



ZODIAC

Heat line



GB Exchanger Instructions for installation and use

Cette notice d'installation fait partie intégrante du produit et doit être impérativement remise à l'utilisateur.

Lire attentivement les avertissements contenus dans le présent livret car ils fournissent des indications importantes au niveau de la sécurité d'utilisation et de manutention. Conserver ce livret afin de pouvoir toujours le consulter.

L'installation doit être effectuée, conformément aux normes en vigueur et en respectant les instructions du fabricant, par une personne professionnellement qualifiée.

Par "personne professionnellement qualifiée", il s'entend une personne ayant les compétences techniques dans le secteur des composants ZPCE et des installations de chauffage.

Un défaut dans l'installation peut entraîner des dommages sur des personnes, animaux ou objets pour lesquels le fabricant ne saurait être tenu responsable.

Après avoir retiré l'emballage de l'appareil, s'assurer de l'état du contenu.

Avant de raccorder l'appareil, s'assurer que les données fournies par ZPCE sont compatibles avec l'installation à réaliser dans les limites maximales autorisées du produit concerné.

Au préalable de toute opération d'entretien, de manutention ou de réparation sur l'appareil, couper l'alimentation électrique sur ce dernier.

En cas de panne et/ou de fonctionnement anormal de l'appareil n'envisager aucune tentative de réparation sur celui-ci, couper l'alimentation électrique sur ce dernier.

L'éventuelle intervention de réparation devra être effectuée par un service d'assistance autorisé qui utilisera exclusivement des pièces de remplacement d'origine. Le non respect des clauses décrites ci-dessus peut compromettre la sécurité d'utilisation de l'appareil.

Pour garantir l'efficacité de l'appareil et pour son fonctionnement correct, il est indispensable de faire effectuer un entretien périodique de ce dernier en se conformant aux instructions fournies par ZPCE.

Dans le cas où l'appareil devrait être vendu ou transféré chez un utilisateur différent, s'assurer que ce livret accompagne le matériel afin que le nouveau propriétaire ou l'installateur puisse le consulter.

Cet appareil devra être destiné exclusivement à l'usage pour lequel il a été conçu; toute autre utilisation aléatoire devra être considérée comme impropre et dangereuse.

Sont exclues toutes responsabilités contractuelles ou extracontractuelles de ZPCE pour des dommages causés suite à des erreurs d'installation ou d'utilisation, ou par un non respect des instructions fournies par ZPCE ou des normes d'installation en vigueur concernant le matériel en objet.

IMPORTANT - CAUTION - IMPORTANT

This manual is an integral part of the product and must be supplied to the installer and the end user.

The advice included in this manual must be carefully read as they supply important indications about safety and maintenance. Keep this manual in order to consult it if necessary.

The appliance must be installed according to the standards in force, by qualified personnel, this means by personnel having skill to care of ZPCE products and heating installations.

A failing installation can cause damages to persons, pets or items. In any case, the manufacturer can be considered as responsible of such damages.

When unpacking the unit, check its state.

Before connecting the unit, make sure that the advice supplied by this manual are in accordance with the installation and its conditions of use.

Before any servicing, maintenance and repair, switch off the main supply.

In event of failure or abnormal operation, switch off the unit before any repair.

Any repair shall be performed by ZPCE authorized service personnel with genuine spare parts. The use of non-genuine parts can be harmful to the unit and to the persons.

In order to ensure a long-lasting efficiency of the unit, it shall be maintained in accordance with the instructions included in this manual.

In event of sale or transfer of this unit to another user, make sure this manual is supplied as well.

This unit must be exclusively used for the use it was designed to. Any other use shall be considered as improper and hazardous.

In event of damages due either to an improper installation or use or if the instructions provided by ZPCE or the standards in force are improperly applied, all ZPCE responsibilities will be void.

IMPORTANT - CAUTION - IMPORTANT

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1. GENERAL

1.1 General terms of delivery

Any equipment, even CARRIAGE and PACKING FREE, travels at the consignee's risk. The consignee shall make reserves in writing on the carrier's delivery bill if he notes damage caused during the transport (confirmation to be sent to the carrier within 48 hours by registered mail and Acknowledgement of Receipt).

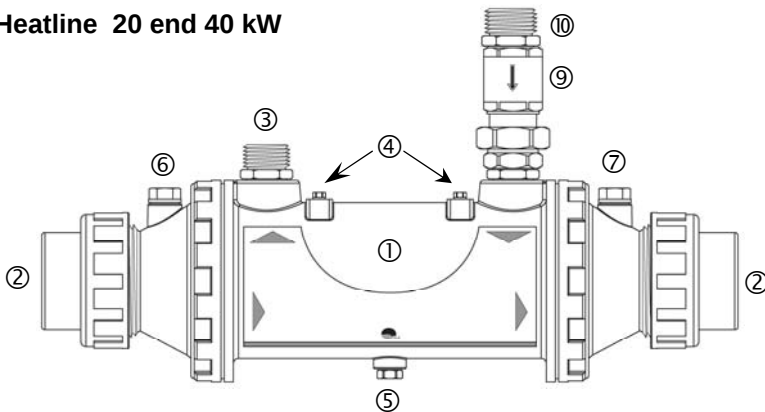
1.2 Water treatment

In order to use our appliances in the best conditions, swimming pool water shall comply with the following values: free chlorine: max. 2.5 mg/L, total bromine: max. 5.5 mg/L, pH between 6.9 and 8.0. For any other treatment, the fitter and the user shall apply to the supplier of the planned disinfection's process (chemical, electrochemical or electro-physical) for the compatibility with the materials of our appliances. In any case, treatment shall be installed downstream the heating equipment.

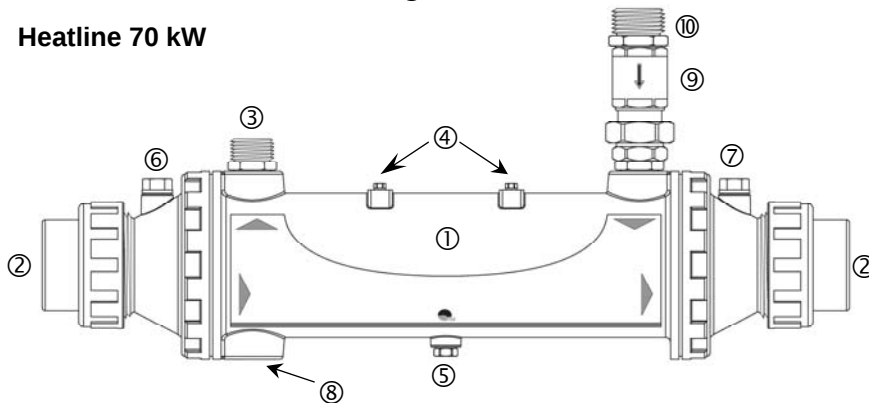
2. DESCRIPTION

2.1 Presentation

Heatline 20 end 40 kW

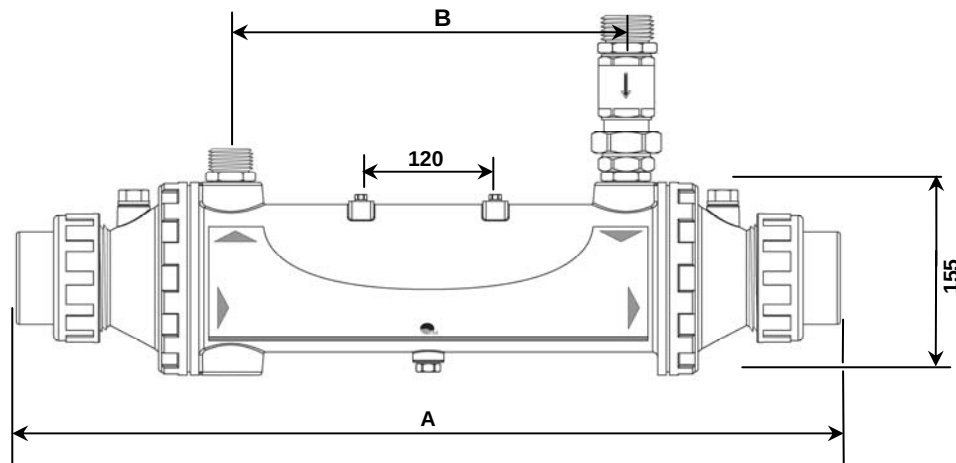


Heatline 70 kW



- ① multitubular titanium or inox heat exchanger
- ② fittings ½ union PVC Ø63 + reduction Ø50
- ③ male heating fitting Ø26/34
- ④ two bolts and four M6 inserts for fixing the body
- ⑤ drain plug for primary circuit (Ø15/21)
- ⑥ injected thimble (for introducing a regulation sensor) Ø11 inside
- ⑦ plug Ø15/21 (possible location for raising the flow controller to Ø20/27)
- ⑧ orifice blocked (with threading Ø 26/34 female) on exchanger body 70 kW: **never use a primary circuit connection!**
- ⑨ check valve (female connection Ø26/34 not part of the original assembly)
- ⑩ nipple (male/male Ø26/34, not part of the original assembly)

2.2 Dimensions



Heatline 20 and 40 KW : A = 535 mm, B = 198 mm
Heatline 70 KW : A = 665 mm, B = 328 mm

Dimensions with ± 1mm

3. INSTALLATION OF THE UNIT

The exchanger shall be placed in a technical equipment area (ventilated, dry and without stored pool maintenance substances), close to the heat source (boiler, heat pump, geothermal energy, solar heating...) and to the filter of the pool. It shall be fixed horizontally to the wall using an angle bracket (not provided).

If the heat source is far from the facility, plan to install the heat exchanger close to the heat source in order to limit the losses of calories in the primary circuit. Plan the connection at the pool by ducts buried in a trench at 50 cm depth, in Ø50 (or Ø 63 if the circuit is more than 30 metres there and back).

Notice: If the exchanger is far away from the heat source, provide the hydraulic connection with appropriate section taking account of the distance, the flow rate and the pressure drop. In any case, these connections shall be properly insulated and fitted with automatic air bleed on high points of the circuit.

4. CONNECTIONS

4.1 Hydraulic connections

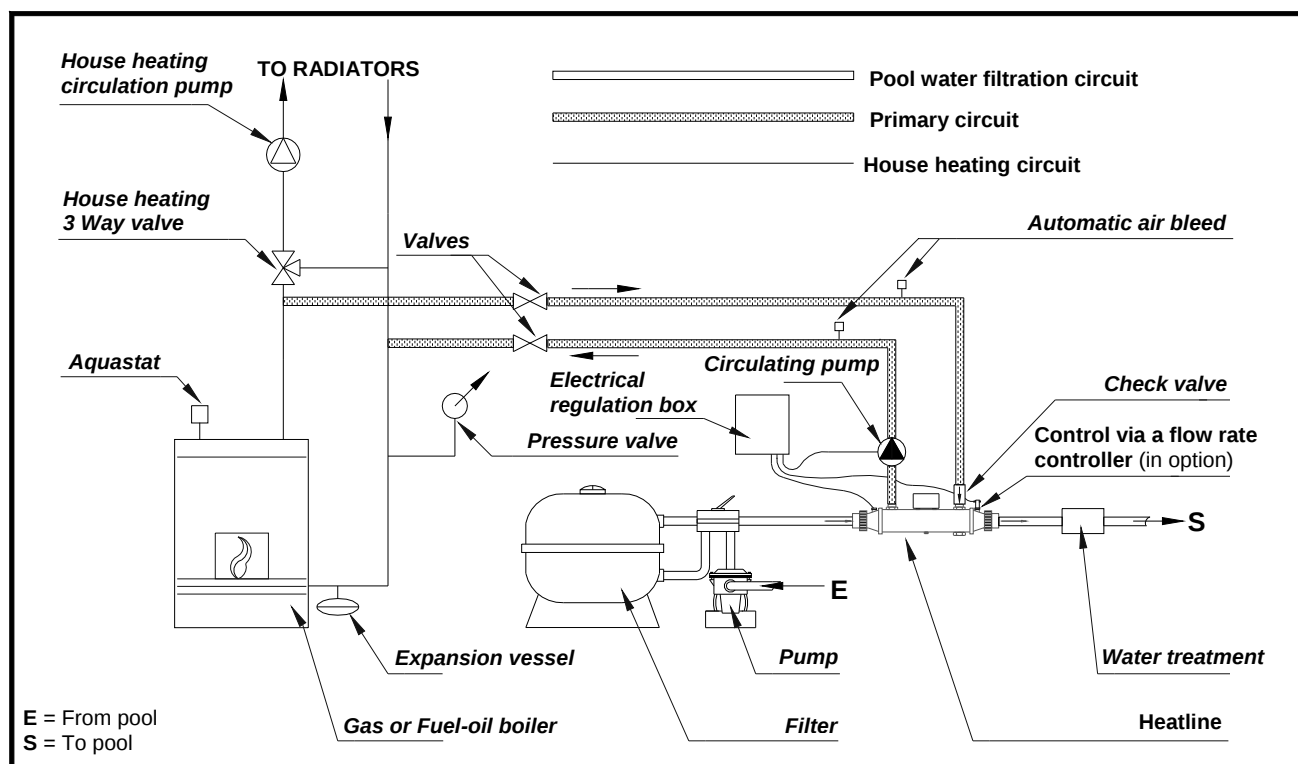
Circuit to pool: the exchanger shall be connected to the filtration circuit, with a minimum flow rate of 5m³/h up to 22m³/h. Plan for a by-pass fitting if the filter is above 22 m³/h or to facilitate the maintenance of the appliance. Water inlet on the left (factory configuration) or the right side by turning of the whole of the device's body.

Circuit to boiler: the exchanger shall be connected directly to the primary circuit of the heat source supplying constant temperature (90°C/70°C mandatory, maximum pressure 3 bars). Primary circulation will be provided by a pump and non-return valve to avoid thermosiphoning.

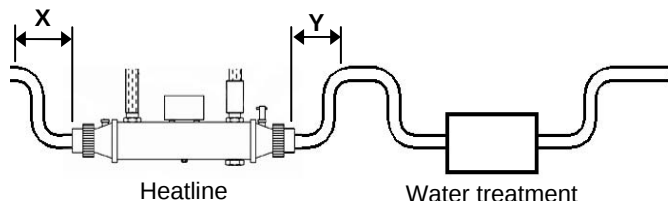
Circulation direction: circulation of both circuits shall be counter-current. Caution, pool water inlet shall always be on the side of the thermo-well.

Tested pressure of hydraulic circuit: 4 bars

Service pressure of hydraulic circuit: 2 bars



Installation advised:



X = Y: minimum 15 to 20 cm

Note 1: advised fitting to retain water permanently in the exchanger body.

Note 2: advised fitting to avoid aggressive chlorine feedback into the heater when the filtering is stopped

Caution!

Connections of primary circuit shall be realised before any valve or house heating circulation pump. Particular case of a heat source with an integral pump: provide a liquid receiver or relay logic to stop the pump and the heat source.

5. STARTING UP

Technical characteristics:

Model	Powers*		Flow rates primary circuit	Pressure drop primary circuit	Flow rates secondary circuit	Pressure drop secondary circuit	Dry weight
	90/70°C	45°C					
Heatline 20	20 kW	4 kW	0.9 m ³ /h	0.15 mWC	10 m ³ /h	0.5 mWC	3.1 Kg
Heatline 40	40 kW	8 kW	1.7 m ³ /h	0.2 mWC	15 m ³ /h	0.8 mWC	3.2 Kg
Heatline 70	70 kW	14 kW	3 m ³ /h	0.3 mWC	20 m ³ /h	1 mWC	4 Kg

* Primary circuit, secondary pool water 26°C.

5.1 Operating conditions

The temperature of the water circulating in the exchanger must be between 2°C and 40°C (maximum temperature permissible in the primary circuit: 90°C, minimum temperature in the primary circuit 45°C for good power restitution).

Before switching the device on, you need to make sure:

- the hydraulic fittings are correctly tightened,
- there is no leak,
- the appliance is correctly fixed to the wall.

5.2 Starting up

- start the filtration pump,
- Check the degassing and pool water circulation in the exchanger,
- Check the filling and degassing of the heating circuit,
- set the required temperature on the regulation module (not provided),

Note:

- the regulation module must take the input temperature of the swimming pool water into the device as a reference,
- the regulation module must give the command to irrigate the exchanger's primary circuit only if heat is demanded and filtration is operational. It is then that a transfer of energy occurs from the heat source primary circuit to the swimming pool secondary circuit, thus providing the pool with heat.

Observation: when the pool reaches the desired temperature, the regulation module (not provided) must stop irrigation of the exchanger's primary circuit. The device then no longer provides the pool with heat.

ESSENTIAL! Stop irrigation of the exchanger's primary circuit while cleaning the filter.

5.3 Checking

Make sure that the exchanger stops sending heat to the pool when:

- decreasing the required temperature on the regulation module (not provided).
- filtration is switched off.

Check that the exchanger is no longer being irrigated with water by the primary heating circuit when filtration is stopped and/or the swimming pool does not require heat. If this is the case, check the operation of the spring valve or for the presence of another pump in the installation, in which case, install an electric valve.

Important! Before any intervention, make sure the unit is switched off.

5.4 Winter storage

- switch off the general power supply to the regulation module and to the device supplying the primary to the exchanger,
- drain the pool circuit by removing both connection union fittings in order to avoid the **risk of frost**.
- drain the primary circuit (after closing the isolation valves) by removing the drain plug only if frost can be expected

Warning: only the plug seal ensures water tightness. Replace it without using hemp! Do not over tighten the plug + seal unit to ensure good water tightness and avoid damaging the thread.

The guarantee will be cancelled in event of frost of the appliance due to an improper winter storage.

5.5 Restart

- refer to the procedures described in paragraphs 5.1, 5.2 and 5.3.

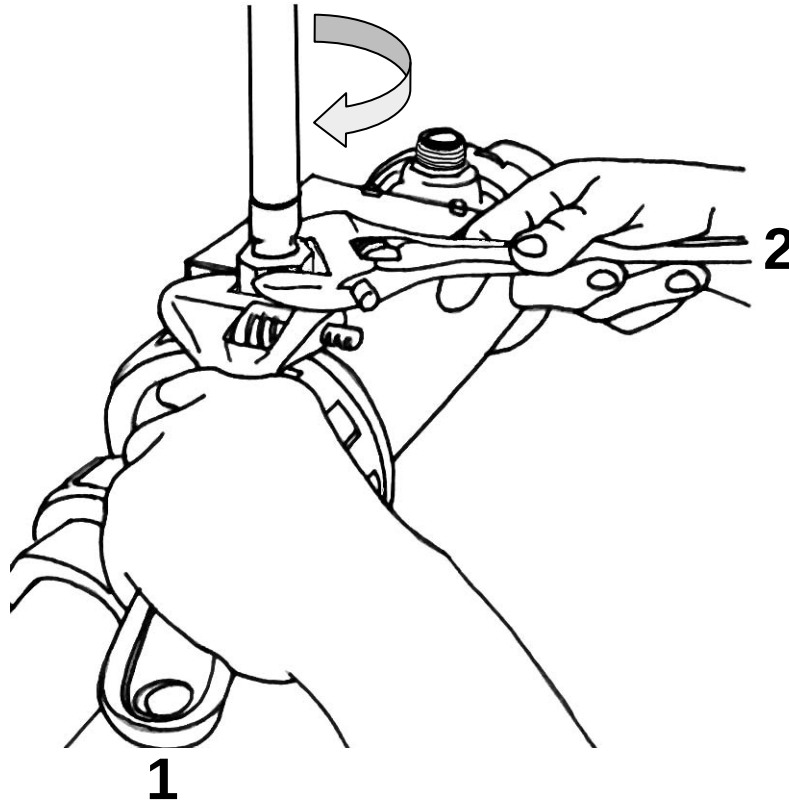
6. WARNING

ATTENTION!

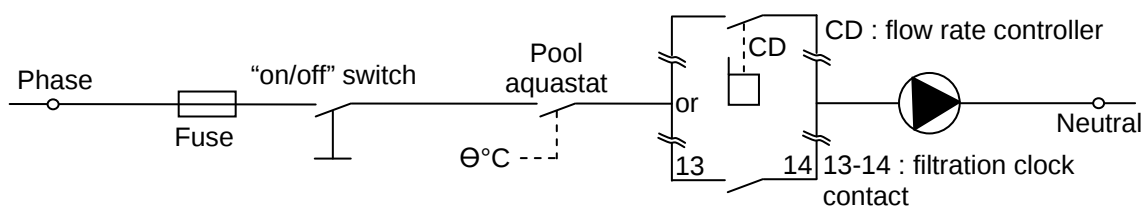
Make sure the appliance is disconnected from mains supply before any intervention. Any intervention shall be qualified and authorised personnel only.

CAUTION!

Use two keys to fasten the fittings. Key #1 shall remain steady.



7. SCHEMATIC ELECTRICAL DIAGRAM HEATLINE



IMPORTANT: disassembly of the body of the device voids the **GUARANTEE**.
This device is installed using a hydraulic press.

For ongoing improvement, our products are subject to change without notice.

- Edition 03/2009

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DECLARATION CEE DE CONFORMITE

déclare que les produits ou gammes ci-dessous :
declares that the herewith products or ranges

ECHANGEURS DE CHALEUR SPECIAL PISCINE HEAT EXCHANGERS SPECIALLY DESIGNED FOR POOLS HEAT LINE

sont conformes aux dispositions :
are in conformity with the provisions

➔ de la directive COMPATIBILITE ELECTROMAGNETIQUE 89/336/CEE
amendée par 93/068/CEE.

➔ of the ELECTROMAGNETIC COMPATIBILITY directive 89/336/EEC, as amended 93/068/EEC.

Les normes harmonisées suivantes ont été appliquées :
The harmonized standards have been applied

EN 55011
EN 55022
CEI 801-4
CEI 801-2
CEI 801-3

➔ de la directive BASSE TENSION 73/23/CEE, amendée par 93/068/CEE.
➔ of the LOW VOLTAGE directive 73/23/EEC, as amended 93/068/EEC .

Les normes harmonisées suivantes ont été appliquées :
The harmonized standards have been applied

EN 60335-1

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Zodiac, la maîtrise des éléments.

Mondialement reconnu pour la qualité et la fiabilité de ses produits dans les secteurs de l'aéronautique et du nautisme, Zodiac engage son nom dans l'univers de la piscine pour vous offrir toute une gamme de piscines, nettoyeurs automatiques, systèmes de traitement d'eau, systèmes de chauffage et de déshumidification de piscines. En s'appuyant sur le savoir-faire technologique et l'expérience de PSA, Zodiac vous apporte la garantie d'appareils de très haut niveau tant dans leur conception que dans leurs performances.

Un véritable gage d'efficacité et de tranquillité !

Zodiac, mastering the elements.

Renowned worldwide for the quality and reliability of its products in the aeronautical and marine sectors, Zodiac has now brought its expertise to swimming pools, to bring you a full range of pools, automatic pool cleaners, water treatment systems, heating and dehumidification units.

Backed by PSA technology, expertise and experience, Zodiac brings you the reassurance of top quality equipment in terms of both design and performance.

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