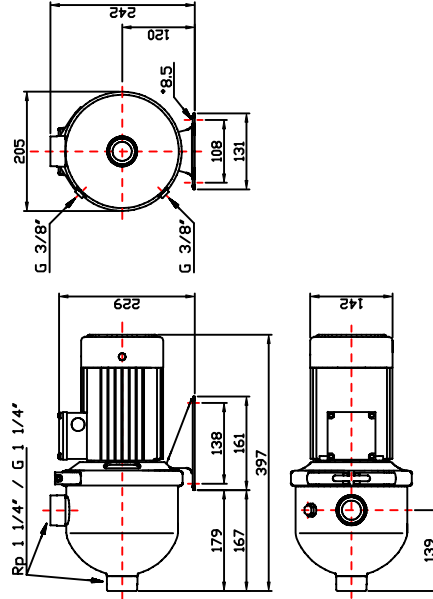
(*) This distance depends of the needed discharge assemblies
(*) Esta distancia varía según el número de descargas necesarias

CONTROL PANEL
PANEL DE CONTROL



DIMENSIONES: 400 x 400 x 210 mm.

PUMP TYPE CHI 4-40
BOMBA TIPO CHI 4-40



ELECTROLYSIS TANK
CUBA ELECTROLITICA

PETION
 Modelo: A-685-TF
 Capacidad: 750 m³/h
 Potencia: 1,08 kw
 Dimensiones en Milímetros

PETER TABOADA
 ADVANCED WATER TECHNOLOGY
 THE BEST WATER SOLUTIONS

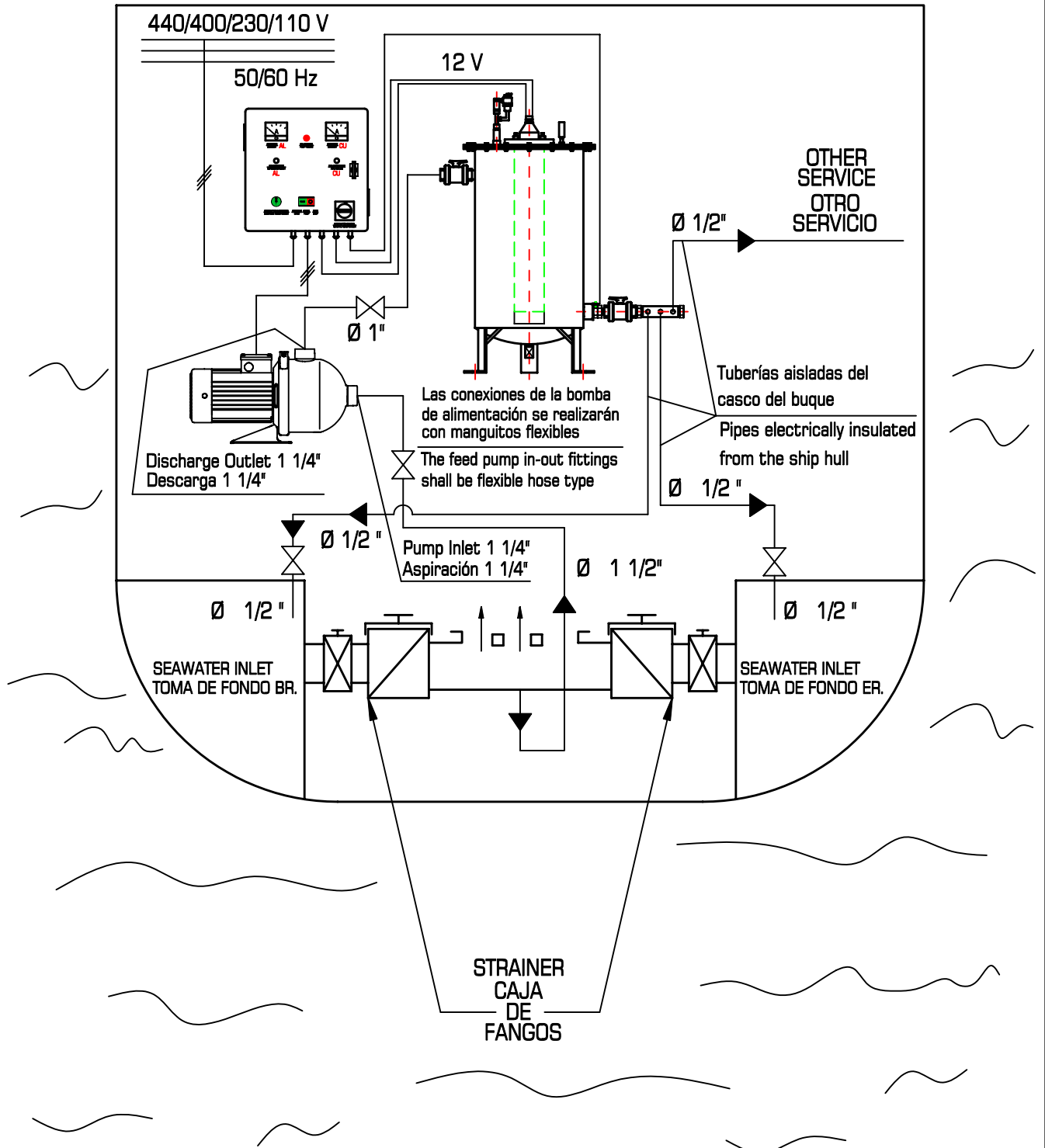
UKAS
 QUALITY MANAGEMENT
 001

Revisión: 00	Comprob.: Oscar Saal Fecha: 15/10/07	Aprobado: Jesús T. Fecha: 15/10/07
Dibujado: Fernando X Fecha: 15/10/07		

ALWAYS INSTALL PUMP BELOW THE WATER LINE.

HACER LA INSTALACIÓN DE LA BOMBA, SIEMPRE, BAJO LA LÍNEA DE FLOTACIÓN.

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Dibujado: Fernando X. Fecha: 15/10/07	Compr.: Fernando X. Fecha: 15/10/07	Aprobado: Jesús T. Fecha: 15/10/07				
			Modelo: A-685-TF Esquema de instalación en buque			

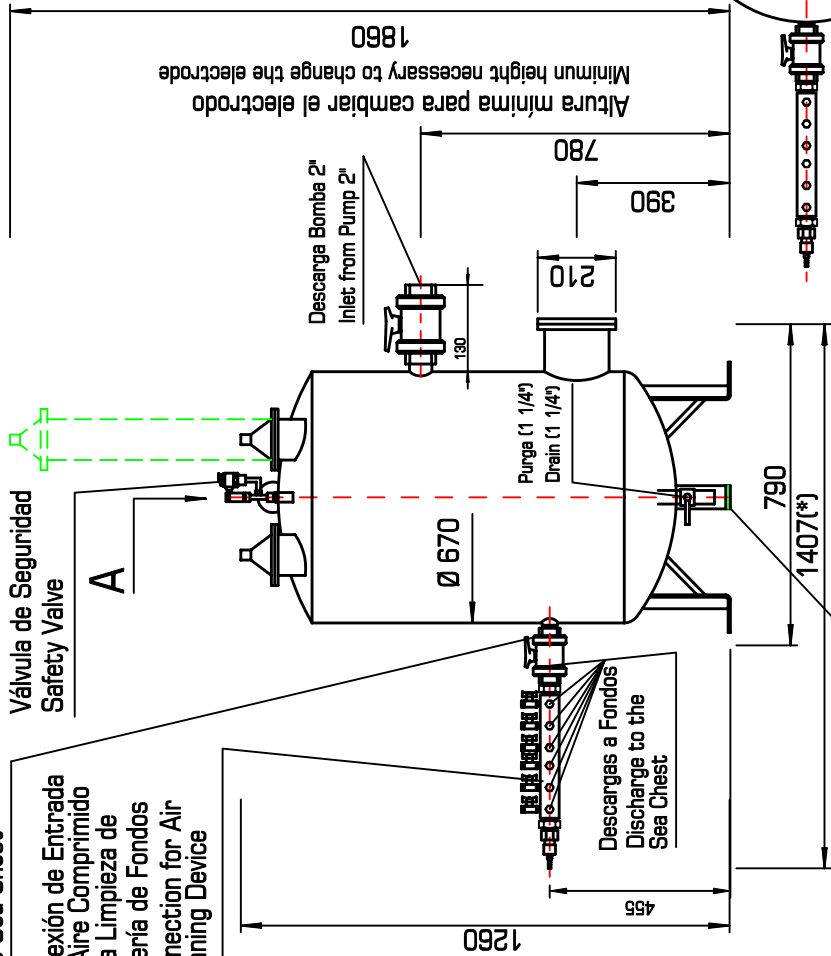
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CUBA ELECTROLÍTICA ELECTROLYSIS TANK

Válvula Incomunicación
Descarga a Fondos
Shut-off Valve Discharge
to the Sea Chest

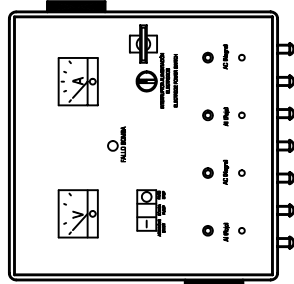
Válvula de Seguridad
Safety Valve

Conexión de Entrada
de Aire Comprimido
para Limpieza de
Tubería de Fondos
Connection for Air
Cleaning Device



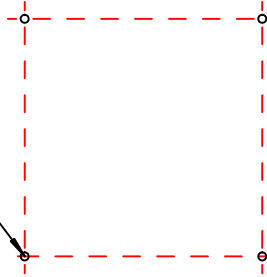
CUADRO DE MANDO CONTROL PANEL

Dimensiones/Dimensions: 395x395x205 mm.



ANCLAJE SUPPORT

4 x Ø12



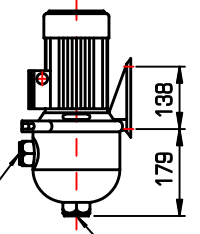
BOMBA TIPO CHI 12-25 PUMP TYPE CHI 12-25

Dimensiones/Dimensions: 500x242x205 mm.

VISTA A VIEW A

Descarga 1 1/2"
Discharge Outlet 1 1/2"

Aspiración 1 1/2"
Pump Inlet 1 1/2"



ANCLAJE BOMBA SUPPORT PUMP



ANCLAJE SUPPORT

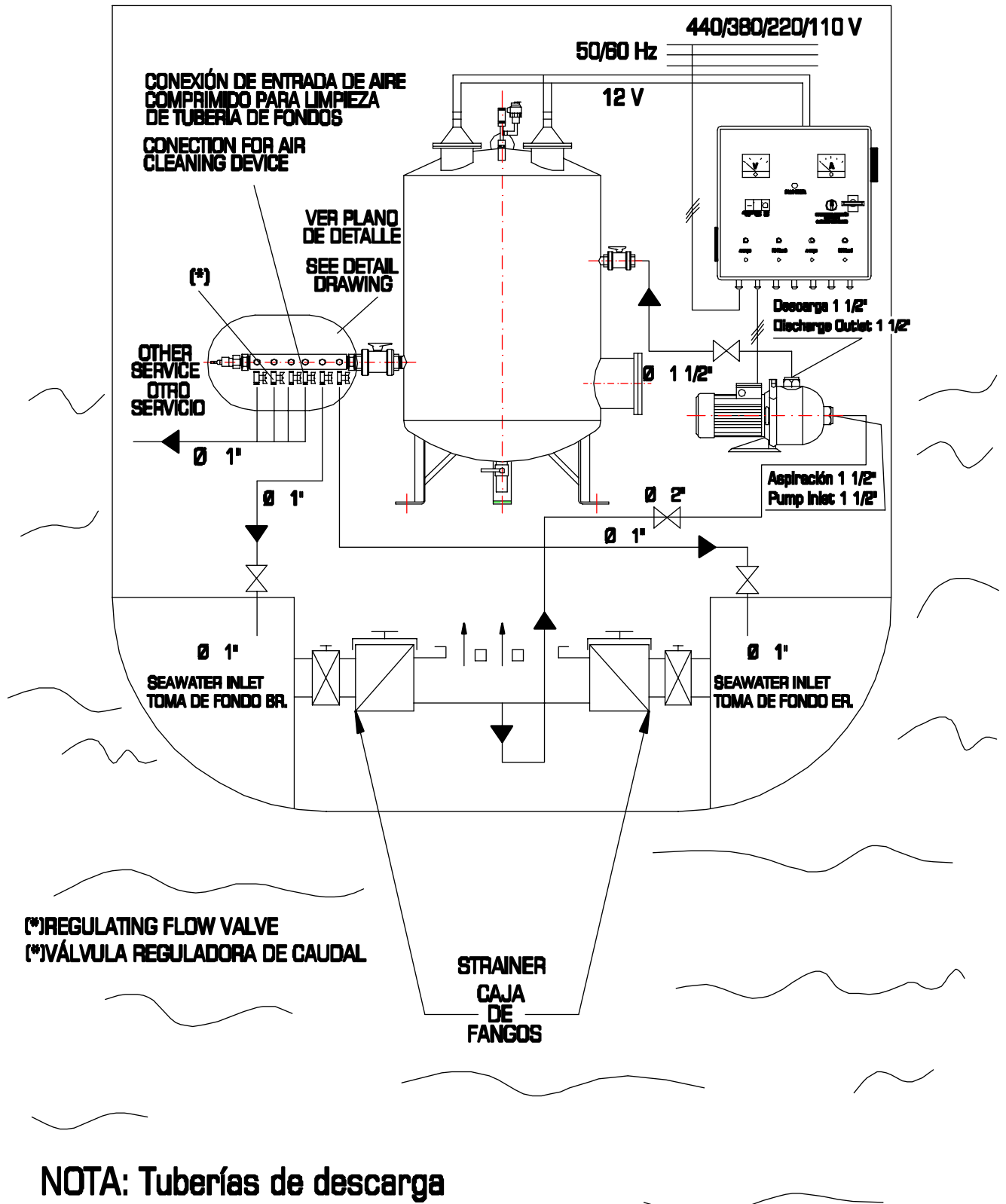
Chapa espesor 5 mm
Steel Thickness 5 mm

(*) Esta distancia varíe según
el número de descargas necesarias
(*) This distance depending the number of
discharge assemblies needed

<p>Revisión: 00</p>		<p>Modelo: 2A-685-TF Capacidad: 1.500 m³/h Potencia: 2,80 kW Dimensiones en Milímetros</p>	
<p>Dibujado: Fernando X Fecha: 05/1/01</p>	<p>Compro.: Fernando X Fecha: 05/1/01</p>	<p>Aprobado: Jesús T. Fecha: 05/1/01</p>	<p>001</p>

HACER LA INSTALACIÓN DE LA BOMBA, SIEMPRE, BAJO LA LÍNEA DE FLOTACIÓN.

ALWAYS INSTALL THE PUMP BELOW THE WATER LINE



NOTA: Tuberías de descarga aisladas del casco del buque

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Revisión: 00						
Dibujado: Fernando X. Fecha: 05/11/01	Comprob.: Dacer San Fecha: 05/11/01	Aprobado: Jesús T. Fecha: 05/11/01				
<p>Modelo: 2A-685-TF</p> <p>INSTALLATION OUTLINE CIRCUITO GENERAL</p> <p>DATOS DE INSTALACIÓN Y TUBERÍA</p>						