

Pompe monoblocco centrifughe in-line
Close coupled centrifugal in-line pumps
Inline-Kreiselpumpen in Blockbauweise
Pompes monobloc centrifuges in-line
Bombas monobloc centrifuga in-line
Monoblock centrifugal in-line pump
Многорядные центробежные моноблочные насосы
直联离心管道泵

NR, NR4

ISTRUZIONI ORIGINALI PER L'USO
ORIGINAL OPERATING INSTRUCTIONS
ORIGINAL BETRIEBSANLEITUNG
INSTRUCTIONS ORIGINALES POUR L'UTILISATION
INSTRUCCIONES ORIGINALES DE USO
ORIGINAL DRIFT/INSTALLATIONSANVISNINGAR
ПЕРВОНАЧАЛЬНЫЕ ИНСТРУКЦИИ ПО ЭКСПЛУАТАЦИИ
使用说明书

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 **calpeda**[®]

CE

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1 GENERAL INFORMATION

Before using the product carefully read the information contained in this instruction manual, the manual should be kept for future reference.

Italian is the original language of this instruction manual, this language is the reference language in case of discrepancies in the translations.

This manual is part of the essential safety requirement and must be retained until the product is finally de-commissioned.

The customer, in case of loss, can request a copy of the manual by contacting Calpeda S.p.A. or their agent, specifying the type of product data shown on the label of the machine (see 2.3 Marking)

Any changes, alterations or modifications made to the product or part of it, not authorized by the manufacturer, will revoke the "CE declaration" and warranty.

This appliance should not be operated by children younger than 8 years, people with reduced physical, sensory or mental capacities, or inexperienced people who are not familiar with the product, unless they are given close supervision or instructions on how to use it safely and are made aware by a responsible person of the dangers its use might entail.

Children must not play with the appliance.

It is the user's responsibility to clean and maintain the appliance. Children should never clean or maintain it unless they are given supervision.

Do not use in ponds, tanks or swimming pools or where people may enter or come into contact with the water.

Read carefully the installation section which sets forth:

- The maximum permissible structural working pressure (chapter 3.1).

- The type and section of the power cable (chapter 6.5).
- The type of electrical protection to be installed (chapter 6.5).

GB

1.1 Symbols

To improve the understanding of the manual, below are indicated the symbols used with the related meaning.



Information and warnings that must be observed, otherwise there is a risk that the machine could damage or compromise personnel safety.



The failure to observe electrical information and warnings, could damage the machine or compromise personnel safety.



Notes and warnings for the correct management of the machine and its parts.



Operations that could be performed by the final user. After carefully reading of the instructions, is responsible for maintenance under normal conditions. They are authorized to affect standard maintenance operations.



Operations that must be performed by a qualified electrician. Specialized technician authorised to affect all electrical operations including maintenance. They are able to operate with in the presence of high voltages.



Operations that must be done performed by a qualified technician. Specialized technician able to install the device, under normal conditions, working during "maintenance", and allowed to do electrical and mechanical interventions for maintenance. They must be capable of executing simple electrical and mechanical operations related to the maintenance of the device.



Indicates that it is mandatory to use individual protection devices - hand protection.



Indicates that it is mandatory to use individual protection devices - eye protection.



Operations that must be done with the device switched off and disconnected from the power supply.



Operations that must be done with the device switched on.

1.2 Manufacturer name and address

Manufacturer name: Calpeda S.p.A.
Address: Via Roggia di Mezzo, 39
36050 Montorso Vicentino - Vicenza / Italia
www.calpeda.it

1.3 Authorized operators

The product is intended for use by expert operators divided into end users and specialized technicians. (see the symbols above).



It's forbidden, for the end user, carry out operations which must be done only by specialized technicians. The manufacturer declines any liability for damage related to the non-compliance of this warning.

1.4 Warranty

For the product warranty refer to the general terms and conditions of sale.



The warranty covers only the replacement and the repair of the defective parts of the goods (recognized by the manufacturer).

GB

The Warranty will not be considered in the following cases:

- Whenever the use of the device does not conform to the instructions and information described in this manual.
- In case of changes or variations made without authorization of the manufacturer.
- In case of technical interventions executed by a non-authorized personnel.
- In case of failing to carry out adequate maintenance.

1.5 Technical assistance

Any further information about the documentation, technical assistance and spare parts, shall be requested from: Calpeda S.p.A. (paragraph 1.2).

2 TECHNICAL DESCRIPTION

Close-coupled, single-impeller, centrifugal pumps; electric motor with extended shaft directly connected to the pump. Pump casing with suction and delivery connections with the same diameter and on the same axis (in-line).

2.1 Intended use

Standard construction

For clean liquids, without abrasives, which are non-aggressive for the pump materials (contents of solids up to 0,2%).

Liquid temperature from -10 °C to +90 °C.

Special construction

For clean liquids, without abrasives, which are non-aggressive for the pump materials (contents of solids up to 0,2%) with the following characteristics:

- Cooling mixtures with temperatures from 0 to -30 °C.
- Water with temperatures from 90 °C to 140 °C.
- Oil with temperature up to 200 °C and / or maximum density of 30 cSt.

2.2 Improper use

The device is designed and built only for the purpose described in paragraph 2.1.



Improper use of the device is forbidden, as is use under conditions other than those indicated in these instructions.

Improper use of the product reduces the safety and the efficiency of the device, Calpeda shall not be responsible for failure or accident due to improper use.

2.3 Marking

The following picture is a copy of the name-plate that is on the external case of the pump.

Example plate pump

1	calpeda	11
2	MONITORING	12
3	VICENZA	
4	2900/min XX kW (XX Hp)	
	Q min/max XX / XX m³/m	
	H max/min XX / XX m	
	XXXXXX	14

- 1 Type 1
- 2 Delivery
- 3 Head
- 4 Rated power
- 5 Supply voltage
- 6 Frequency
- 7 Nom. motor current
- 8 Rotation speed rpm
- 9 Operation Duty
- 10 Insul. class
- 11 Certifications
- 12 Serial number
- 13 Weight
- 14 Notes
- 15 Voltage
- 16 % Load
- 17 Power factor
- 18 Efficiency
- 19 Protection
- 20 Efficiency Class

Example plate motor

4	calpeda	
5	MONITORING	
6	VICENZA	
7	0705158995	
8	XX kW (XX Hp)	
9	400Δ/690V V3~50Hz XX / XX A	
10	n 2900/min S1 Icl. F	
11	% cosφ	
12	400 100 0,84 87,5	
13	400 75 0,78 88,1	45kg
14	400 50 0,67 87,4	IP 54
15		IE2-87
16		
17		
18	IEC 60034-1	

3 TECHNICAL FEATURES

3.1 Technical data

Dimensions and weight (paragraph 12.1).
Nominal speed 1450/1750/2900/3450 rpm
Protection IP54

Supply voltage / Frequency:

- up to 240V 1~ 50/60 Hz
- up to 480V 3~ 50/60 Hz

Check that the mains frequency and voltage correspond to the electrical characteristics shown on the indicator plate.

The electric data marked on the label are referred to the nominal power of the motor.

Rated motor power

NR (2900 1/min)	up to kW:	2,2	7,5	18,5
NR4 (1450 1/min)	up to kW:	5,5		
Sound pressure dB (A)	max:	68	72	78
Starts per hour	max:	20	16	12

Maximum permissible working pressure up to 100 m (10 bar).

3.2 Operating conditions

Installation in well ventilated location protected from the weather, with a maximum ambient temperature of 40 °C.

4 SAFETY

4.1 General provisions



Before using the product it is necessary to know all the safety indications.

Carefully read all operating instructions and the indications defined for the different steps: from transportation to disposal.

The specialized technicians must carefully comply with all applicable standards and laws, including local regulations of the country where the pump is sold.

The device has been built in conformity with the current safety laws. The improper use could damage people, animals and objects.

The manufacturer declines any liability in the event of damage due to improper use or use under conditions other than those indicated on the name-plate and in these instructions.



Follow the routine maintenance schedules and the promptly replace damaged parts, this will allow the device to work in the best conditions.

Use only original spare parts provided from Calpeda S.p.A or from an authorized distributor.

Don't remove or change the labels placed on the device.



Do not start the device in case of defects or damaged parts.



Maintenance operations, requiring full or partial disassembly of the device, must be done only after disconnection from the supply.

4.2 Safety devices

The device has an external case that prevents any contact with internal parts.

4.3 Residual risks

The appliance, designed for use, when used in-line with the design and safety rules, doesn't have residual risks.

4.4 Information and Safety signals

For this kind of product there will not be any signals on the product.

4.5 Individual protection devices

During installation, starting and maintenance it is suggested to the authorized operators to consider the use of individual protection devices suitable for described activities.

During ordinary and extraordinary maintenance interventions, safety gloves are required.

Signal individual protection device**HAND PROTECTION**

(gloves for protection against chemical, thermal and mechanical risks).

**EYE PROTECTION**

(glasses for protection from chemical, thermal and biological risks).

5. TRANSPORTATION AND HANDLING

The product is packed to maintain the content intact. During transportation avoid to stack excessive weights. Ensure that during the transportation the packed cannot move. The transport vehicles must comply, for the weight and dimensions, with the chosen product (see paragraph 12.1 dimensions and weights).

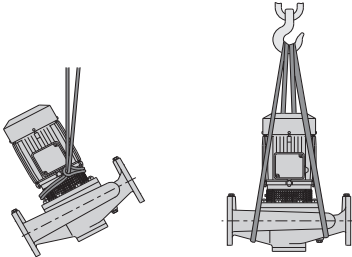
5.1 Handling

Handle with care, the packages must not receive impacts.

Avoid to impact onto the package materials that could damage the pump.

If the weight exceeds 25 Kg the package must be handled by two person at the same time (see paragraph 12.1 dimensions and weights).

Raise the pump-motor unit slowly (fig.1), making sure it does not move from side to side in an uncontrolled way, to avoid the risk of imbalance and tipping up.



(fig. 1)

6 INSTALLATION**6.1 Dimensions**

For the dimensions of the device refer to the annex "Dimensions" (paragraph 12.1 Annexes).

6.2 Ambient requirements and installation site dimensions

The customer has to prepare the installation site in order to guarantee the right installation and in order to fulfill the device requirements (electrical supply, etc...).

The place where the device will be installed must fulfill the requirements in the paragraph 3.2.

It's Absolutely forbidden to install the machine in an environment with potentially explosive atmosphere.

6.3 Unpacking

Inspect the device in order to check any damages which may have occurred during transportation.

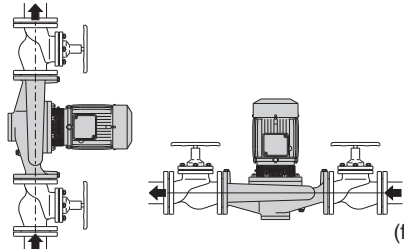
Package material, once removed, must be discarded/recycled according to local laws of the destination country.

Raise the pump-motor unit slowly (see paragraph 12.2 fig.1), making sure it does not move from side to side in an uncontrolled way, to avoid the risk of imbalance and tipping up.

6.4. Installation

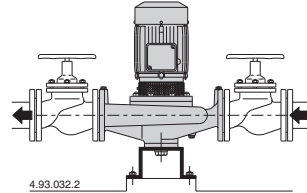
The **NR, NR4 (NRM, NR4M** with single phase motor) close coupled pumps have suction and delivery connections with the same diameter and on the same axis (in-line), so that they may be inserted into a straight pipe like a gate valve.

Info stable and rigid pipelines the pump can be supported directly through the flanges (fig. 2).



(fig. 2)

If the pipe is not stable enough, the pump must be fastened and supported by the suitable threaded holes on the pump casing (fig. 3).



(fig. 3)

The **NR, NR4** in-line pumps can be flanged in the pipe at any angle.

For safety reasons avoid the position with the motor under the pump.

For installation in a position other than with a vertical rotor axis, care must be taken to see that a **drain and condensation water hole** is provided at the lowest point of the motor.

Provide enough clearance around the unit for **motor ventilation**, for inspections, to check the rotation of the shaft and for filling and draining the pump.

6.4.1. Pipes

Ensure the insides of pipes are clean and unobstructed before connection.

ATTENTION: The pipes connected to the pump should be secured to rest clamps so that they do not transmit stress, strain or vibrations to the pump.

The inside diameter of the pipe-work depends on the desired flow.

Provide a diameter assuring a liquid flow not greater than 1.5 m/s for suction and 3 m/s for delivery.

The pipe diameters must never be smaller than the pump connection ports.

6.4.2. Suction pipe

The suction pipe must be perfectly airtight and be led upwards in order to avoid air pockets.

With a **pump located above the water level** (suction lift operation), fit a **foot valve** or a **check valve** on the suction connection.

With a **pump located below water level** (inflow under positive suction head) install a gate valve.

6.4.3. Delivery pipe

Fit a gate valve in the delivery pipe to adjust delivery, head, and absorbed power.

Install a pressure gauge.

With a geodetic head of over 15 m fit a check valve between the pump and the gate valve in order to protect the pump from water hammering.


6.5 Electrical connection

Electrical connection must be carried out only by a qualified electrician in accordance with local regulations.

Follow all safety standards.

The unit must be properly earthed (grounded).
 Connect the earthing (grounding) conductor to the terminal with the Ⓧ marking.
 Compare the frequency and mains voltage with the name-plate data and connect the supply conductors to the terminals in accordance with the appropriate diagram inside the terminal box cover.

ATTENTION: with motor power rating ≥ 5.5 kW avoid direct starting. Provide a control panel with star-delta starting or another starting device.

 **ATTENTION: never allow washers or other metal parts to fall into the internal cable opening between the terminal box and stator.** If this occurs, dismantle the motor to recover the object which has fallen inside.

If the terminal box is provided with an inlet gland, use a flexible power supply cord of the H07 RN-F type with section of cable not less than (par. 12.5 TAB 1).
 If the terminal box is provided with an inlet bushing, connect the power supply cord through a conduit.
 For use in swimming pools (not when persons are in the pool), garden ponds and similar places, a **residual current device** with I Δ N not exceeding 30 mA must be installed in the supply circuit.
 Install a **device for disconnection from the mains** (switch) with a contact separation of at least 3 mm in all poles.
 With a three-phase motor install an overload protection device with curve D appropriate for the rated current of the pump.
Single-phase NRM, NR4M, are supplied with a capacitor connected to the terminals and (for 220-240 V - 50 Hz) with an incorporated thermal protector.

6.6 Operation with frequency converter
 Adjust the frequency converter so that the limiting values of min. 25 Hz and max. fN Hz will not be exceeded.




7 STARTUP AND OPERATION

7.1 Preliminary checks before start-up of the pump
 Do not start-up the device in case of damaged parts.

7.2 First starting




ATTENTION: never run the pump dry. Start the pump after filling it completely with liquid.
 When operating under a positive suction head, fill the pump by opening the suction gate valve slowly and completely, keeping the delivery gate valve and the vent holes (14.42) open to release the air.
 For water circulation in a closed circuit, open both gate valves completely by releasing the air.
 Check that the shaft turns by hand.
With a three-phase motor check that the direction of rotation is as shown by the arrow on the pump casing, otherwise, disconnect electrical power and reverse the connections of two phases.
 With a suction lift operation it may be necessary to wait a few minutes for the pump to prime.
 Check that the pump works within its field of performance, and that the absorbed current shown on the name-plate is not exceeded.
 Otherwise adjust the delivery gate valve.

-  **Do not touch the fluid when its temperature is higher than 50 °C.**
-  **Burn hazard. Due to high temperature of the fluid, the pump casing and the motor may reach temperatures higher than 50°C.**
-  **DO NOT TOUCH these parts unless with suitable protective devices or wait and make sure they have completely cooled.**

7.3 Switch off of the pump









 The appliance must be switch off every time there are faults. (see troubleshooting).

The product is designed for a continuous duty, the switch off is performed by disconnecting the power supply by means the expected disconnecting devices. (see paragraph "6.5 Electrical connection").

8 MAINTENANCE

Before any operations it's necessary to disconnect the power supply.




-  Every maintenance operations, cleaning or repairation executed with the electrical system under voltage, it could cause serious injuries to people.
-  If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
-  In case of extraordinary maintenance, or maintenance operations that require part-removing, the operator must be a qualified technician able to read schemes and drawings. It is suggest to register all maintenance operation executed.
-  During maintenance keep particular attention in order to avoid the introduction of small external parts, that could compromise the device safety.
-  It is forbidden to execute any operations with the direct use of hands. Use water-resistant, anti-cut gloves to disassemble and clean the filter or in other particular cases.
-  During maintenance operations external personnel is not allowed.

Maintenance operations that are not described in this manual must be made only by special personnel authorized by Calpeda S.p.A.

For further technical information regarding the use or the maintenance of the device, contact Calpeda S.p.A.




8.1 Routine maintenance (Standard construction)



-  Before every maintenance operations disconnect the power supply and make sure that the device could not accidentally operate.
-  **Burn hazard. Due to high temperature of the fluid, the pump casing and the motor may reach temperatures higher than 50°C.**
-  **DO NOT TOUCH these parts unless with suitable protective devices or wait and make sure they have completely cooled.**
- When the pump remains inactive it must be emptied completely if there is a risk of freezing.**
 Before restarting the unit, check that the shaft is not jammed and fill the pump casing completely with liquid.

8.1.1 Routine maintenance (Special construction)



-  Before every maintenance operations disconnect the power supply and make sure that the device could not accidentally operate.
-  **Burn hazard. Due to high temperature of the fluid, the pump casing and the motor may reach temperatures higher than 50°C.**
-  **DO NOT TOUCH these parts unless with suitable protective devices or wait and make sure they have completely cooled.**

When the pump remains inactive it must be emptied completely if there is a risk of freezing.

Before restarting the unit, check that the shaft is not jammed and fill the pump casing completely with liquid.

8.2 Dismantling the system

Close the suction and delivery gate valves and drain the pump casing before dismantling the pump.

8.3. Dismantling the pump



Close the suction and delivery gate valves and drain the pump casing before dismantling the pump.

For dismantling and reassembly see construction in the cross section drawing.

The motor and all internal parts can be dismantled without removing the pump casing and pipes.

By removing the nuts (14.28) the motor can be taken out complete with the impeller.

11. Troubleshooting



WARNING: Turn off the power supply before performing any operations.

Do not allow the pump or motor to run when dry even for a short period

Strictly follow the user instructions and if necessary contact an authorised service centre

PROBLEM	PROBABLE CAUSES	POSSIBLE REMEDIES
1) The engine does not start	1a) Unsuitable power supply 1b) Incorrect electrical connections 1c) Engine overload protective device cuts in. 1d) Blown or defective fuses 1e) Shaft blocked 1f) Motor failed	1a) Check that the mains frequency and voltage are suitable. 1b) Connect the power supply cable correctly. Check the setting of the thermal overload protection. 1c) Check the power supply and make sure that the pump shaft is turning freely. Check the setting of the thermal overload protection. 1d) Replace the fuses, check points a) and c) 1e) See "Blocked pump" instruction booklet 1f) Repair or replace the engine.
2) Pump blocked	2a) Prolonged periods of inactivity . 2b) Presence of solid bodies in the impeller 2c) Bearings blocked	2a) Unblock the pump by using a screw driver to turn the relevant notch on the back of the shaft. 2b) Remove any solid foreign bodies inside the impeller 2c) Replace the bearings.
3)The pump functions but no water comes out	3a) Presence of air inside the pump or suction pipe 3b) Possible infiltration of air. 3c) Foot valve blocked or suction pipe not fully immersed in liquid 3d) Suction filter blocked	3a) Release the air from the pump using the delivery control valve. 3b) Check which part is not tight and seal the connection. 3c) Clean or replace the bottom valve and use a suitable suction pipe . 3d) Clean the filter, if necessary, replace it . See point 2b) also.
4) Insufficient flow	4a) Pipes and accessories with diameter too small 4b) Presence of deposits or solid bodies in the impeller 4c) Rotor deteriorated 4d) Worn rotor and pump case 4e) Gases dissolved in the water 4f) Excessive viscosity of the liquid pumped 4g) Incorrect direction of rotation	4a) Use pipes and accessories suitable for the specific application 4b) Clean the impeller and install a suction filter 4c) Replace the impeller 4d) Replace the impeller and the pump casing 4e) Perform the opening and closing manoeuvres through the feeder gate 4f) The pump is unsuitable 4g) Invert the electrical connections in the terminal board
5) Noise and vibrations from the pump	5a) Worn bearings 5b) Unbalanced power supply	5a) Replace the bearings 5b) Check that the mains voltage is right
6) Leakage from the mechanical seal	6a) The mechanical seal has functioned when dry or has stuck 6b) Mechanical seal scored by presence of abrasive parts in the liquid pumped 6c) Mechanical seal unsuitable for the type of application 6d) Slight initial drip during filling or on first start-up	In cases 6a), 6b) and 6c), replace the seal 6a) Make sure that the pump casing is full of liquid and that all the air has been expelled. 6b) Install a suction filter and use a seal suited to the characteristics of the liquid being pumped. 6c) Choose a seal with characteristics suitable for the specific application 6d) Wait for the seal to adjust to the rotation of the shaft. If the problem persists, see points 6a), 6b) or 6c).

9. DISPOSAL



The final disposal of the device must be done by specialized company.

Make sure the specialized company follows the classification of the material parts for the separation.

Observe the local regulations and dispose the device accordingly with the international rules for environment protection.

10 SPARE PARTS

10.1 Spare-parts request

When ordering spare parts, please quote their designation, position number in the cross section drawing and rated data from the pump name plate.

The spare parts request shall be sent to CALPEDA S.p.A. by phone, fax, e-mail.

Changes reserved.

本操作手册属CALPEDA S.P.A.所有，禁止任何形式的复制，即使是部分的。

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1 总则

使用本产品前请仔细阅读此操作手册的内容，并保留此操作手册以供参考。
 此操作手册为意大利语，如有翻译偏差以意大利语为准。
 此操作手册是安全保障必不可少的一部分，在产品最终达到正常工作前请牢记本手册。
 万一用户不慎遗失本手册，可以向CALPEDA S.P.A.或其代理商要求一份复印件，请详述产品铭牌上的资料（见2.3 标记）
 未经制造商认可的有关其产品或部件的任何更改变化，将撤消“CE 声明”和质保。

此产品不应让8岁以下的未成年、身体有缺陷、心智不全或无任何经验的人操作，除非在充分的指导或监督下让相关人员知道如何安全的使用，并且通过一个负责人来让相关人员了解到可能会产生的危险。

不得让儿童接触本产品。
 用户有义务清洁和维护本产品。除非在有人监督的情况下，否则儿童不应清洁和维护本产品。
 不要使用在池塘、水箱或泳池等人为可以进入或接触的水环境中。
 仔细阅读安装部分的规定：
 -最大允许的结构工作压力详见3.1
 -电源线的类型及剖面详见6.5
 -所安装电器设备的防护类型详见6.5

1.1 符号标记

为了便于理解本操作手册，下面给出常用标记符号的含义。



一定要注意通告和警告的标记，否则可能导致产品损坏或人身安全的风险。



忽略有关电气的警告，可能导致产品损坏或人身安全的风险



提示和警告正确操作处理产品及其部件



最终用户可以进行的操作
终端用户：仔细阅读本操作手册后，产品使用者可以负责正常状态下的维护工作。他们可以进行产品的清洁和长期停滞后的重新启动此类标准维护工作。



必须由有资格的专业电工才能进行的操作
专业电工：有资格的专业电工，负责所有电气设备的运行包括维护，应具有高压电资格。



必须由有专业技术资格的人才能进行的操作
专业技术人员：正常状态下，具有产品安装和维护能力的专业技术人员，可以从事电气和机械方面的维护工作。能够从事简单的与设备维护相关的电气和机械方面的操作。



指示必须使用个别的保护装置
- 工作手套。



指示必须使用个别的保护装置
- 护眼用具。



必须断电并断开与电源的连接才能进行的操作



必须接通电源才能进行的操作

1.2 制造商名称和地址

制造商名称：CALPEDA S.P.A.
地址：Via Roggia di Mezzo, 39
36050 Montorso Vicentino - Vicenza / Italia
www.calpeda.it

1.3 授权操作者

本产品只能由有经验的终端用户和专业技术人员操作



禁止终端用户操作那些只能由专业技术人员操作的工作，对未按本规章执行而引起的损害制造商不负任何责任

本设备不适合生理、感官和心智不健全的人员(包括儿童)或缺乏经验和相关知识的人员使用,除非在有专门人员的监管或指导下。
儿童应被监管以避免他们接触此装置。

1.4 质保

质保参见总则和销售条款



质保期内将更换或维修有问题的产品部件（由制造商验证的）。

下面因素不在质保范围：

中文

- 由于产品使用者没有按照说明及本手册的通告信息操作造成的损坏
- 未经制造商认可的对产品的任何改变而造成的损坏
- 由非专业人员操作造成的损坏
- 由不当的维修造成的损坏

1.5 技术支持

任何技术支持、备件及更多的产品信息均可联系：
Calpeda S.p.A. (附件1.2章)。

2 技术说明

直結離心式單段葉片泵浦；電動馬達軸心直接連接泵浦入口和出口尺寸相同，而且並列於同一直線上(In-Line)

2.1 预期用途

标准结构

洁净液体，不含磨蚀性的，非爆炸性的，对泵体材料无害的液体（固体颗粒含量不大于0.2%）
介质温度从-10 °C 到 +90 °C。

特殊结构

洁净液体，不含磨蚀性的，非爆炸性的，对泵体材料无害的液体（固体颗粒含量不大于0.2%）带有以下特征：
- 化学冷却液温度从0° C~30 °C
- 清水温度从90° C~140 °C
- 油质液体温度不高于200 °C或者最大密度是30 cSt

2.2 不当使用

本产品只用于2.1中所述用途



除了本说明手册中指示的用途外,严禁其他不当用途

不当使用将降低本产品的安全性和效率,由于不当使用而造成的损坏和意外,CALPEDA不承担责任



严禁用于可能有人员进入或与水接触的池塘、水箱或游泳池

2.3 标记

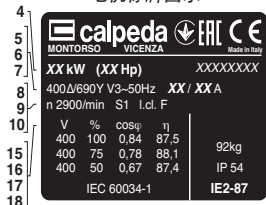
下面给出的是泵外壳上的标签的图片

泵标签图示



- 1 型号
- 2 流量
- 3 扬程
- 4 额定功率
- 5 电源电压
- 6 频率
- 7 电流
- 8 转速rpm
- 9 运行工作制
- 10 绝缘等级
- 11 认证
- 12 序列号
- 13 重量
- 14 注释

电机标签图示



- 4 功率
- 5 电压
- 6 频率
- 7 转速rpm
- 8 运行工作制
- 9 绝缘等级
- 10 认证
- 11 序列号
- 12 重量
- 13 注释
- 14 电压
- 15 % 负荷
- 16 功率因数
- 17 效率
- 18 保护等级
- 19 能效等级
- 20 能效等级

3 技术特性

3.1 技术参数

尺寸和重量 (见12.1)

额定转速 1450/1750/2900/3450rpm

保护等级 IP54

电压/频率:

- 高达 240V 1~ 50/60 Hz

- 高达 480V 3~ 50/60 Hz

检查主电源的电压、频率等参数是否符合电机铭牌所示
标牌的电气数据依据电机的正常功率而标出。

额定电机功率

NR (2900 1/min)	直至 kW:	2,2	7,5	18,5
NR4 (1450 1/min)	直至 kW:	5,5		
噪音等级	dB (A) 最大:	68	72	78
每小时启动次数	最大:	20	16	12
最大工作压力为 100 m (10 bar).				

3.2 工作条件

请安装在可遮蔽风雨通风良好的场所，最高 环境温度 为 40 °C

4 安全性

4.1 总则



使用本产品前应了解有关安全的指示
仔细阅读所有的操作说明和从搬运到处理的每一步指示专业技术人员必须认真遵从所有的适用标准和法律，包括产品应用地当地的规章
产品安装使用应符合现行的安全法规
不当的使用可能会对人身、动物和其他对象造成损害
制造商对于由于不当使用或未按本操作手册和标牌的标示使用所造成的损坏不负责任



按照日程维护计划操作并及时更换损坏的部件
可使产品工作在最佳状态
使用 CALPEDA S.P.A. 或其指定代理商提供的原厂配件



不要撕下或改变产品上的标识
当产品有问题或部件有损坏的情况下不要启动产品



由于维修时会全部或部分的拆开产品,因此之前务
必断开供电电源

4.2 安全装置

本产品具有全外部壳体,可防止与内部部件的任何接触

4.3 剩余风险

当按照本产品的设计功能和所有安全规则使用本产品时没有剩余风险

4.4 通告和安全警示

没有任何安全警示在此类产品上面

4.5 个别的保护装置

在安装、使用和维修期间，建议操作人员使用适合此操作的个别保护装置或手段当进行日常或个别的维修工作时

标示的个别保护装置



手的保护
(防热、化学品和机械损害的手套)



护眼用具

(可用来防护化学试剂, 热气及其他物体对眼睛的伤害)

5. 搬运操作

货物应包装完好

运输过程中应避免超重, 并确保货物不会移动。确保运输车辆和所运货物尺寸相符合

无需特殊车辆运输

运输车辆应与被运货物的尺寸重量相符合(见 表见12.1 尺寸与重量)

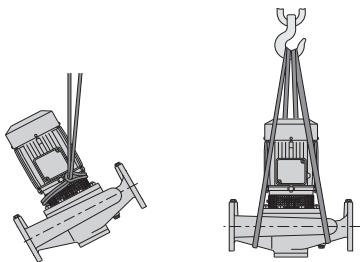
5.1 搬运

小心搬运, 轻拿轻放

避免冲撞包装材料以免损坏泵的外壳

对于重量超过25公斤的包装物需由两人同时抬搬(见 表见12.1 尺寸与重量)

缓慢提升泵组(图.1), 确保它不会左右晃动, 以避免因不平衡而倾倒。



(图.1)

6 安装

6.1 尺寸

产品的尺寸详见附件“尺寸”(附件12.1章)

6.2 环境要求和安装位置的尺寸

客户应将本产品妥当的安装于适当位置以满足设备的要求(供电需要等)

安装位置应满足章节3.2中的要求

禁止将产品安装于有潜在易燃易爆危险的环境中

6.3 拆箱



开箱检查产品是否因运输而损坏

拆开的包装材料应根据产品使用国当地的法律规定遗弃或再利用

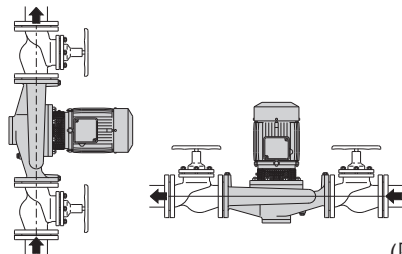
缓慢提升泵-电机组(见12.2章节 图1)

确保它不会晃来晃去, 以避免因不平衡而倾倒。

6.4. 安装

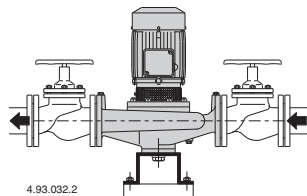
NR, NR4泵 (NRM, NR4M为单相电机) 为直联电动泵, 其吸入口与出水口在同一轴线上并有同一直径, 因此该泵可以像阀或闸阀那样插入直线管道中去。

当管道为稳固、结实状况, 该泵可以直接由法兰来支撑(图2)。



(图2)

如果管道不够稳固, 则本泵必须通过泵壳上的螺栓孔紧固在支架上(图3)。



(图3)

NR, NR4管道泵可以以任何角度用法兰固定在管道中。

为了安全原因应避免安装时电机处于泵的下部。

当轴不是以垂直位置安装时, 必须注意, 使排水孔必须处于电机的最低位置。

为了便于电机的散热, 观察泵轴的转向, 及灌泵和泵的排水, 因此安装时应在泵组的周围留下足够的空间。

中文

6.4.1 管道

应确保连接前所有管道内部干净、无堵塞;

注意: 管道与水泵的连接应当支撑可靠, 并紧固联接, 以确保不传递应力应变及振动到泵上。

管路的内径依所需流量而定

管路直径应确保进口流速不超过1.5m/s出口流速不超过3m/s

管路直径不允许小于泵的接口尺寸

6.4.2 进水管

进水管应气密良好并稍向上倾斜以避免窝气

如果连接的是软管, 则必须使用内部带有螺旋钢丝的加强型软管以避免抽吸时将吸入管吸瘪。

当泵置于水面之上时(吸入操作), 应在吸入端安装脚阀或单向阀

当泵位于水面之下时(灌入操作)应安装一闸阀

6.4.3. 出水管

在出水管上安装一闸阀以调节出水量、扬程和净功率

安装一压力表

当落差超过15M时应在泵和闸阀之间安装一止回阀以避免水锤对泵的伤害

6.5. 电气联接



必须由合格电工根据当地规范进行电气联接。

必须遵守安全标准。

泵-电机组必须可靠地接地。

把接地导线接到标有记号的端子上 ⊕。

请对照电源电压和铭牌上所标数值，根据接线盒内盖上的电路图联接电源。

注意：超过 **5.5KW** 的电机不能直接起动，设置控制箱用星三角或其它方式起动。



注意：绝对不允许将垫片等金属部件掉入电机接线盒的定子线圈中。

如果发生此种问题，必须拆开电机，取出部件。

如果接线盒的进线口为密封管，则应使用H07RN-F型柔软的电线，电缆的剖面不低于表1章12.5 IEC 60335-1的相关规定。

如果接线盒的进线口是套管，则应通过套管连接电线。

作为用于游泳池、花园池塘的泵，必须在电源线路中安装漏电保护器，其灵敏度不大于30毫安。

安装一个使电源断开的装置，各电极之间至少有3mm的间隙。

对于三相电机，根据其额定电流一定要安装一个过载保护装置曲线D。

对于单相的 **NRM, NR4M** 泵，提供一个连接在接线柱上的电容，对于220-240V-50Hz的电源，还提供一个相连的热保护装置。

6.6操作频率转换器。

调整频率转换器，以便不超过最小极限值。25赫兹最大。 f_N 的赫兹。

7 启动和运行

7.1 启动前的预检

当存在有故障的部件时不要启动本产品

7.2 首次启动



请注意：千万不要使泵干态运行。
一定先注水后再启动泵。

当泵为正吸上扬程下工作时，（即泵中心线低于吸水面）缓慢地打开吸水口的闸阀直到全部开启，使泵得以注水，这时应保持气阀(14.42)和出水口闸阀打开以排除空气。

为使水在一个闭合回路中循环，完全打开两个闸阀以排除空气。

用手检查轴能否转动。

对于三相电机应检查其转向是否和泵壳上箭头所示方向一致，不符，则断开电源互换其中的两相。

对于吸入操作时泵可能需要几分钟时间才能上水正常工作
检查泵是否工作在正常范围，工作电流不应超过铭牌上注明的电流

否则调整出口阀门



当泵送液体温度超过50度时不要接触液体



烫伤危险。由于液体温度较高，泵壳和电机可能超过50°C。



除非有适当的保护装置否则不要触摸这些部件，或等到设备完全冷却下来。

7.3 泵的停车



当存在故障时必须关闭设备

本产品设计为连续工作，当希望断开本产品时可断开供电电源停机(见章节6.5 电气连接)

8 维修

任何维修操作前都应该先断开电源，必要时可由电工或专业技术人员操作



在带电情况下的任何类似清洁或维修的操作都可能对人身造成严重伤害



如果电源电缆出现损坏，必须由厂商、厂商代理或相同资质的人员进行更换。

突发的维修或需要部分拆解零件的维修，都必须由能看懂结构图的专业人员来操作



建议记录所有的维修过程，在维修期间特别小心注意不要带入任何外部细小异物，这会对产品的造成损害



不要在无防护措施的情况下用手直接操作，应带防水防割的手套进行过滤器的拆解清洁或其他维修工作



维修期间无关人员禁止入内

本操作手册中没有介绍的维修工作只能由CALPEDA授权的特别人员来完成

有关产品使用和维修的更多信息请联系CALPEDA S.P.A.

8.1 日常维护 (标准结构)



每次维修工作前都应先断开电源并确保设备不会意外接通运转



烫伤危险。由于液体温度较高，泵壳和电机可能超过50°C。



除非有适当的保护装置否则不要触摸这些部件，或等到设备完全冷却下来。

在泵长期不使用的情况下，如有结冰的可能，则应彻底排放掉液体。

在再次启动泵-电机组前，一定检查轴是否被卡住，并往泵内注水。

8.1 日常维护 (特殊结构)



每次维修工作前都应先断开电源并确保设备不会意外接通运转



烫伤危险。由于液体温度较高，泵壳和电机可能超过50°C。



除非有适当的保护装置否则不要触摸这些部件，或等到设备完全冷却下来。

在泵长期不使用的情况下，如有结冰的可能，则应彻底排空液体。

在再次启动泵-电机机组前，一定检查轴是否被卡住，并往泵内注水。

8.2 系统的分解

分解前，关闭进出口隔栅。

8.3. 泵的拆解



拆解泵之前应关闭进出口的阀门并排空泵壳内的水。

拆解和组装参见剖面图的结构

在不移动泵壳和管路的情况下即可拆解电机和所有的内部零件。

拧下螺母 (14.28) 可将完整的电机带着叶轮一起卸下来。

9. 处理



产品的最终处理应由专业公司操作
确保专业公司是按照材料分类方式处理
按照当地的法规和有关环境保护的国际准则处理

10 备件

10.1 订购备件

订购备件时请根据剖面图提供备件的名称和位置编号及泵铭牌上的数据 (型号、参数和序列号)

备件需求请电话、传真、邮件给CALPEDA S.P.A

保留更改权利

11. 常见故障和解决方法



警告: 任何操作之前均应断开电源。

决不允许泵组干转,即使是短时间的。

严格按照使用说明书操作,如有必要请联系授权服务中心。

故障现象	故障的可能原因	解决办法
1)电机不转	1a)供电问题 1b)电线连接错误 1c)电机的过载保护动作 1d)保险丝问题 1e)泵轴卡死 1f)电机故障	1a)检查主电源的电压、频率等是否匹配。 1b)正确连接供电电源线,检查过热保护装置。 1c)检查供电电源并确认泵轴可以自由转动,检查过热保护装置。 1d)更换保险丝,并检查a)c) 1e)见2)泵卡死 1f)维修或更换电机。
2)泵卡死不转	2a)长期不使用 2b)叶轮被异物卡住 2c)轴承损坏	2a)用一螺丝刀转动泵轴末端的开槽以解除卡阻。 2b)取出叶轮处的异物。 2c)更换轴承。
3)泵工作但不出水	3a)泵内或吸入管路内有空气 3b)可能有漏气的地方 3c)底阀卡死或吸入管口未完全浸入液体中 3d)进口过滤器堵塞	3a)用排气阀释放泵内空气。 3b)检查所有连接处,看是否拧紧或密封 3c)清洗或更换底阀,并选用合适的进水管路 3d)清洗过滤器,如有必要更换它。同时参见2b)。
4)流量不足	4a)管路或附件直径过小 4b)叶轮处存在异物或沉积物 4c)转子损坏 4d)转子和泵壳磨损过度 4e)水中有大量气泡 4f)泵送的液体粘度过高 4g)反转	4a)选用直径适当的管路和附件。 4b)清洁叶轮并安装一进口过滤器。 4c)更换叶轮。 4d)更换叶轮和泵壳 4e)执行打开、关闭加水堵的操作排除泵内空气。 4f)选泵不合适。 4g)将接线盒内任意两线对调。
5) 泵的颤动和噪音	5a)轴承磨损 5b)三相电不平衡	5a) 更换轴承 5b) 检查主电源
6) 机封漏水	6a)机封干转或粘连 6b)泵送液体内有磨蚀性物质导致机封划伤 6c)机封不适合所泵送的液体 6d)灌泵或初次启动泵时的轻微渗透	对6a) 6b) 6c)的情况,需更换机封。 6a)确保泵壳内充满液体,并排空所有气体。 6b)安装进口过滤器,并选用与所泵送介质特性相符合的机封。 6c)选用与所泵送介质特性相符的机封。 6d)让泵转动一会机封将随转动而调整,如问题依然存在,参见6a) 6b) 6c)。

中文

12. ALLEGATI

12.1 Dimensioni e pesi

Dimensions and weights

Abmessung und Gewicht

Dimensions et poids

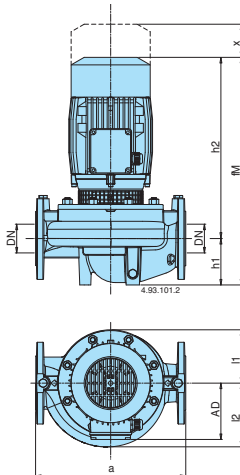
Dimensiones y pesos

Mått och vikt

Afmetingen en gewicht

Διαστάσεις και βάρη

Габариты и вес



TYPE	mm										kg
	DN	a	fM	h1	h2	Ob	AD	l1	l2	x	
NR 50D/A-C/B	50	320	360	90	270	98	111	93	100	70	29,5-30,8
NR 32/160A-A-B/A	32	340	421	80	341	-	128	102	102	60	
NR 32/200B	32	440	469	85	384	-	128	126	126	60	- 36,3
NR 32/200A/A-S/A	32	440	495	85	410	-	138	126	126	60	
NR 40/125A/A-B/A-C	40	320	420	81	339	-	128	93	98	70	29,5-27,5-26,5
NR 40/160B/A	40	320	430	81	349	-	128	119	119	75	35,0
NR 40/160A/A	40	320	470	81	389	-	128	119	119	75	40,0
NR 40/200A-A-B	40	440	496	81	430	-	138	140	140	75	57,5 - 57
NR 50/125C/A-F/A	50	340	437	90	347	-	128	96	115	75	31,5-29,5
NR 50/125A/B	50	340	477	90	387	-	128	96	115	75	36,1
NR 50/160C/B	50	340	480	90	390	-	128	120	128	75	41,6
NR 50/160A/B-B/A	50	340	506	90	416	-	138	120	128	75	51,8-50,5
NR 50/200D/B	50	440	516	100	416	-	138	140	140	80	59,7
NR 50/200A/A-B/A	50	440	544	100	444	-	160	140	140	80	77,2-69,7
NR 50/250C/B	50	440	657	100	557	-	185	175	175	85	114
NR 50/250B/B	50	440	707	100	557	-	185	175	175	85	121
NR 50/250A/B	50	440	732	100	632	-	185	175	175	85	149,5
NR 65/125F/B	65	340	494	105	389	-	128	121	145	95	46
NR 65/125S/B-A-B-D/A	65	340	520	105	415	-	138	121	145	95	56,1-56,1-54,6
NR 65/160A-A-B/A	65	340	552	105	447	-	160	121	142	95	74-67,5
NR 65/200B/B	65	475	666	105	561	-	185	140	153	90	108
NR 65/200A/B	65	475	716	105	611	-	185	140	153	90	114
NR 65/200S/B	65	475	741	105	636	-	185	140	153	90	142,5
NR 65/250C/B	65	475	722	105	567	-	185	175	175	90	134
NR 65/250A/B-B/B	65	475	747	105	642	-	185	175	175	90	161-155

TYPE	mm										kg
	DN	a	fM	h1	h2	Ob	AD	l1	l2	x	
NR4 50A/A-B/A-C/A	50	320	360	90	270	98	111	93	100	70	24-24-24
NR4 65A/A-B/A-C/A	65	360	370	100	270	118	111	102	114	70	28-28-28
NR4 100A/B-B/B-C/B	100	500	549	150	399	162	138	153	173	105	67-59-59
NR4 125C/B	125	600	589	170	419	194	138	172	195	120	91,5
NR4 125A/A-B/A	125	600	608	160	438	194	160	172	195	120	110-108
NR4 32/160A-B	32	340	421	80	341	-	128	102	102	60	23-22,9
NR4 32/200B-C	32	440	429	85	344	-	128	126	126	60	
NR4 32/200A/A	32	440	469	85	344	-	128	126	126	60	
NR4 40/160A-B	40	320	430	81	349	-	128	119	119	75	31,5 - 31
NR4 40/200B	40	440	430	81	349	-	128	140	140	75	39,5
NR4 40/200A/A	50	440	470	81	349	-	128	140	140	75	43
NR4 50/160B-C	50	340	440	90	350	-	128	120	128	75	35,5-33,5
NR4 50/160A/B	50	340	480	90	350	-	128	120	128	75	37,5
NR4 50/200A/B-B/B	50	440	516	100	416	-	138	140	140	80	56
NR4 50/250C/B	50	440	516	100	416	-	138	175	175	85	77,5
NR4 50/250A/A-B/B	50	440	545	100	445	-	160	175	175	85	93,5-80
NR4 65/125D-F	65	340	454	105	349	-	128	121	145	95	39-37
NR4 65/125S/B-A/B	65	340	494	105	349	-	128	121	145	95	42-41,5
NR4 65/160A/B-B/B	65	340	504	105	399	-	138	121	142	95	42,7-42,5
NR4 65/200C/B	65	475	536	105	431	-	138	140	153	90	52
NR4 65/200B/B	65	475	536	105	431	-	138	140	153	90	60
NR4 65/200A/B	65	475	552	105	447	-	160	140	153	90	64,5
NR4 65/250C/B-D/B	65	475	555	105	450	-	160	175	175	90	75,5-75,5
NR4 65/250A/A-B/A	65	475	555	105	450	-	160	175	175	90	98-85

12. ALLEGATI

12.3 Denominazione delle parti

Designation of parts

Teile-Benennung

Description des pièces

Denominación de los elementos

Reservdelslista

Benaming van de onderdelen

Προσδιορισμός ανταλλακτικών

НАЗВАНИЕ КОМПОНЕНТОВ

备件名称

Italiano _____	English _____	Deutsch _____
Nr. Denominazione	Nr. Designation	Nr. Teile-Benennung
14.00 Corpo pompa	14.00 Pump casing	14.00 Pumpengehäuse
14.12 Tappo (scarico)	14.12 Plug (draining)	14.12 Verschlusschraube (Entleerung)
14.20 O-ring	14.20 O-ring	14.20 Runddichtring
14.24 Vite	14.24 Screw	14.24 Schraube
14.28 Dado	14.28 Nut	14.28 Mutter
14.42 Tappo (riempimento)	14.42 Plug (filling)	14.42 Verschlusschraube (Auffüllung)
28.00 Girante	28.00 Impeller	28.00 Laufrad
28.04 Dado bloccaggio girante	28.04 Impeller nut	28.04 Laufradmutter
28.12 Anello di sicurezza	28.12 Circlip	28.12 Sicherungsring
32.00 Lanterna di raccordo	32.00 Lantern bracket	32.00 Antriebslaterne
32.30 Protezione	32.30 Guard	32.30 Verkleidung
32.32 Vite	32.32 Screw	32.32 Schraube
32.33 Dado in gabbia	32.33 Caged Nut	32.33 Käfigmutter
36.00 Tenuta meccanica	36.00 Mechanical seal	36.00 Gleitringdichtung
36.50 Anello di spallamento	36.50 Shoulder ring	36.50 Schulterring
46.00 Anello paraspruzzi	46.00 Deflector	46.00 Spritzring
70.20 Vite	70.20 Screw	70.20 Schraube
73.00 Cuscinetto lato pompa	73.00 Pump-side bearing	73.00 Wälzlager, pumpenseitig
76.00 Carcassa motore con avvolg.	76.00 Motor casing with winding	76.00 Motorgehäuse mit Wicklung
76.04 Passacavo	76.04 Cable gland	76.04 Kabelführung
76.54 Morsettiera completa	76.54 Terminal box, set	76.54 Klemmenbrett, komplett
78.00 Albero con pacco rotore	78.00 Shaft with rotor packet	78.00 Welle mit Rotorpaket
81.00 Cuscinetto lato ventola	81.00 Fan-side bearing	81.00 Wälzlager, lüfterradseitig
82.00 Coperchio motore lato vent.	82.00 Motor end shield, fan side	82.00 Motorlagergehäuse, lüfterradseitig
82.04 Molla di compensazione	82.04 Compensating spring	82.04 Federscheibe
88.00 Ventola	88.00 Motor fan	88.00 Lüfterrad
90.00 Calotta	90.00 Fan cover	90.00 Haube
92.00 Tirante	92.00 Tie-bolt	92.00 Verbindungsschraube
94.00 Condensatore	94.00 Capacitor	94.00 Kondensator
94.02 Anello ferma condensatore	94.02 Capacitor gland	94.02 Sicherungsring für Kondensator
98.00 Coperchio scatola morsetti	98.00 Terminal box cover	98.00 Klemmenkastendeckel
98.04 Vite	98.04 Screw	98.04 Schraube

12. ALLEGATI

12.3 Denominazione delle parti Designation of parts Teile-Benennung Description des pièces Denominación de los elementos Reservdelista Benaming van de onderdelen Προσδιορισμός ανταλλακτικών НАЗВАНИЕ КОМПОНЕНТОВ 备件名称

Français _____		Español _____		Svenska _____	
Nr.	Description	Nr.	Denominación	Nr.	Beskrivning
14.00	Corps de pompe	14.00	Cuerpo bomba	14.00	Pumphus
14.12	Bouchon (vidange)	14.12	Tapón con arandela	14.12	Plugg med bricka
14.20	Joint torique	14.20	Junta cuerpo bomba	14.20	O-ring
14.24	Vis	14.24	Tornillo	14.24	Skruv
14.28	Ecrou	14.28	Tuerca	14.28	Mutter
14.42	Bouchon (remplissage)	14.42	Tapón con arandela	14.42	Plugg med bricka
28.00	Roue	28.00	Rodete	28.00	Pumphjul
28.04	Ecrou de blocage de roue	28.04	Tuerca fijación rodete	28.04	Pumphjulsmutter
28.12	Circlips	28.12	Anillo de seguridad	28.12	Circlip
32.00	Lanterne de raccordement	32.00	Acoplamiento motor bomba	32.00	Mellandel
32.30	Protecteur	32.30	Protector	32.30	Skydd
32.32	Vis	32.32	Tornillo	32.32	Skruv
32.33	Écron engagé	32.33	Tuerca fijación	32.33	Caged Nut
36.00	Garniture mécanique	36.00	Sello mecánico	36.00	Mekanisk axeltätning
36.50	Bague d'appui	36.50	Bague d'appui	36.50	Smorjnippel
46.00	Déflecteur	46.00	Aspersor	46.00	Avkastarring
70.20	Vis	70.20	Tornillo	70.20	Skruv
73.00	Roulement à billes, côté pompe	73.00	Cojinete lado bomba	73.00	Kullager
76.00	Carcasse moteur avec bobinage	76.00	Carcasa motor bobinada	76.00	Stator med lindningar
76.04	Bague de serrage de câble	76.04	Anillo pasacable	76.04	Kabelgland
76.54	Plaque à bornes, complète	76.54	Placa bornes completa	76.54	Kopplingsplint
78.00	Arbre-rotor	78.00	Eje con rotor	78.00	Axel med rotor
81.00	Roulement à billes, côté ventilateur	81.00	Cojinete	81.00	Kullager
82.00	Fond de moteur, côté ventilateur	82.00	Tapa motor lado ventilador	82.00	Motorsköld fläkt sida
82.04	Rondelle de compensation	82.04	Muelle de compensación	82.04	Distansbricka
88.00	Ventilateur	88.00	Ventilador	88.00	Fläkt
90.00	Capot	90.00	Protector ventilador	90.00	Fläktkåpa
92.00	Tirant d'assemblage	92.00	Espárrago tirante	92.00	Statorskruv
94.00	Condensateur	94.00	Condensador	94.00	Kondensator
94.02	Bague d'arrêt pour condensateur	94.02	Anillo fijación condensador	94.02	Fästing för kondensator
98.00	Couvercle de boîte à bornes	98.00	Tapa caja bornes	98.00	Lock för kopplingslåda
98.04	Vis	98.04	Tornillo	98.04	Skruv

12. ALLEGATI

12.3 Denominazione delle parti

Designation of parts

Teile-Benennung

Description des pièces

Denominación de los elementos

Reservdelislista

Benaming van de onderdelen

Προσδιορισμός ανταλλακτικών

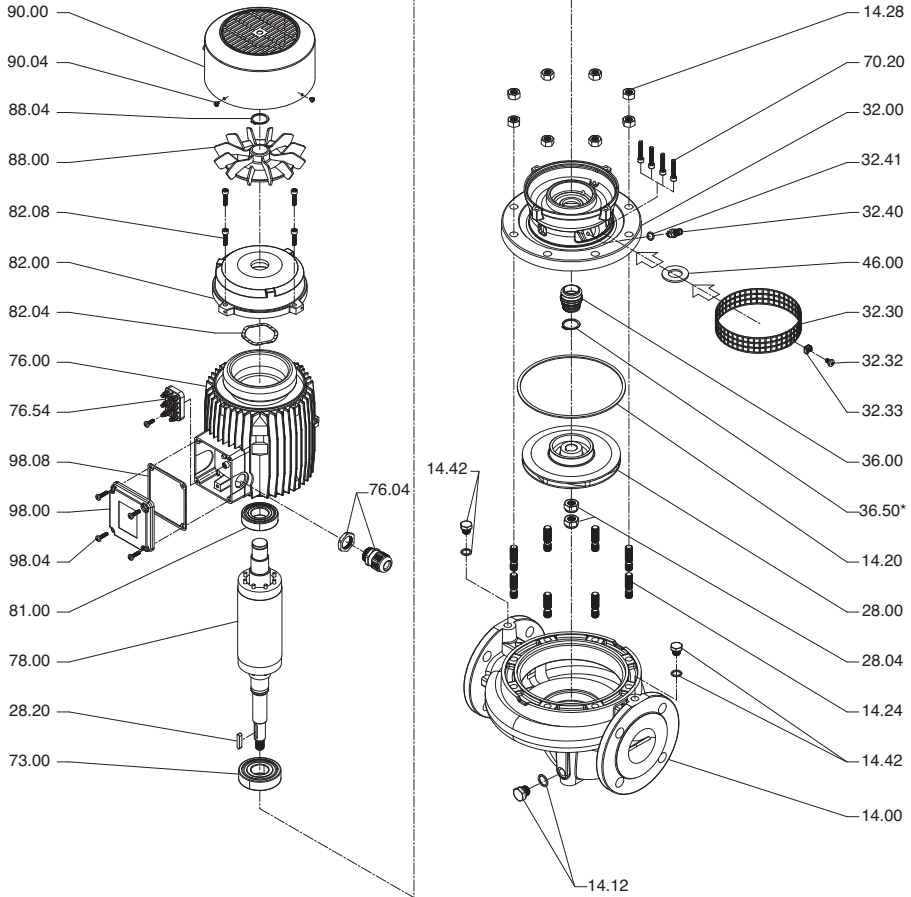
НАЗВАНИЕ КОМПОНЕНТОВ

备件名称

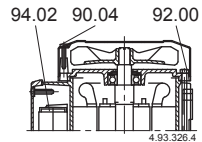
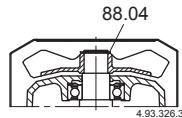
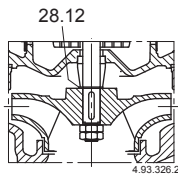
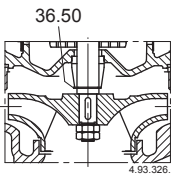
Nederlands _____		Русский _____		中文 _____
Nr.	Benaming	N°	Наименование	名称
14.00	Pomphuis	14.00	Корпус насоса	14.00: 泵壳
14.12	Aftapplug met dichtring	14.12	Пробка (слив)	14.12: 水堵(排放)
14.20	O-ring	14.20	Уплотнительное кольцо	14.20: O型圈
14.24	Bout	14.24	Винт	14.24: 螺丝
14.28	Moer	14.28	Гайка	14.28: 螺母
14.42	Vulplug met dichtring	14.42	Пробка (наполнение)	14.42: 水堵(灌注)
28.00	Waaier	28.00	Рабочее колесо	28.00: 叶轮
28.04	Waaiermoer	28.04	Блокировочная гайка раб. колеса	28.04: 叶轮锁母
28.12	Circlip	28.12	Предохранительное кольцо	28.12: 弹性挡圈
32.00	Lantaarnstuk	32.00	Соединительная втулка	32.00: 笼型支架
32.30	Beschermrooster	32.30	Защитное устройство	32.30: 护网
32.32	Schroef	32.32	Винт	32.32: 螺丝
32.33	Caged Nut	32.33	Гайка с обоймой	32.33: 螺母
36.00	Mechanische asafdichting	36.00	Мех. уплотнение	36.00: 机械密封
36.50	Schouderring	36.50	Упорное кольцо	36.50: 密封挡圈
46.00	Spatring	46.00	Кольцо для защиты от брызг	46.00: 挡水圈
70.20	Bout	70.20	Винт	70.20: 螺丝
73.00	Lager	73.00	Подшипник со стороны насоса	73.00: 泵侧轴承
76.00	Motorhuis met wikkeling	76.00	Корпус двигателя с обмоткой	76.00: 带线包的电机壳体
76.04	Kabeltule	76.04	Кабелепровод	76.04: 电缆护套
76.54	Aansluitbox	76.54	Зажимная коробка в сборе	76.54: 接线盒
78.00	As met rotor	78.00	Вал-ротор	78.00: 轴与转子组
81.00	Lager	81.00	Подшипник со стороны крыльчатки	81.00: 风扇侧轴承
82.00	Motordeksel	82.00	Крышка двигателя со стороны крыльчатки	82.00: 风扇侧电机端盖
82.04	Compensatieveer	82.04	Компенсационная пружина	82.04: 补偿弹簧
88.00	Koelwaaier	88.00	Крыльчатка	88.00: 电机风扇
90.00	Koelwaaierkap	90.00	Колпак	90.00: 风扇罩
92.00	Draadeind	92.00	Анкерный болт	92.00: 连接螺栓
94.00	Condensator	94.00	Конденсатор	94.00: 电容
94.02	Condensatorkraag	94.02	Стопорное кольцо конденсатора	94.02: 电容压盖
98.00	Deksel aansluitdoos	98.00	Крышка зажимной коробки	98.00: 接线盒盖
98.04	Bout	98.04	Винт	98.04: 螺丝

12.4. Disegno per lo smontaggio ed il rimontaggio

Drawing for dismantling and assembly
 Zeichnung für Demontage und Montage
 Dessin pour démontage et montage
 Dibujo para desmontaje y montaje
 Ritning för demontering och monterring
 Onderdelentekening
 Чертеж для демонтажа и сборки
 组装与分解图



* NR4 65/200 A-B



12.5. Sezione minima dei conduttori
Minimum cross-sectional area of conductors
Kleinster Querschnitt der Leiter
导体最小截面积

Tab. 1

TAB 1IEC 60335-1

Corrente nominale dell'apparecchio Rated current of appliance Bemessungsstrom des Gerätes 设备额定运行电流 A	Sezione nominale Nominal cross-sectional area Nennquerschnitt 导体额定截面积 mm ²
>0,2 ÷ ≤3	0,5 ^a
>3 ÷ ≤6	0,75
>6 ÷ ≤10	1,0
>10 ÷ ≤16	1,5
>16 ÷ ≤25	2,5
>25 ÷ ≤32	4
>32 ÷ ≤40	6
>40 ÷ ≤63	10

^a Questi cavi possono essere usati solo se la loro lunghezza non supera 2 m tra il punto in cui il cavo o la sua protezione entra nell'apparecchio e l'entrata nella spina.

These cords may only be used if their length does not exceed 2 m between the point where the cord or cord guard enters the appliance and the entry to the plug.

Diese Leitungen dürfen nur verwendet werden, wenn ihre Länge 2 m zwischen dem Punkt, an dem die Leitung oder die Biegeschutztülle in das Gerät eintritt, und dem Eintritt in den Stecker nicht überschreitet.

电源线插头到电线末端尾档的长度不应超过2米。

I DICHIARAZIONE DI CONFORMITÀ

Noi CALPEDA S.p.A. dichiariamo sotto la nostra esclusiva responsabilità che le Pompe NR, NR4, NRM, NRM4, tipo e numero di serie riportati in targa, sono conformi a quanto prescritto dalle Direttive 2006/42/CE, 2009/125/CE, 2014/30/EU, 2014/35/EU e dalle relative norme armonizzate. Regolamento della Commissione N. 547/2012, 640/2009.

GB DECLARATION OF CONFORMITY

We CALPEDA S.p.A. declare that our Pumps NR, NR4, NRM, NRM4, with pump type and serial number as shown on the name plate, are constructed in accordance with Directives 2006/42/EC, 2009/125/EC, 2014/30/EU, 2014/35/EU and assume full responsibility for conformity with the standards laid down therein. Commission Regulation No. 547/2012, 640/2009.

D KONFORMITÄTSESKLÄRUNG

Wir, das Unternehmen CALPEDA S.p.A., erklären hiermit verbindlich, daß die Pumpen NR, NR4, NRM, NRM4, Typbezeichnung und Fabrik-Nr. nach Leistungsschild den EG-Vorschriften 2006/42/EG, 2009/125/EG, 2014/30/EU, 2014/35/EU entsprechen. ErP-Richtlinie N. 547/2012, 640/2009.

F DECLARATION DE CONFORMITE

Nous, CALPEDA S.p.A., déclarons que les Pompes NR, NR4, NRM, NRM4, modèle et numéro de série marqués sur la plaque signalétique sont conformes aux Directives 2006/42/CE, 2009/125/CE, 2014/30/EU, 2014/35/EU. Règlement de la Commission N° 547/2012, 640/2009.

E DECLARACION DE CONFORMIDAD

En CALPEDA S.p.A. declaramos bajo nuestra exclusiva responsabilidad que las Bombas NR, NR4, NRM, NRM4, modelo y número de serie marcados en la placa de características son conformes a las disposiciones de las Directivas 2006/42/CE, 2009/125/CE, 2014/30/EU, 2014/35/EU. Reglamento de la Comisión n.º 547/2012, 640/2009.

DK OVERENSSTEMMELSESERKLÆRING

Vi CALPEDA S.p.A. erklærer hermed at vore pumper NR, NR4, NRM, NRM4, pumpe type og serie nummer vist på typeskiltet er fremstillet i overensstemmelse med bestemmelserne i Direktiv 2006/42/EC, 2009/125/EC, 2014/30/EU, 2014/35/EU og er i overensstemmelse med de heri indeholdte standarder. Kommissionens forordning nr. 547/2012, 640/2009.

P DECLARAÇÃO DE CONFORMIDADE

Nós, CALPEDA S.p.A., declaramos que as nossas Bombas NR, NR4, NRM, NRM4, modelo e número de série indicado na placa identificadora são construídas de acordo com as Directivas 2006/42/CE, 2009/125/CE, 2014/30/EU, 2014/35/EU e somos inteiramente responsáveis pela conformidade das respectivas normas. Disposição Regulamentar da Comissão n.º 547/2012, 640/2009.

NL CONFORMITEITSVERKLARING

Wij CALPEDA S.p.A. verklaren hiermede dat onze pompen NR, NR4, NRM, NRM4, pomptype en serienummer zoals vermeld op de typeplaat aan de EG-voorschriften 2006/42/EU, 2009/125/EU, 2014/30/EU, 2014/35/EU voldoen. Verordening van de commissie nr. 547/2012, 640/2009.

SF VAKUUTUS

Me CALPEDA S.p.A. vakuutamme että pumppumme NR, NR4, NRM, NRM4, malli ja valmistusnumero tyypikkilvystä, ovat valmistettu 2006/42/EU, 2009/125/EU, 2014/30/EU, 2014/35/EU direktiivien mukaisesti ja CALPEDA ottaa täyden vastuun siitä, että tuotteet vastaavat näitä standardeja. Komission asetus (EY) N:o 547/2012, 640/2009.

S EU NORM CERTIFIKAT

CALPEDA S.p.A. intygar att pumpar NR, NR4, NRM, NRM4, pumptyp och serienummer, visade på namnplåten är konstruerade enligt direktiv 2006/42/EC, 2009/125/EC, 2014/30/EU, 2014/35/EU. Calpeda åtar sig fullt ansvar för överensstämmelse med standard som fastställts i dessa avtal. Kommissionens förordning nr 547/2012, 640/2009.

GR ΔΗΛΩΣΗ ΣΥΜΦΩΝΙΑΣ

Εμείς ως CALPEDA S.p.A. δηλώνουμε ότι οι αντλίες μας αυτές NR, NR4, NRM, NRM4, με τύπο και αριθμό σειράς κατασκευής όπου αναγράφετε στην πινακίδα της αντλίας, κατασκευάζονται σύμφωνα με τις οδηγίες 2006/42/ΕΟΚ, 2009/125/ΕΟΚ, 2014/30/ΕΥ, 2014/35/ΕΥ και αναλαμβάνουμε πλήρη υπευθυνότητα για συμφωνία (συμμόρφωση), με τα στάνταρ των προδιαγραφών αυτών. Κανονισμός Αρ. 547/2012, 640/2009 της Επιτροπής.

TR UYGUNLUK BEYANI

Bizler CALPEDA S.p.A. firması olarak NR, NR4, NRM, NRM4, Pompalarımızın, 2006/42/EC, 2009/125/EC, 2014/30/EU, 2014/35/EU, direktiflerine uygun olarak imal edilidiklerimi beyan eder ve bu standartlara uygunluğuna dair tüm sorumluluğu üstleniriz. 547/2012, 640/2009 sayılı Komisyon Yönetmeliği.

RU ДЕКЛАРАЦИЯ СООТВЕТСТВИЯ

Компания "Calpeda S.p.A." заявляет с полной ответственностью, что насосы серий NR, NR4, NRM, NRM4, тип и серийный номер которых указывается на заводской табличке соответствуют требованиям нормативов 2006/42/CE, 2009/125/CE, 2014/30/EU, 2014/35/EU. Постановление Комиссии № 547/2012, 640/2009.

中文 声明

我们科沛达泵业有限公司声明我们制造的 NR, NR4, NRM, NRM4, (在标牌上的泵型号和序列号)均符合以下标准的相应目录:2006/42/CE,2009/125/EC,2014/30/EU,2014/35/EU.本公司遵循其中的标准并承担相应的责任.委员会条例 No.547/2012, 640/2009

Montorso Vicentino, 10.2017

Il Presidente
Marco Mettifofo



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