
Unilift KP 150, KP 250, KP 350

Installation and operating instructions

GB D F I E P GR NL S FIN DK
PL RU H SI HR SER RO BG CZ SK TR
EE LT LV UA



(GB) Declaration of Conformity

We **Grundfos** declare under our sole responsibility that the products **Unilift KP 150, KP 250 and KP 350**, to which this declaration relates, are in conformity with the Council directives on the approximation of the laws of the EC member states relating to

- Machinery (98/37/EC).
 - Electromagnetic compatibility (2004/108/EC).
 - Electrical equipment designed for use within certain voltage limits (2006/95/EC).
- Standards used: EN 60335-1: 2002 and EN 60335-2-41: 2003.
- Construction products (89/106/EEC).
- Standard used: EN 12050-2.

(F) Déclaration de Conformité

Nous **Grundfos** déclarons sous notre seule responsabilité que les produits **Unilift KP 150, KP 250 et KP 350** auxquels se réfère cette déclaration sont conformes aux Directives du Conseil concernant le rapprochement des législations des Etats membres CE relatives à

- Machines (98/37/CE).
 - Compatibilité électromagnétique (2004/108/CE).
 - Matériel électrique destiné à employer dans certaines limites de tension (2006/95/CE).
- Standards utilisés: EN 60335-1: 2002 et EN 60335-2-41: 2003.
- Produits de construction (89/106/CEE).
- Standard utilisé: EN 12050-2.

(E) Declaración de Conformidad

Nosotros **Grundfos** declaramos bajo nuestra única responsabilidad que los productos **ProductName1** y **ProductName2** a los cuales se refiere esta declaración son conformes con las Directivas del Consejo relativas a la aproximación de las legislaciones de los Estados Miembros de la CE sobre

- Máquinas (98/37/CE).
 - Compatibilidad electromagnética (2004/108/CE).
 - Material eléctrico destinado a utilizarse con determinadas límites de tensión (2006/95/CE).
- Normas aplicadas: EN 60335-1: 2002 y EN 60335-2-41: 2003.
- Productos de construcción (89/106/CEE).
- Norma aplicada: EN 12050-2

(GR) Δήλωση Συμμόρφωσης

Εμείς η **Grundfos** δηλώνουμε με αποκλειστικά δική μας ευθύνη ότι τα προϊόντα **ProductName1** και **ProductName2** συμμορφώνονται με την Οδηγία του Συμβουλίου επί της σύγκλισης των νόμων των Κρατών Μελών της Ευρωπαϊκής Ένωσης σε σχέση με τα

- Μηχανήματα (98/37/EC).
 - Ηλεκτρομαγνητική συμβατότητα (2004/108/EC).
 - Ηλεκτρικές συσκευές σχεδιασμένες για χρήση εντός ορισμένου ηλεκτρικής τάσης (2006/95/EC).
- Πρότυπα που χρησιμοποιήθηκαν:
EN 60335-1: 2002 και
EN 60335-2-41: 2003.
- Προϊόντα κατασκευών (89/106/EEC).
- Πρότυπο που χρησιμοποιήθηκε: EN 12050-2.

(S) Försäkran om överensstämmelse

Vi **Grundfos** försäkrar under ansvar, att produkterna **Unilift KP 150, KP 250 och KP 350**, som omfattas av denna försäkran, är i överensstämmelse med Rådets Direktiv om inbördes närmande till EU-medlemsstaternas lagstiftning, avseende

- Maskinell utrustning (98/37/EC).
 - Elektromagnetisk kompatibilitet (2004/108/EC).
 - Elektrisk material avsedd för användning inom vissa spänningsgränser (2006/95/EC).
- Använda standarder: EN 60335-1: 2002 och EN 60335-2-41: 2003.
- Produkter för bygg och anläggning (89/106/EEC).
- Använd standard: EN 12050-2.

(DK) Overensstemmelseserklæring

Vi **Grundfos** erklærer under ansvar, at produkterne **Unilift KP 150, KP 250 og KP 350**, som denne erklæring omhandler, er i overensstemmelse med Rådets direktiver om indbyrdes tilnærmelse til EF medlemsstaternes lovgivning om

- Maskiner (98/37/EF).
 - Elektromagnetisk kompatibilitet (2004/108/EF).
 - Elektrisk materiel bestemt til anvendelse inden for visse spændingsgrænser (2006/95/EF).
- Anvendte standarder: EN 60335-1: 2002 og EN 60335-2-41: 2003.
- Byggevarer (89/106/EØF).
- Anvendt standard: EN 12050-2.

(D) Konformitätserklärung

Wir **Grundfos** erklären in alleiniger Verantwortung, dass die Produkte **Unilift KP 150, KP 250 und KP 350**, auf die sich diese Erklärung bezieht, mit den folgenden Richtlinien des Rates zur Angleichung der Rechtsvorschriften der EG-Mitgliedstaaten übereinstimmen

- Maschinen (98/37/EG).
 - Elektromagnetische Verträglichkeit (2004/108/EG).
 - Elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen (2006/95/EG).
- Normen, die verwendet wurden: EN 60335-1: 2002 und EN 60335-2-41: 2003.
- Bauprodukte (89/106/EWG).
- Norm, die verwendet wurde: EN 12050-2.

(I) Dichiarazione di Conformità

Noi **Grundfos** dichiariamo sotto la nostra esclusiva responsabilità che i prodotti **Unilift KP 150, KP 250 e KP 350** ai quali questa dichiarazione si riferisce sono conformi alle Direttive del Consiglio concernente il ravvicinamento delle legislazioni degli Stati membri CE relative a

- Macchine (98/37/CE).
 - Compatibilità elettromagnetica (2004/108/CE).
 - Materiale elettrico destinato ad essere utilizzato entro certi limiti di tensione (2006/95/CE).
- Standard usati: EN 60335-1: 2002 e EN 60335-2-41: 2003.
- Prodotti da costruzione (89/106/CEE).
- Standard usato: EN 12050-2.

(P) Declaração de Conformidade

Nós **Grundfos** declaramos sob nossa única responsabilidade que os produtos **Unilift KP 150, KP 250 e KP 350** aos quais se refere esta declaração estão em conformidade com as Directivas do Conselho das Comunidades Europeias relativas à aproximação das legislações dos Estados Membros respeitantes à

- Máquinas (98/37/CE).
 - Compatibilidade electromagnética (2004/108/CE).
 - Material eléctrico destinado a ser utilizado dentro de certos limites de tensão 2006/95/CE).
- Normas utilizadas: EN 60335-1: 2002 e EN 60335-2-41: 2003.
- Produtos de construção (89/106/CEE).
- Norma utilizada: EN 12050-2.

(NL) Overeenkomstigheidsverklaring

Wij **Grundfos** verklaren geheel onder eigen verantwoordelijkheid dat de producten **Unilift KP 150, KP 250 en KP 350** waarop deze verklaring betrekking heeft in overeenstemming zijn met de Richtlijnen van de Raad inzake de onderlinge aanpassing van de wetgeving in de Lid-Staten betreffende

- Machines (98/37/EG).
 - Elektromagnetische compatibiliteit (2004/108/EG).
 - Elektrisch materiaal bestemd voor gebruik binnen bepaalde spanningsgrenzen (2006/95/EG).
- Normen: EN 60335-1: 2002 en EN 60335-2-41: 2003.
- Bouwproducten (89/106/EEG).
- Norm: EN 12050-2.

(FIN) Vastaavuusvakuutus

Me **Grundfos** vakuutamme yksin vastuullisesti, että tuotteet **Unilift KP 150, KP 250 ja KP 350**, jota tämä vakuutus koskee, noudattavat direktiivie ja jotka katsoivat EY:n jäsenvaltioiden koneellisia laitteita koskevien lakien yhdenmukaistusta seur:

- Koneet (98/37/EY).
 - Elektromagneettinen vastaavuus (2004/108/EY).
 - Määrättyjen jänniterajojen puitteissa käytettävät sähköiset laitteet (2006/95/EY).
- Käytetyt standardit: EN 60335-1: 2002 ja EN 60335-2-41: 2003.
- Rakennustuotteet (89/106/EY).
- Käytetty standardi: EN 12050-2.

(PL) Deklaracja zgodności

My, **Grundfos**, oświadczamy z pełną odpowiedzialnością, że nasze wyroby **Unilift KP 150, KP 250 i KP 350**, których deklaracja niniejsza dotyczy, są zgodne z następującymi wytycznymi Rady d/s ujednoczenia przepisów prawnych krajów członkowskich EG:

- maszyny (98/37/EG).
 - zgodność elektromagnetyczna (2004/108/EG).
 - wyposażenie elektryczne do stosowania w określonym zakresie napięć (2006/95/EG).
- zastosowane normy: EN 60335-1: 2002 i EN 60335-2-41: 2003.
- Budowa wyrobu (89/106/EWG)
- Zastosowana norma: EN 12050-2.

(RU) Свидетельство о соответствии требованиям

Мы, фирма **Grundfos**, со всей ответственностью заявляем, что изделия **Unilift KP 150, KP 250 и KP 350**, к которым и относится данное свидетельство, отвечают требованиям следующих указаний Совета ЕС об унификации законодательных предписаний стран-членов ЕС:

- Машиностроение (98/37/EC).
- Электромагнитная совместимость (2004/108/EC).
- Электрические машины для эксплуатации в пределах определенного диапазона значений напряжения (2006/95/EC).
- Применявшиеся стандарты: Евростандарт EN 60335-1: 2002 и EN 60335-2-41: 2003.
- Строительные изделия (89/106/EEC).
- Применявшиеся стандарты: Евростандарт EN 12050-2.

(SI) Izjava o ustreznosti

Ми, **Grundfos**, pod polno odgovornostjo izjavljamo, da so izdelki **Unilift KP 150, KP 250 in KP 350**, na katere se ta izjava nanaša, v skladu z naslednjimi smernicami Sveta za uskladitev pravnih predpisov držav članic Evropske skupnosti:

- Stroji (98/37/EG).
- Elektromagnetna kompatibilnost (2004/108/EG).
- Električna pogonska sredstva za uporabo v določenih napetostnih mejah (2006/95/EG).
- Uporabljeni normi: EN 60335-1: 2002 in EN 60335-2-41: 2003.
- Izdelek gradnje (89/106/EEC).
- Uporabljeni standard: EN 12050-2.

(SER) Izjava o konformitetu

Ми, **Grundfos**, izjavljujemo pod potpunom odgovornošću da su proizvodi **Unilift KP 150, KP 250 i KP 350** na koje se odnosi ova izjava u saglasnosti sa smernicama i uputstvima Saveta za usaglašavanje pravnih propisa članica Evropske unije:

- Mašine (98/37/EG).
- Elektromagnetna usaglašenost (2004/108/EG).
- Električna oprema razvijena za korišćenje unutar određenih naponskih granica (2006/95/EG).
- Korišćeni standardi: EN 60335-1: 2002 i EN 60335-2-41: 2003.
- Konstruktivni proizvodi (89/106/EWG)
- Korišćen standard: EN 12050-2.

(BG) Декларация за съответствие

Ние, фирма **Grundfos** заявяваме с пълна отговорност, че продуктите **Unilift KP 150, KP 250 и KP 350**, за които се отнася настоящата декларация, отговарят на следните указания на Съвета за уеднаквяване на правните разпоредби на държавите членки на ЕС:

- Машини (98/37/EO).
- Электромагнитна поносимост (2004/108/EO).
- Електрически машини и съоръжения за употреба в рамките на определени граници на напрежение на електрическия ток (2006/95/EO).
- Приложени норми: EN 60335-1: 2002 и EN 60335-2-41: 2003.
- Конструктивни продукти (89/106/EIO)
- Приложени норми: EN 12050-2.

(SK) Prehlásenie o konformite

My firma **Grundfos**, na svoju plnú zodpovednosť prehlasujeme, že výrobky **Unilift KP 150, KP 250 a KP 350**, na ktoré sa toto prehlásenie vzťahuje, sú v súlade s nasledovnými smernicami Rady pro zblíženie právnych predpisov členských zemí Európskej únie:

- Stroje (98/37/EG).
- Elektromagnetická kompatibilita (2004/108/EG).
- Elektrické prevádzkové prostriedky, použité v určitom napätovom rozsahu (2006/95/EG).
- Použitá norma: EN 60335-1: 2002 a EN 60335-2-41: 2003.
- Konštrukčné výrobky (89/106/EWG)
- Použitá norma: EN 12050-2.

(H) Konformitási nyilatkozat

Mi, a **Grundfos**, egyedüli felelősséggel kijelentjük, hogy az **Unilift KP 150, KP 250 és KP 350** termékek, amelyekre jelen nyilatkozat vonatkozik, megfelelnek az Európai Unió tagállamainak jogi irányelveit összehangoló tanács alábbi irányelveinek:

- Gépek (98/37/EK).
- Elektromágneses összeférhetőség (2004/108/EK).
- Meghatározott feszültség határon belül használt elektromos eszközök (2006/95/EK).
- Alkalmazott szabványok: EN 60335-1: 2002 és EN 60335-2-41: 2003.
- Összeépített berendezések (89/106/EGK)
- Alkalmazott szabvány: EN 12050-2.

(HR) Izjava o uskladenosti

Ми, **Grundfos**, izjavljujemo uz punu odgovornost, da su proizvodi **Unilift KP 150, KP 250 i KP 350**, na koje se ova izjava odnosi, sukladni smjernicama Savjeta za prilagodbu propisa država-članica EZ:

- Strojevi (98/37/EZ).
- Elektromagnetska kompatibilnost (2004/108/EZ).
- Električni pogonski uređaji za korištenje unutar određenih granica napona (2006/95/EZ).
- Korištene norme: EN 60335-1: 2002 i EN 60335-2-41: 2003.
- Građevni proizvodi (89/106/EEZ).
- Korištena norma: EN 12050-2.

(RO) Declarație de conformitate

Noi, **Grundfos**, declarăm asumându-ne întreaga responsabilitate că produsele **ProductName1, ProductName2** la care se referă această declarație sunt în conformitate cu Directivele Consiliului în ceea ce privește alinierea legislațiilor Statelor Membre ale CE, referitoare la:

- Utilaje (98/37/CE).
- Compatibilitate electromagnetică (2004/108/CE).
- Echipamente electrice destinate utilizării între limite exacte de tensiune (2006/95/CE).
- Standarde aplicate: EN 60335-1: 2002 și EN 60335-2-41: 2003.
- Construcția produselor (89/106/CEE).
- Standard folosit: EN 12050-2.

(CZ) Prohlášení o konformitě

My firma **Grundfos** prohlašujeme na svou plnou odpovědnost, že výrobky **Unilift KP 150, KP 250 a KP 350** na něž se toto prohlášení vztahuje, jsou v souladu s ustanoveními směrnice Rady pro sblížení právních předpisů členských států Evropského společenství v oblastech:

- Strojrenství (98/37/EG).
- Elektromagnetická kompatibilita (2004/108/EG).
- Provozování spotřebičů v toleranci napětí (2006/95/EG).
- použitá norma: EN 60335-1: 2002 a EN 60335-2-41: 2003.
- Konstrukční výrobky (89/106/EWG)
- Použitá norma: EN 12050-2.

(TR) Uygunluk Bildirgesi

Biz **Grundfos** olarak, bu beyanda belirtilen **Unilift KP 150, KP 250 ve KP 350** ürünlerimin,

- Makina (98/37/EC).
- Elektromanyetik uyumluluk (2004/108/EC).
- Belli voltaj sınırlarında kullanılmak üzere üretilmiş elektrik donanımları (2006/95/EC).
- Kullanılan standartlar: EN 60335-1: 2002 ve EN 60335-2-41: 2003.
- Yapı ürünleri (89/106/EEC)
- Kullanılan standart: EN 12050-2.

ile ilgili olarak Avrupa topluluğu'na Üye Devletlerin yasalarında yer alan Belediye Yönetmeliklerine uygun olduğumu, tüm sorumluluğu bize ait olmak üzere beyan ederiz.

EE Vastavuse deklaratsioon

Meie, **Grundfos**, deklareerime enda ainuvastutusel, et toode **ProductName1** ja **ProductName2**, mille kohta käesolev juhend käib, on vastavuses EL nõukogu Direktiividega EMÜ liikmesriikide seaduste ühitamise kohta, mis käsitlevad:

- Masinad (98/37/EC).
- Elektromagnetilist ühilduvust (2004/108/EC).
- Madalapinge-elektriseadmed (2006/95/EC).
- Kasutatud standardid: EN 60335-1: 2002 ja EN 60335-2-41: 2003.
- Ehituslikud tooted (89/106/EEC).
- Kasutatud standardit: EN 12050-2.

LT Atitikties deklaracija

Mes, **Grundfos**, su visa atsakomybe pareiskiami, kad gaminiai **Unilift KP 150, KP 250** ir **KP 350**, kuriems skirta ši deklaracija, atitinka Tarybos Direktivąs dėl Europos Ekonominės Bendrijos šalių narių įstatymų suderinimo šiose srityse:

- Mašinos (98/37/EC).
- Elektromagnetinis suderinamumas (2004/108/EC).
- Elektriniai prietaisai, skirti naudoti tam tikrose įtampų ribose (2006/95/EC).
- Naudojami standartai: EN 60335-1: 2002 ir EN 60335-2-41: 2003.
- Statybinės medžiagos (89/106/EEC).
- Naudojamas standartas: EN 12050-2.

LV Paziņojums par atbilstību prasībām

Sabiedrība **Grundfos** ar pilnu atbildību dara zināmu, ka izstrādājumi **Unilift KP 150, KP 250** un **KP 350**, uz kuriem attiecas šis paziņojums, atbilst šādām Padomes direktīvām par tuvināšanos EK dalībvalstu likumdošanas normām:

- Mašīnubūvniecība (98/37/EK).
- Elektromagnētiskā savienojamība (2004/108/EK).
- Elektriskais aprīkojums, kas paredzēts lietošanai zināmu sprieguma robežpārītību ietvaros (2006/95/EK).
- Piemērotie standarti: EN 60335-1: 2002 un EN 60335-2-41: 2003.
- Celtniecības izstrādājumi (89/106/EEK)
- Piemērotais standarts: EN 12050-2.

UA Свідчення про відповідність вимогам

Ми, фірма **Grundfos**, із усією відповідальністю заявляємо, що вироби **Unilift KP 150, KP 250** і **KP 350** до яких і відноситься дане свідчення відповідають вимогам наступних указівок Ради СЕС про уніфікацію законодавчих розпоряджень країн-членів СЕС:

- Машинобудування (98/37/ЕС).
- Електромагнітна сумісність (2004/108/ЕС).
- Електричні машини для експлуатації в межах визначеного діапазону значень напруги (2006/95/ЕС).
- Стандарти, що застосовувалися: Євростандарт EN 60335-1: 2002 і EN 60335-2-41: 2003.
- Будівельні вироби (89/106/ЕЕС)
- Стандарти, що застосовувалися: Євростандарт EN 12050-2.

Bjerringbro, 1st September 2008



Svend Aage Kaas
Technical Director

Unilift KP 150, KP 250, KP 350

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GB

2. Unilift KP pumps

Grundfos Unilift KP pump series is available in these versions:

- **Unilift KP-S** with integrated, electronic sensor (automatic operation)
- **Unilift KP-A** with float switch (automatic operation)
- **Unilift KP-M** without level switch (manual operation).

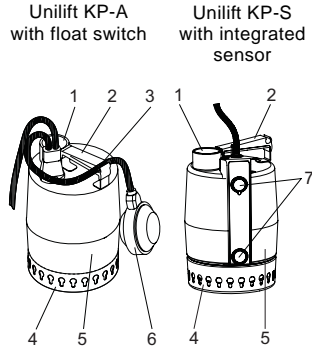




Fig. 1 Pumps with level switch

Warning

Prior to installation, read these installation and operating instructions. Installation and operation must comply with local regulations and accepted codes of good practice.

1. Symbols used in this document

Warning

If these safety instructions are not observed, it may result in personal injury!

Caution
If these safety instructions are not observed, it may result in malfunction or damage to the equipment!

Note
Notes or instructions that make the job easier and ensure safe operation.

Pos.	Description
1	Discharge port, Rp 1 ¼
2	Handle
3	Cable clamp
4	Suction strainer
5	Pump sleeve
6	Float switch
7	Integrated, electronic sensor

TM03 4450 2508

3. Application

Unilift KP 150, KP 250 and KP 350 are single-stage submersible pumps designed for the pumping of grey wastewater.

The Unilift KP pump can pump water with a limited content of solid particles up to 10 mm diameter without being clogged or damaged.

The pump can be used for automatic as well as manual operation and is suitable for both permanent and temporary use.

The pump is designed for the following applications:

- pumping in drain pits
- pumping of wastewater from washing machines, baths, sinks, etc. from low-lying parts of buildings up to sewer level
- drainage of flooded cellars or buildings
- pumping in surface water drain pits with inlets from roof gutters, pits, tunnels, etc.
- emptying of swimming pools, ponds or fountains.



Do not use the pump in or at swimming pools, garden ponds, etc. when there are persons in the water.

3.1 Pumped liquids

The pump is **not** suitable for these liquids:

- liquids containing long fibres
- inflammable liquids (oil, petrol, etc.)
- aggressive liquids.

Unilift KP-S: When using the pump in a liquid with a high content of salt, please be aware whether deposits are formed on the sensing elements.

The pump contains approx. 70 ml of non-toxic rotor liquid which will be mixed with the pumped liquid in case of a leak.

Note

4. Functions

Unilift KP-S

Automatic on/off operation via an integrated, electronic sensor.

Unilift KP-A

Automatic on/off operation via a float switch.

Unilift KP-M

Manual operation via external on/off switch.

5. Operating conditions

Liquid temperature

Min. 0 °C.

Maximum liquid temperature depends on the rated voltage of the pump. See this table:

Voltage	Max. liquid temperature [°C]
1 x 100 V, 50 Hz	+35
1 x 110 V, 50 Hz	+40
1 x 100-110 V, 50 Hz ¹⁾	+40
1 x 220-230 V, 50 Hz ²⁾	+50
1 x 220-240 V, 50 Hz, 50 Hz ¹⁾²⁾	+50
1 x 230-240 V, 50 Hz ²⁾	+50
1 x 100 V, 60 Hz	+35
1 x 115 V, 60 Hz	+50 (KP 350: +45)
1 x 220 V, 60 Hz	+40
3 x 200 V, 50 Hz	+35
3 x 380-400 V, 50 Hz ¹⁾	+50
3 x 380-415 V, 50 Hz	+50
3 x 200 V, 60 Hz	+35

At intervals of at least 30 minutes, the pump is allowed, however, to run at max. +70 °C for periods not exceeding 2 minutes.

¹⁾ Voltage variant for Unilift KP 350

²⁾ Unilift KP-S is only available in these variants

Storage temperature

-20 °C to +70 °C.

Installation depth

Max. 10 m below liquid level.

5.1 Sound pressure level

The sound pressure level of the pump is lower than the limiting values stated in the EC Council Directive 98/37/EC relating to machinery.

6. Installation

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Caution

Do not install the pump hanging from the electric cable or the discharge pipe.

Do not lower or lift the pump by means of the electric cable. Lift the pump using the pipe/hose or a rope secured to the pump handle.

6.1 Space requirement

6.1.1 Unilift KP-S

The pump requires only 5 mm between the sensor and the wall.

If the pump is installed in a pit, the pit diameter must be at least 200 mm to avoid too many starts and stops. We recommend these dimensions:

Pit diameter [mm]	200	250	300
Max. inlet flow to pit [m ³ /h]	0,2	0,4	0,8

6.1.2 Unilift KP-A

If the pump is installed in a pit, the minimum dimensions of the pit should be as shown in fig. 2 to ensure free movability of the float switch.

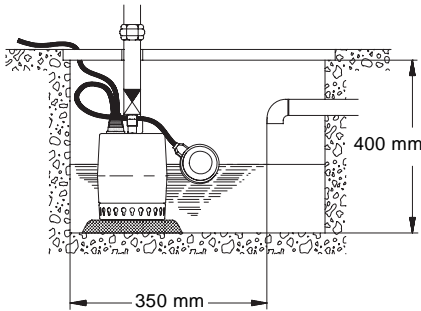


Fig. 2 Min. pit dimensions for Unilift KP-A

6.1.3 Unilift KP-M

The pump requires no more space than the physical dimensions of the pump. See page 261.

6.2 How to place the pump

Unilift KP-A and Unilift KP-M can be used in vertical position with the discharge port pointing upwards. The pumps may also be used in horizontal or tilted position with the discharge port as the highest point. See fig. 3.

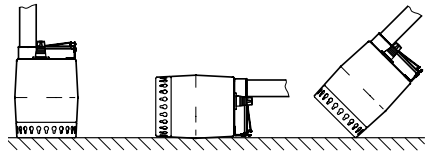


Fig. 3 How to place Unilift KP-A and Unilift KP-M

Caution

Place Unilift KP-S in vertical position. See fig. 4.

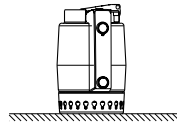


Fig. 4 How to place Unilift KP-S

Place the pump so that the suction strainer is not covered in sludge, mud or similar materials. This can be ensured by placing the pump on bricks, an iron plate, or similar. See fig. 5.

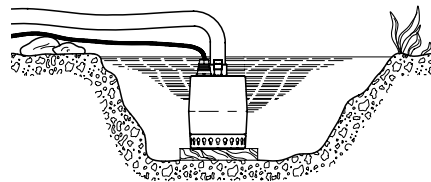


Fig. 5 Pump placed on a plate

6.3 Connection of discharge pipe

Fit the discharge pipe or hose in the Rp 1 1/4 discharge port. Steel pipes can be screwed directly into the pump discharge port.

In case of a permanent installation, fit a union to the discharge pipe to facilitate mounting and removal. If a hose is used, fit a hose union.

Caution

The pump must not be installed hanging from the discharge pipe.

In a permanent installation **with** float switch/integrated sensor, fit a non-return valve to the discharge pipe or hose.

6.4 Start/stop level

6.4.1 Unilift KP-S

The level difference cannot be adjusted as the sensor is an integrated part of the pump.

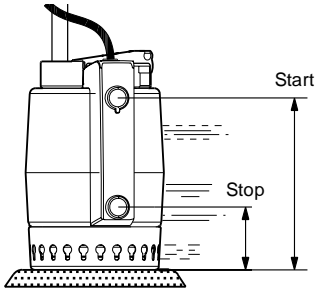


Fig. 6 Start/stop levels, Unilift KP-S

Pump type	Start [mm]	Stop [mm]
Unilift KP 150 S	175	55
Unilift KP 250 S		
Unilift KP 350 S	185	65

6.4.2 Unilift KP-A

The level difference between start and stop can be adjusted by changing the free cable length between the pump handle and the float switch.

- A long free cable length gives fewer starts/stops and a large level difference.
- A short free cable length gives frequent starts/stops and a small level difference.

To enable the float switch to start and stop the pump, the free cable length (L) must be min. 70 mm and max. 150 mm. See fig. 7.

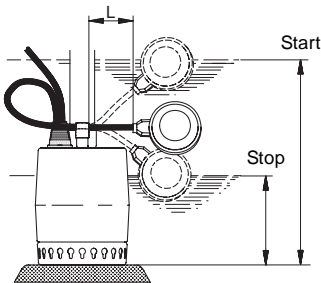


Fig. 7 Start/stop levels, Unilift KP-A

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Pump type	Cable length (L) min. 70 mm		Cable length (L) max. 150 mm	
	Start [mm]	Stop [mm]	Start [mm]	Stop [mm]
Unilift KP 150 A	290	140	335	100
Unilift KP 250 A				
Unilift KP 350 A	300	150	345	110

6.5 Electrical connection

The electrical connection must be carried out in accordance with local regulations and standards.

Check that the mains voltage and frequency correspond to the values stated on the pump nameplate.



As a precaution, the pump must be connected to a socket with earth connection. We recommend permanent installations to be provided with an earth leakage circuit breaker (ELCB).

The pump must be connected to an external mains switch with a minimum contact gap of 3 mm in all poles.

The pump motor incorporates thermal overload protection and requires no additional motor protection.

If the motor is overloaded, it will stop automatically.

Note *When the motor has cooled to normal temperature, it will restart automatically.*

Motors for Unilift KP 350, 3 x 200 V, 50 Hz, must be connected to a motor-protective circuit breaker.

Three-phase pumps with float switch (Unilift KP-A) must be connected to the mains supply by means of a contactor. See fig. 8.

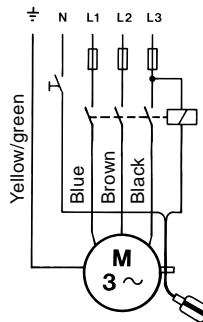


Fig. 8 Wiring diagram

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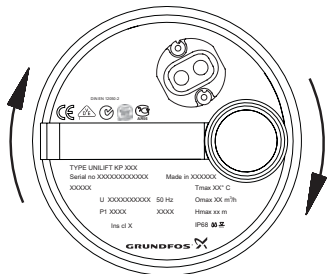
6.5.1 How to check the direction of rotation

(Three-phase pumps only)

Check the direction of rotation every time the pump is connected to a new installation.

Check the direction of rotation like this:

1. Place the pump on a plane surface.
2. Start and stop the pump.
3. Observe the pump when started. If the pump gives a slight clockwise jerk, see fig. 9, the direction of rotation of the motor is correct. If the jerk is counter-clockwise, interchange two phases in the mains connection.



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Fig. 9 Direction of rotation

If the pump is connected to a piping system, carry out the check of direction of rotation in this way:

1. Start the pump and check the quantity of water.
2. Stop the pump and interchange two phases in the mains connection.
3. Start the pump and check the quantity of water.
4. Stop the pump.
5. Compare the results taken under points 1 and 3. The largest quantity of water indicates the correct direction of rotation.

7. Operation

7.1 Unilift KP-S

The pump will start in these situations:

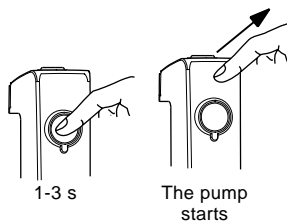
Automatic start

- The liquid level reaches the upper sensing element.

Manual start

- Connect the power supply.
- Hold a finger over the upper sensing element between 1 and 3 seconds. The pump only starts if the finger is removed within the stipulated time. See fig. 10.

Note *When the pump is started manually, it will run for min. 5 seconds or until the liquid reaches the lower sensing element.*



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Fig. 10 Manual starting by touching with a finger

The pump will stop in these situations:

Automatic stop

- The liquid reaches a level below the lower sensing element.

Manual stop

- Disconnect the power supply.

7.2 Unilift KP-A

The pump will start and stop automatically, depending on the liquid level and the cable length of the float switch.

Forced operation

If the pump is used for draining liquid below the stop level of the float switch, the float switch can be held in a higher position by fastening it to the pump discharge pipe.

During forced operation, the liquid level should be checked regularly to avoid dry running.

7.3 Unilift KP-M

The pump is started and stopped via an external switch.

To avoid dry running, check the liquid level regularly during operation, for instance via external level monitoring.

To enable the pump to self-prime during start-up, the liquid level must be at least 30 mm.

The pump can pump down to a liquid level of 15 mm.

8. Maintenance

Under normal operating conditions, the pump is maintenance-free.

If the pump has been used for liquids other than clean water, it should be flushed through with clean water immediately after use.

Warning

For safety reasons the suction strainer must always be fitted to the pump during operation.



Never dismantle the pump unless the power supply has been switched off. Be careful during dismantling as you will get access to sharp edges, etc., which may cause cuts. Wear protective gloves.

8.1 Cleaning the pump

Warning



Before starting any work on the pump, make sure that the power supply has been switched off and that it cannot be accidentally switched on.

If the pump delivers too little water due to deposits or the like, dismantle and clean the pump:

1. Disconnect the power supply.
2. Drain the pump.
3. Remove the suction strainer.
Press a screwdriver in between the pump sleeve and the strainer and press hard. Do the same in several places along the strainer until it is pried loose and can be removed.
See fig. 11.

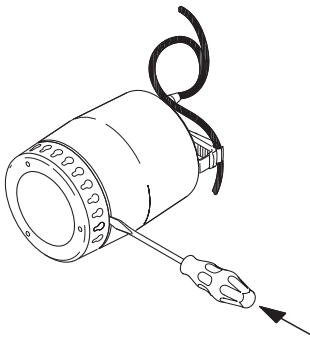


Fig. 11 How to remove the suction strainer

4. Clean the suction strainer and fit it again.

If the pump still delivers too little water, dismantle the pump further.

Procedure:

1. Disconnect the power supply.
2. Remove the suction strainer (see point 3 above).
3. Turn the pump housing 90 ° counter-clockwise using a screwdriver, see the arrow on the pump housing. Pull off the pump housing. See fig. 12.

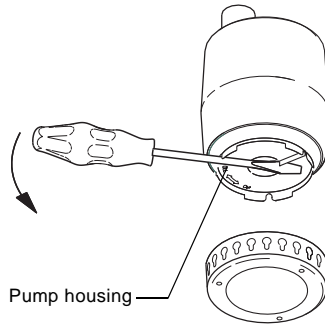


Fig. 12 How to remove the pump housing

4. Clean and flush the inside of the pump to remove possible impurities between motor and pump sleeve. Clean the impeller. See fig. 13.

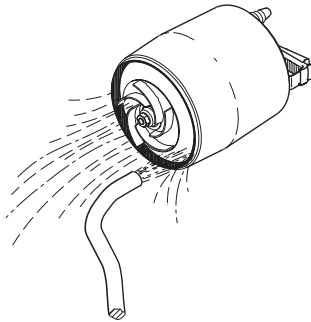


Fig. 13 How to flush the pump

5. Check that the impeller can rotate freely. If not, remove the impeller. See point 6.
6. Unscrew the nut (cross width 13 mm) from the motor shaft. Use a screwdriver to prevent the impeller from turning. See fig. 14.

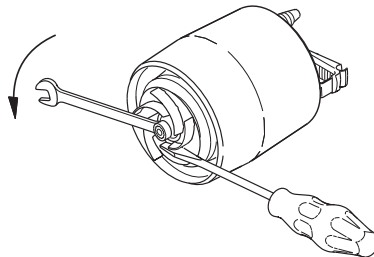


Fig. 14 How to remove the impeller

7. Clean the impeller and clean around the shaft.
8. Check the impeller, the pump housing and the sealing part. If necessary, replace defective parts.
9. Assemble the pump in the reverse order of the dismantling.

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Before and during the mounting of the pump housing, check that the sealing part is fitted correctly. See fig. 15. Moisten the sealing part with water to ease the fitting.

Caution

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8.2 Service

The impeller, the suction strainer and the non-return valve are replaceable.

Order numbers for the ordering of service kits and contents of service kits appear from the tables below and fig. 15.

Pump type	Part number
Impeller kit	
Unilift KP 150	015778
Unilift KP 250	015779
Unilift KP 350	015787
Suction strainer	
Unilift KP 150	96548064
Unilift KP 250	96548064
Unilift KP 350	96548066
Non-return valve	
Unilift KP 150	
Unilift KP 250	15220
Unilift KP 350	

Service kits	Pos.	Designation	Quantity
Impeller kit	A	Impeller	1
	B	Nut	1
	C	Sealing part	1
Suction strainer	D	Suction strainer	1

If other pump components are damaged or defective, please contact the pump supplier.

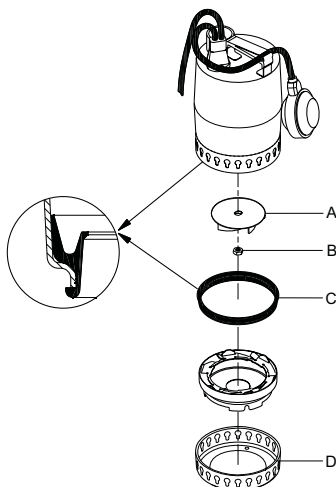


Fig. 15 Service parts

Sensor

The sensor can be retrofitted on all pump models. Order numbers for the ordering of sensors appear from the table below and fig. 16.

Pump type	Plug	Cable length	Part number
	CH	10 m	96636210
	DK	10 m	96636211
Unilift KP 150	Schuko	3 m	96632895
Unilift KP 250	Schuko	10 m	96632896
Unilift KP 350	-	10 m	96632897
	Australia	5 m	96632898

Order the parts through the pump supplier.

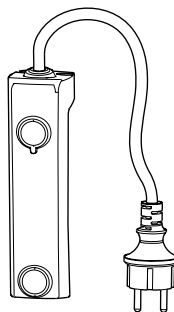


Fig. 16 Sensor

Note

Cable and level switch must be replaced by an authorised Grundfos service workshop.

9. Fault finding



Warning

Before starting fault finding, the power supply must be switched off. Make sure that the power supply cannot be accidentally switched on again.

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Fault	Cause	Remedy
1. Motor does not start.	a) Power supply disconnected.	Connect the power supply.
	b) Pump stopped by level switch.	Unilift KP-S: Start the pump by touching the upper sensing element with a finger. See 7.1 <i>Unilift KP-S</i> . Unilift KP-A: Start the pump by lifting the float switch. See 7.2 <i>Unilift KP-A</i> .
	c) Fuses in installation are blown.	Replace the fuses.
	d) Thermal switch tripped.	Wait until the thermal switch cuts in again or let the pump cool off. See 6.5 <i>Electrical connection</i> .
2. The thermal switch trips out after short time of operation.	a) The temperature of the pumped liquid is higher than the value stated in section 5. <i>Operating conditions</i> .	The pump starts automatically after sufficient cooling.
	a) Pump is partly blocked by impurities.	Clean the pump. See 8. <i>Maintenance</i> .
3. Pump runs but delivers too little water.	b) The pump is mechanically blocked.	Remove the blockage. See 8. <i>Maintenance</i> .
	a) Pump is partly blocked by impurities.	Clean the pump. See 8. <i>Maintenance</i> .
	b) Discharge pipe/hose partly blocked.	Check and clean the non-return valve, if fitted.
4. The pump runs but delivers no water.	c) Wrong direction of rotation in three-phase pumps. See 6.5.1 <i>How to check the direction of rotation</i> .	Reverse the direction of rotation.
	a) Pump is blocked by impurities.	Clean the pump. See 8. <i>Maintenance</i> .
5. Unilift KP-S operation is unstable or it does not start when the liquid touches the upper sensing element.	b) Discharge pipe/hose partly blocked.	Check and clean the non-return valve, if fitted.
	c) Liquid level too low. During normal operation, the suction strainer must be covered by the pumped liquid.	Lower the pump deeper into the liquid or adjust the level switch.
	d) Unilift KP-A: Free cable length of the float switch is too long.	Reduce the free cable length. See 6.4 <i>Start/stop level</i> .
	a) Dirt on the sensing elements.	Clean the sensing elements.
6. Unilift KP-S does not stop after the liquid has passed the lower sensing element.	b) Defective sensor.	Replace the sensor. Contact Grundfos.
	a) High salt concentration and moisture or dirt on the sensing elements. See 3.1 <i>Pumped liquids</i> .	Clean the sensing elements.
	b) Moist and thick layer of dirt on the sensing elements.	Clean the sensing elements.

10. Disposal

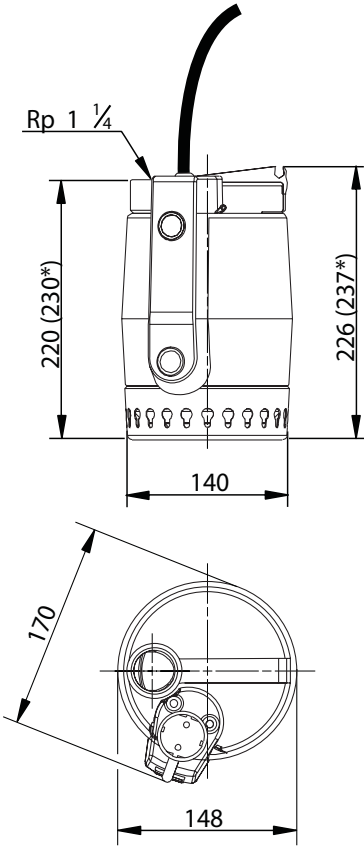
This product or parts of it must be disposed of in an environmentally sound way:

1. Use the public or private waste collection service.
2. If this is not possible, contact the nearest Grundfos company or service workshop.

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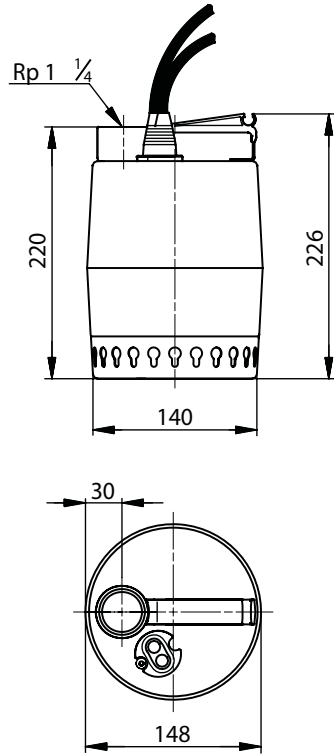
Dimensions

Unilift KP-S



* Unilift KP 350

Unilift KP-M



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