

**Pompes de relevage submersibles  
pour l'assèchement et l'élévation des eaux chargées  
Schmutzwasser-Tauchmotorpumpen  
Submersible Waste Water Pump  
Vuilwater-klokpompen  
Elettropompa sommergibile per acque cariche  
Motobombas sumergibles para aguas cargadas  
Moto-bomba submersível para água de esgoto  
Pumpe til spildevand**



#### **Notice de service**

Cette notice de service comporte des instructions et des avertissements importants. Elle doit être lue impérativement avant l'installation, le branchement électrique et la mise en service. Les notices de service relatives aux composants de ce groupe sont également à respecter.



#### **Betriebsanleitung**

Diese Betriebsanleitung enthält wichtige Hinweise und Warnvermerke. Bitte vor Einbau, elektrischem Anschluss und Inbetriebnahme unbedingt lesen. Weitere Betriebsanleitungen, die Komponenten dieses Aggregates betreffen, sind zusätzlich zu berücksichtigen.



#### **Operating Instructions**

These operating instructions contain fundamental information and precautionary notes. Please read the manual thoroughly prior to installation of unit, electrical connection and commissioning. It is imperative to comply with all other operating instructions referring to components of individual units.



#### **Bedrijfsvoorschrift**

Dit bedrijfsvoorschrift bevat belangrijke aanwijzingen en waarschuwingen. Wij verzoeken u dringend dit voorschrift voor het inbouwen, de elektrische aansluiting en het in bedrijf nemen te lezen. Er dient bovendien rekening te worden gehouden met de overige bedrijfsvoorschriften, welke betrekking hebben op de componenten van deze aggregaten.



#### **Istruzioni per l'esercizio**

Queste istruzioni per l'esercizio racchiudono importanti indicazioni ed avvertimenti. Preghiamo di leggerle prima del montaggio, del collegamento elettrico e della messa in marcia. Si deve inoltre tener conto delle altre istruzioni riguardanti le parti componenti del gruppo



#### **Manual de instrucciones**

El presente manual de instrucciones de servicio contiene observaciones y advertencias de máxima importancia. Léanlo con atención antes de instalar el grupo, de realizar la conexión eléctrica y antes de la puesta en servicio. Considere además los manuales de instrucción adicionales referentes a los componentes del grupo.



#### **Instruções de serviço**

Estas instruções de serviço contêm indicações e notas de advertência. Por favor é necessário ler as conexões elétricas e a colocação em funcionamento antes da montagem. Além disso deve-se levar em conta todas as demais instruções de serviços que estão correlacionadas com este grupo.



#### **Driftsvejledning**

Denne driftsvejledning indeholder vigtige henvisninger og advarselsmærkninger. Elektrisk tilslutning og idrifttagning bedes ubetinget læst før montering. Der henvises iverigt til driftsvejledninger, der omhandler dette aggregats komponenter.

**F**

Consulter les illustrations page 3 pendant la lecture du mode d'emploi. 7 - 10

**D**

Beim Lesen der Betriebsanleitung Zeichnungen auf Seite 3 beachten. 11 - 14

**GB**

Please consult the drawings on page 3 when reading the Operating Instructions. 15 - 18

**NL**

Let bij het lezen van het bedrijfsvoorschrift svp op de tekeningen op pagina 3. 19 - 22

**I**

Leggendo le istruzioni di funzionamento si prega di osservare il disegno a pagina 3. 23 - 26

**E**

Durante la lectura del manual de instrucciones, obsérvense las ilustraciones de la página 3. 27 - 30

**P**

Favor observar as figuras da página 3 durante a leitura das instruções de serviço. 31 - 34

**DK**

Ved gennemlæsningen af driftsvejledningen bedes De bemærke tegningen på side 3. 35 - 38

Pour les n° des pièces et leur désignation voir page	4/5.
Für Teile-Nr. und Teile-Benennung siehe Seiten	4/5.
For part numbers and designations please refer to pages	4/5.
Onderdeel-nummers en benaming zie pag.	4/5.
Per i numeri di posizione e la denominazione dei pezzi vedi alle pagine	4/5.
Para los números de pieza y las denominaciones véase página	4/5.
Relativamente a números de peças e suas denominações, veja página	4/5.
Met hensyn til komponent-nr. og komponent-benævneelse se side	4/5.

Déclaration »CE« de conformité	39
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Dichiarazione CE di conformità	40
Declaración CE de conformidad	40
Declaração CE de conformidade	40
EF-overensstemmelseserklæring	40

Fig. 1

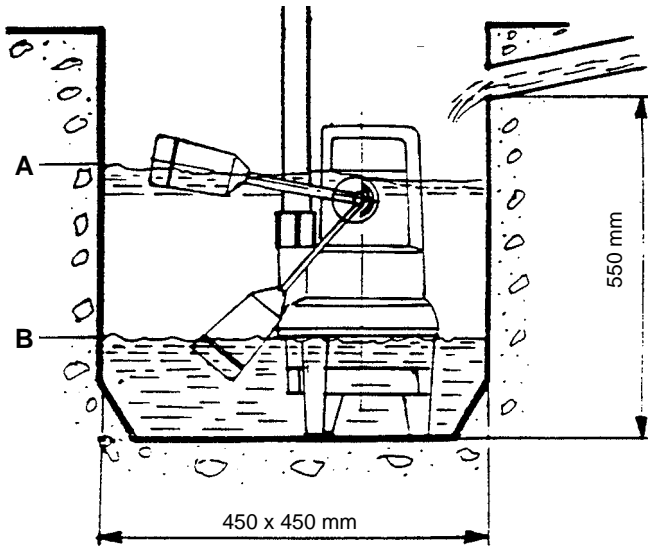
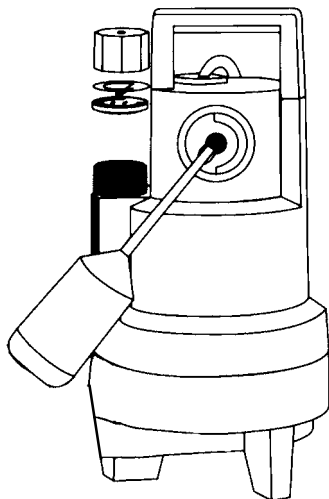


Fig. 2



F

D

GB

NL

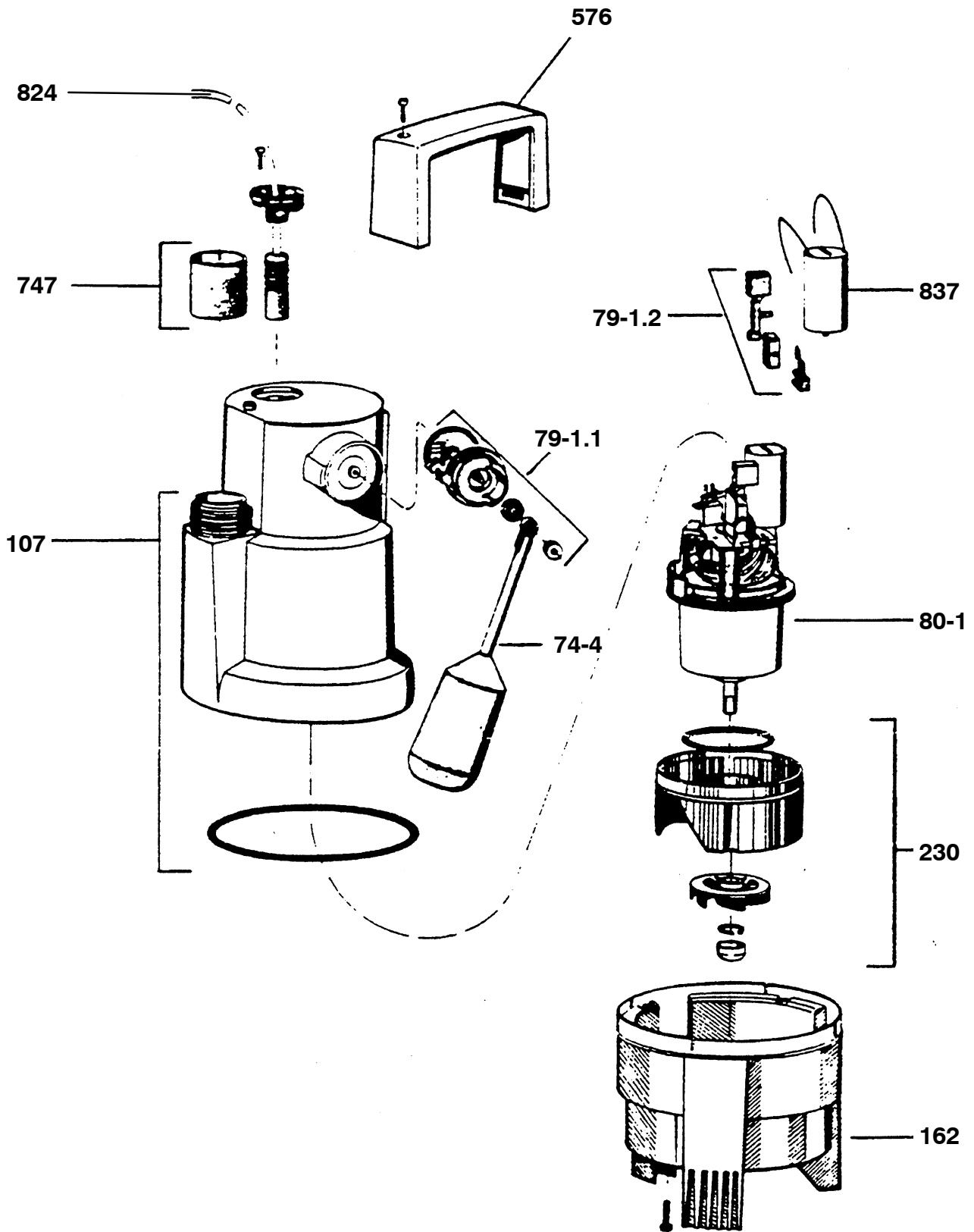
I

E

P

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Fig. 3



F  
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Repère	Désignation
107	Corps de refoulement
162	Fond d'aspiration
230	Roue
576	Poignée
74-4	Flotteur
747	Clapet de retenue + accès de nettoyage
79-1.1	Commande automatique (extérieur)
79-1.2	Commande automatique (intérieur)
80-1	Moteur semi-fini
824	Câble
837	Condensateur

Pezzo No.	Denominazione
107	Corpo premente
162	Coperchio aspirante
230	Girante
576	Impugnatura
74-4	Galleggiante
747	Valvola di ritegno e apertura di pulizia
79-1.1	Automatismo di comando (esterno)
79-1.2	Automatismo di comando (interno)
80-1	Motore
824	Cavo
837	Condensatore

**F**
**D**

Teile Nr.	Teile-Benennung
107	Druckgehäuse
162	Saugdeckel
230	Lauftrad
576	Griff
74-4	Schwimmer
747	Rückschlagklappe und Reinigungsöffnung
79-1.1	Schaltautomatik (außen)
79-1.2	Schaltautomatik (innen)
80-1	Motor
824	Kabel
837	Kondensator

Pieza no.	Denominación de la pieza
107	Carcasa de impulsión
162	Tapa de aspiración
230	Rodete
576	Asa
74-4	Flotador
747	Válvula de retención y abertura de limpieza
79-1.1	Mando automático (exterior)
79-1.2	Mando automático (interior)
80-1	Motor
824	Cable
837	Condensador

**GB**
**NL**

Part No.	Part Designation
107	Discharge casing
162	Suction cover
230	Impeller
576	Handle
74-4	Float
747	Swing check valve and cleaning hole
79-1.1	Automatic switch (internal)
79-1.2	Automatic switch (external)
80-1	Motor
824	Cable
837	Capacitor

Peça nº	Designação da peça
107	Caixa de pressão
162	Tampa de aspiração
230	Roda accionada
576	Pega
74-4	Bóia
747	Tampa de retenção e abertura para limpeza
79-1.1	Unidade automática de comando (externa)
79-1.2	Unidade automática de comando (interna)
80-1	Motor
824	Cabo
837	Condensador

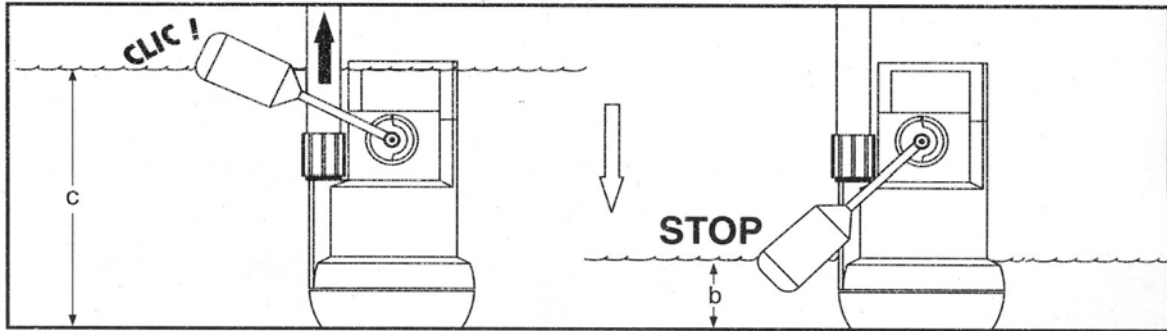
**I**
**E**

Onder-deelnr.	Onderdeel-benaming
107	Drukhuis
162	Zuigdeksel
230	Waaier
576	Handgreep
74-4	Vlotter
747	Terugslagklep en reinigungsopening
79-1.1	Schakelautomatiek (buiten)
79-1.2	Schakelautomatiek (binnen)
80-1	Motor
824	Kabel
837	Kondensator

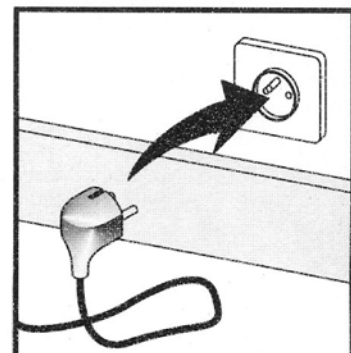
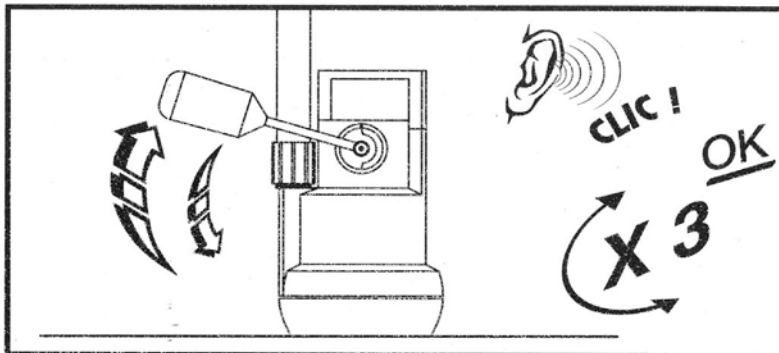
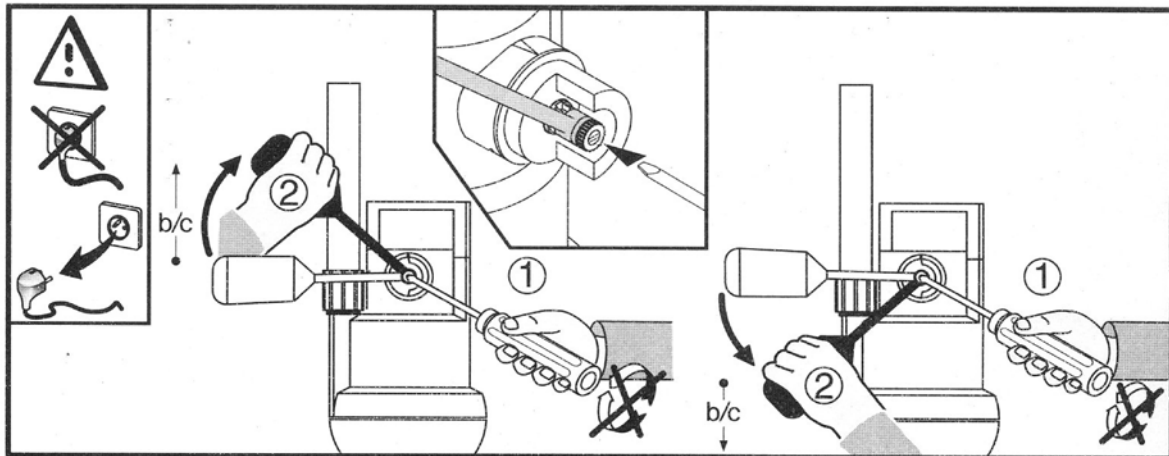
Komp.-nr.	Komponent-benævnelse
107	Trykhus
162	Sugedæksel
230	Løbehjul
576	Håndgreb
74-4	Svømmer
747	Kontraklap og renseåbning
79-1.1	Indkoblingsautomatik, udvendige dele
79-1.2	Indkoblingsautomatik, indvendige dele
80-1	Motor
824	Kabel
837	Kondensator

**P**
**DK**

**F** Fig. 4



Ama-Drainer	b mini	b maxi
Ama-Drainer 201 SE / 250 SE	~ 60 mm	~ 160 mm
Ama-Drainer 301 SE	~ 60 mm	~ 210 mm
Ama-Drainer 303 SE	~ 100 mm	~ 250 mm
Ama-Drainer 324 SE	~ 140 mm	~ 290 mm
Ama-Drainer 356 SE	~ 170 mm	~ 340 mm
Ama-Drainer 358 SE	~ 170 mm	~ 340 mm
Ama-Drainer	b mini	c maxi
Ama-Drainer 301 SE => AD Box 021 *)	~ 60 mm	~ 190 mm



\*) - Pour l'installation dans la boîte, il est nécessaire de démonter également la poignée de la pompe qui sera à conserver pour toutes réclamations (plaque signalétique).  
 - Beim Einbau in den Behälter muß auch der Pumpengriff entfernt werden. Für Reklamationsfälle muß der Griff aufbewahrt werden, da sich darauf das Fabriksschild befindet.  
 - Prior to installation in the tank, the pump handle must be removed. However, keep the handle to facilitate dealing with queries or complaints, since the handle carries the pump's nameplate.  
 - Bij inbouw in het reservoir dient tevens de handgreep te worden verwijderd. De greep dient voor garantiegevallen te worden bewaard, daar zich hierop het fabriekspaatje bevindt.  
 - Per l'installazione nel serbatoio si deve anche togliere l'impugnatura della pompa. Bisogna però conservare l'impugnatura per l'eventualità di un reclamo, perchè sopra si trova la targhetta.

## 1 General

This KSB pump has been developed in accordance with state-of-the-art standards; it is manufactured with utmost care and subject to continuous quality control.

These operating instructions are intended to facilitate familiarisation with the pump and its designated use.

The manual contains important information for reliable, proper and efficient operation. Compliance with the operating instructions is of vital importance to ensure reliability and a long service life of the pump and to avoid any risks.

These operating instructions do not take into account local regulations; the operator must ensure that such regulations are strictly observed by all, including the personnel called in for installation.

This pump must not be operated beyond the limit values specified in the technical documentation for the medium handled, capacity, speed, density, pressure, temperature and motor rating. Make sure that operation is in accordance with the instructions laid down in this manual or in the contract documentation.

The name plate indicates the type series/size, main operating data and works/serial number; please quote this information in all queries, repeat orders and particularly when ordering spare parts.

If you need any additional information or instructions exceeding the scope of this manual or in case of damage please contact KSB's nearest customer service centre.

## 2 Safety

These operating instructions contain fundamental information which must be complied with during installation, operation and maintenance. Therefore this operating manual must be read by the operator prior to installation and commissioning, and it must always be kept at the place of use of the pump for easy access.

Not only must the general safety instructions laid down in this chapter on "Safety" be complied with, but also the safety instructions outlined under specific headings.

Do not allow young children and/or frail people to use the pump unit without supervision.

Children must not play with the pump unit.

### 2.1 Marking of Instructions in the Manual

The safety instructions contained in this manual whose non-observance might cause hazards to persons are specially marked with the general hazard sign, namely



The electrical danger warning sign is



The word

#### Caution

is used to introduce safety instructions whose non-observance may lead to damage to the pump and its functions.

Instructions attached directly to the pump must always be complied with and be kept in a perfectly legible condition at all times.

### 2.2 Personnel Qualification and Training

All personnel involved in the operation, maintenance, inspection and installation of the pump must be fully qualified to carry out the work involved. The personnel's responsibilities, competence and supervision must be clearly defined by the operator. To the extent that the personnel in question is not already in possession of the requisite know-how, appropriate training and instruction must be provided. If required, the operator may commission the manufacturer/supplier to take care of such training. In addition, the operator is responsible for ensuring that the contents of the operating instructions are fully understood by the responsible personnel.

### 2.3 Non-compliance with Safety Instructions

Non-compliance with safety instructions can jeopardise the safety of personnel, the environment and the machine itself. Non-compliance with these safety instructions will also lead to forfeiture of any and all rights to claims for damages.

In particular, non-compliance can, for example, result in:

- failure of important machine/unit functions
- failure of prescribed maintenance and servicing practices
- hazard to persons by electrical, mechanical and chemical effects
- hazard to the environment due to leakage of hazardous substances.

### 2.4 Safety Awareness

It is imperative to comply with the safety instructions contained in this manual, the relevant national accident prevention regulations and the operator's own internal work, operation and safety regulations.

### 2.5 Safety Instructions for the Operator/User

- Any hot or cold components that could pose a hazard must be equipped with a guard by the operator.
- Guards which are fitted to prevent accidental contact with moving parts must not be removed whilst the machine is operating.

- Leakages (e.g. at the shaft seal) of hazardous media handled (e.g. explosive, toxic, hot) must be carried away so as to avoid any danger to persons and the environment. Pertinent legal provisions must be adhered to.
- Electrical hazards must be eliminated. (In this respect refer to the relevant safety regulations applicable to different countries and/or the local energy supply companies.)

**2.6 Safety Instructions for Maintenance, Inspection and Installation Work**

The operator is responsible for ensuring that all maintenance, inspection and installation work be performed by authorised, qualified specialist personnel who are thoroughly familiar with the manual.

Work on the machine shall be carried out only during standstill. The shutdown procedure described in the manual for taking the machine out of service must be adhered to without fail.

Pumps or pump units handling media injurious to health must be decontaminated.

Immediately following completion of the work, all safety-relevant and protective devices must be re-installed and/or re-activated.

Please observe all instructions set out in the chapter on "Commissioning" before returning the machine to service.

**2.7 Unauthorised Modification and Manufacture of Spare Parts**

Modifications or alterations of the machine are only permitted after consultation with the manufacturer. Original spare parts and accessories authorised by the manufacturer ensure safety. The use of other parts can invalidate any liability of the manufacturer for consequential damage.

**2.8 Impermissible Modes of Operation**

The warranty relating to the operating reliability and safety of the pump supplied is only valid if the machine is used in accordance with its designated use and if all operating instructions described in chapter 4 have been followed. The limits stated in the data sheet must not be exceeded under any circumstances.

**3 Transport/Interim Storage**

**3.1 Transport**

Please use the provided handle for transport.

**Caution**

**Never carry the pump by means of the float switch (for type SE only) or the power supply cable.**

Please avoid damage to the pump during transport and make sure that it cannot drop down.

**3.2 Interim Storage/Preservation**

The pump should be stored in vertical position in a dry, dark, frost-proof room not exposed to sunlight.

Under these conditions it does not need additional preservation.

**4 Description of the Product and Accessories**

**4.1 Technical Specification**

**4.1.1 Standard Variant**

Ama-Drainer 324 is a submersible motor pump for percolating or leakage water.

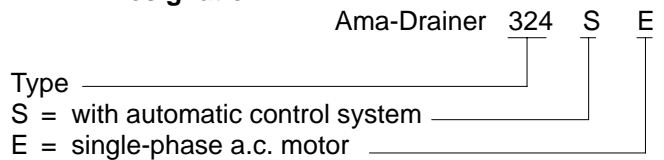
It is suitable for handling chemically neutral, slightly contaminated waste water containing solids with a grain size of up to 24 mm as well as wash water.

**Caution**

**The pump cannot cope with the following media:**

- corrosive, combustible or explosive media,
- food,
- sewage.

**4.2 Designation**



**4.3 Design**

Ama-Drainer 324 is a vertical submersible motor pump, single-stage, with level control.

The motor

- is a single-phase a.c. motor (230 V),
- is equipped with thermal motor protection with automatic reset and start-up,
- is cooled by the medium pumped,
- has an earthed power supply cable,

The pump

- is supplied with a non-return valve and a female-thread connection socket.

All wetted components are manufactured from non-corrodable materials.

The grease-lubricated bearings are sealed-for-life.

**4.4 Accessories**

Our pump is ready for instant start-up.

Any accessories you might need are available from the dealer.

**5 Assembly/Installation at Site**

**5.1 Safety Regulations**

- Your electric installation must be in accordance with the IEC 364 electric installation standards: the socket must be equipped with an earth terminal. The electric mains to which the pump is connected must be equipped with a fault current circuit breaker (max. 30 mA omnipolar separation). Please contact a qualified electrician.

**Use of the pump in a swimming pool or garden pond is not allowed.**



GB

- **Ama-Drainer 324 SE (cable length 3 m) must not be used outdoors!**
- **If you use an extension cord, please see to it that it is of the same quality as the pump cable supplied.**
- **Make sure that the electrical connections are not exposed to humidity.**
- **Caution! Switch off the pump prior to each assembly and disassembly of the pipelines or any other work on the pump.**

### 5.2 Checks to Be Carried out Prior to Installation

Check the data on the name plate to verify that the pump can be run on the mains power supply. Make sure that all safety regulations are complied with. Check whether the medium to be pumped is covered by the media specified under 4.1.1.

### 5.3 Installing the Pump/Unit

The pump must be installed on solid, firm ground. For recommended dimension please refer to 9.2 and the drawing 1 on page 3.

Make sure that the float can move freely.

If required, suspend the pump using a rope attached to the handle.

- **Caution! Do not suspend the pump by means of the power supply cable.**

### 5.4 Connecting the Piping

#### 5.4.1 Connecting the Piping Stationary Installation (cable length 3 m)

The pump is connected with threaded socket G 1 1/4. Use a pipeline with an inner diameter of 32 mm.

#### Caution

Make sure that the highest point of the discharge line is situated above the level of the local sewers to avoid backwash from the sewer.

#### 5.4.2 Connecting the Piping Mobile Version (cable length 10 m)

Connect the hose with an inner diameter of 30 mm with an adaptor G 1 1/4 (not included in the scope of supply) and fasten it with a hose clamp.

### 5.5 Connection to Power Supply

It is of vital importance to comply with the safety regulations applicable to your electric mains supply. The pump is ready for operation when it is plugged in. The pump is switched on and off automatically.

## 6 Commissioning, Start-up/Shutdown

### 6.1 Commissioning, Start-up

The pump's automatic control system will cut in when level **A** is reached and will cut out when level **B** is reached (see 9.2 and drawing 1 on page 3).

### 6.2 Operating Limits

Head	max. 8.5 m
Capacity	max. 11 m <sup>3</sup> /h
Immersion depth	max. 2 m
Voltage/frequency	max. 230 V / 50 Hz
Max. temperature, continuous	0 up to 35 °C
Grain size	24 mm ø max.
Residual water level (Type SE on manual operation)	35 mm min.
Power input	600 W max.
Type of protection	IP 68
Noise level	<70 dB(A)
Supply cable	10 m H07RNF
type SE	3 m H05RNF

**GB**

### 6.3 Shutdown/Storage/Preservation

Unplug the unit.

Only after an adequate cooling down period (min. 10 minutes) must the pump be removed from the sump/tank. Separate the pump and the discharge piping. Remove the pump.

Clean the pump under a water jet.

Position the water jet on the pump's discharge nozzle (after having removed the non-return valve).

Reassemble the socket and non-return valve following the assembly sequence in accordance with 9.3 and the drawing 2 on page 3.

Leave the pump to dry; store it in vertical position in a dry, frost-proof, dark room.

Special preservation measures are not required.

### 6.4 Returning to Service after Storage

Please refer to section 5 Assembly/Installation at Site.

## 7 Maintenance and Servicing

### 7.1 General Instructions

**Switch off the pump prior to any maintenance/servicing work. Any extension of the cable or dismantling of the motor component must be carried out by authorised trained personnel.**

### 7.2 Maintenance/Servicing

The pump operates practically maintenance-free.

It will suffice to clean the pump at regular intervals and check the condition of pump and cable.

### 7.3 Drainage

The pump will be automatically drained when it is taken out of the medium pumped.

**7.4 Dismantling**

The unit must only be dismantled by authorised, trained personnel.

**7.5 Reassembly**

The unit must only be reassembled by authorised, trained personnel.

**7.6 Spare Parts Stock**

It is not recommended to keep spare parts on stock. In the case of damage please refer to the service centre directory attached.

**8 Trouble-shooting**


**In case of working fault, take-off the plug and let the pump become colder before handling it again.**

Faults	Causes	Remedies
<ul style="list-style-type: none"> <li>- The pump is running, but does not deliver or delivers insufficient flow rate.</li> </ul>	<ul style="list-style-type: none"> <li>- The hydraulic system is clogged with foreign matter.</li> <li>- The discharge line is closed.</li> <li>- The non-return valve is fitted in the wrong direction of throughflow or clogged.</li> </ul>	<ul style="list-style-type: none"> <li>- Clean the hydraulic system with a water jet (see 6.3).</li> <li>- Open the accessories fitted on the discharge line.</li> <li>- Reassemble the valve in correct sequence according to 9.3 and drawing 2 on page 3 or clean it.</li> </ul>
<ul style="list-style-type: none"> <li>- The pump does not start up or only runs for a short time.</li> </ul>	<ul style="list-style-type: none"> <li>- The pump is switched off by the thermal motor protection because:               <ol style="list-style-type: none"> <li>1) the pump is overheated,</li> <li>2) the pump runs dry.</li> </ol> </li> <li>- The power supply is interrupted.</li> </ul>	<ul style="list-style-type: none"> <li>- Check the temperature of the medium handled.</li> <li>- Check the minimum flow of the medium handled.</li> <li>- Check the electrical connections.</li> </ul>

**9 Appendix**
**9.1 Exploded View and List of Components**

For exploded view refer to drawing 3 on page 4.  
For legend refer to page 5.

**9.5 Recycling**

Ama-Drainer 324 consists of materials that can be separately recycled.  
Plastic components are marked in accordance with ISO 11 469.

**9.2 Installation Drawing**

For installation drawing refer to drawing 1 on page 3.

**9.3 Mounting the Socket and Non-return Valve**

For mounting the socket and non-return valve refer to drawing 2 on page 3.

**9.4 Adjusting the Cut-in Level Control**  
(drawing 4, page 6)

The cut-in level of the pump is preset in the factory and can be modified as shown in drawing 4.  
follows:

- Check the pump's proper functioning. To do so, operate the float arm several times. Each time the float arm is lifted up, you must hear the contact cut in.
- Reconnect the pump to the electric mains.

**9.6 Safety Standards**

The pumps are in accordance with the following European standards:

CE - EN 12 050-2

**Déclaration »CE« de conformité / Konformitätserklärung /  
EC declaration of conformity / EG-verklaring van overeenstemming**
**F**

Par la présente, nous déclarons que le groupe moto-pompe  
*Hiermit erklären wir, dass das Pumpenaggregat*  
Herewith we declare that the pump unit  
*Hiermee verklaren wij, dat het pompaggregaat*

**D**
**Ama-Drainer 324**

correspond aux dispositions pertinentes suivantes dans la version respective en vigueur:  
*folgenden einschlägigen Bestimmungen in der jeweils gültigen Fassung entspricht:*  
complies with the following provisions as applicable to its appropriate current version:  
*voldoet aan de huidige versie van de volgende bepalingen:*

**GB**

Directive relative aux machines 98/37/CE, Annexe II A,  
directive relative à la compatibilité électromagnétique 89/336/CEE, Annexe I et  
la directive relative à la basse tension 73/23/CEE, Annexe III B

*Richtlinie 98/37/EWG "Maschinen", Anhang II A,  
Richtlinie 89/336/EWG "Elektromagnetische Verträglichkeit", Anhang I  
und der Richtlinie 73/23/EWG "Niederspannungsrichtlinie", Anhang III B*

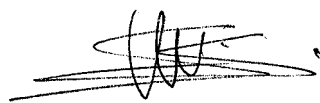
**NL**

As defined by machinery directive 98/37/EEC, Annex II A,  
electromagnetic compatibility directive 89/336/EEC, Annex I  
and the EC directive on low-voltage equipment 73/23/EEC, Annex III B

*Inzake de machine-richtlijn 98/37/EEG, Bijlage II A,  
de richtlijn 89/336/EEG i.v.m. elektromagnetische compatibiliteit, Bijlage I  
en de laagspanningsrichtlijn 73/23/EEG, Bijlage III B*

Normes harmonisées utilisées, notamment  
*Angewendete harmonisierte Normen, insbesondere*  
Applied harmonized standards, in particular  
*Gebruikte geharmoniseerde normen, in het bijzonder*

**EN 292/1, EN 292/2, EN 60 335 - 1, EN 60 335 - 2 - 41, EN 61 000 - 6 - 1, EN 61 000 - 6 - 3**



Martial Smis 1.10.2002  
Le Responsable Développement Pompes de petite Puissance

KSB S.A.S., 128, rue Carnot, 59320 Sequedin/Lille (France)

**Dichiarazione CE di conformità / Declaración de Conformidad /  
Declaração CE de conformidade / EU-overensstemmelseserklæring**

Si dichiara che il modello del gruppo di pompaggio  
*Por la presente declaramos que el grupo*  
 Com a presente, declaramos que o grupo moto-bomba  
*Hermed erklæres, at pumpetype*

## Ama-Drainer 324

è conforme alle seguenti disposizioni pertinenti nella versione valida al momento:  
*es conforme a las disposiciones actualmente vigentes de la:*  
 está em conformidade com as disposições pertinentes, a saber na sua versão corrente:  
*er i overensstemmelse med følgende bestemmelser til en hver tid gyldig udgave:*

Ai sensi della direttiva CE 98/37/CEE relativa a macchinari, Appendice II A,  
 direttiva CE 89/336/CEE relativa a compatibilità elettromagnetica, Appendice I  
 e la Direttiva 73/23/CEE relativa a bassa tensione, Appendice III B

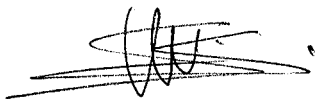
*Para los efectos de las directrices de la CE 98/37/CEE "Maquinaria", anexo II A,  
 89/336/CEE "Compatibilidad electromagnética", anexo I  
 y 73/23/CEE "Directriz de bajo voltaje", anexo III B*

Segundo directiva CE máquinas 98/37/CEE, Anexo II A,  
 directiva CE compatibilidade electromagnética 89/336/CEE, Anexo I  
 e la directiva sobre equipamento de baixa voltagem 73/23/CEE, Anexo III B

*I henhold til EU-lovgivning om maskiner 98/37/EØF, Bilag II A,  
 elektromagnetisk kompatibilitet 89/336/EØF, Bilag I  
 og EU-lovgivningen om elektrisk materiel for visse spændingsgrænser 73/23/EØF, Bilag III B*

Norme armonizzate applicate, in particolare  
*Normas concordantes aplicadas; en especial*  
 Normas harmonizadas utilizadas, em particula  
*De harmoniserde standarder, der er blevet anvendt, er i særdeleshed*

**E** EN 292/1, EN 292/2, EN 60 335 - 1, EN 60 335 - 2 - 41, EN 61 000 - 6 - 1, EN 61 000 - 6 - 3



**P** Martial Smis 1.10.2002  
 Le Responsable Développement Pompes de petite Puissance  
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**DK**

