# **Panasonic**

# Operating Instructions 使用說明書

إرشادات التشغيل

Water Purifier For Household Use

瀘水器 家庭用

مرشحة الماء للاستخدام المنزلي



Model No. TK-CS200



Thank you for purchasing this Panasonic product. 感謝您購買Panasonic的產品。

شكرًا لشرائك هذا المنتج من باناسونيك.

- Please read these instructions carefully before using this product, and save this manual for future use.
- Please carefully read the "Safety Precautions" (P.EN3-EN4) of this manual before use.
- Be absolutely sure to check that the purchase date has been entered on the warranty.
- Please keep in mind that the manufacturer of the product will not be responsible for any product malfunctioning or accidents resulting from the improper installation or operation of the product.
- ■請在使用本產品之前仔細閱讀本說明書,並妥善保管本說明書以備日後使用。
- ■請在使用之前仔細閱讀「安全注意事項」(參閱TC3~TC4頁)。
- ■保證書上的「購買日期」請務必填寫。
- ■因安裝錯誤或不正確使用,而造成產品故障或發生事故時,本公司恕不負責。
  - يرجى قراءة هذه الإرشادات بعناية قبل استخدام المنتج والاحتفاظ بهذا الكتيب لاستخدامه في المستقبل.
    - يرجى قراءة «احتياطات السلامة» (ص.ĀR4-AR3) في هذا الكتيب بعناية قبل الاستخدام.
      - احرص على تدوين تاريخ الشراء في الضمان.
- \_ يرجى الانتباه إلى أن الشَّركة المصنعة للمنتج لن تكون مسؤولة عن أي خلل أو حوادث تنتج عن تركيب أو تشغيل المنتج بشكل غير صحيح.

# **Contents**

Safety PrecautionsEN Operating PrecautionsEN
Installation 1  Names of the Parts and Check the supplied accessoriesEN
Installation 2 Checking the faucetEN
Attaching the bypass selectorEN
Installation 4 Installing the Water PurifierEN1
Installation 5 Checks after installation EN1

How to Use	EN12
Maintenance	EN13
Replacing the Cartridge	EN15
When the water supply is cut off	EN16
When not in use for a long time	EN16
When Moving the main unit	EN17
Q&A	EN18
Before Requesting a Repair Service	EN19
Optional Accessories	EN20
Specifications	EN20

# 目錄

<b>安全注意事項</b> 使用上的注意事項	
安装1 零件名稱及檢查已提供的配件	TC6
安裝2 查看水龍頭	TC7
安裝分水開關	TC8
安裝濾水器	TC10
安裝5 安裝後的確認	TC11

使用方法	TC12
維修保養	TC13
更換濾芯	TC15
斷水時	TC16
長期間不使用	TC16
移動本體時	TC17
常見問題 (Q&A)	TC18
委託修理前	TC19
選購品	TC20
規格	TC20
售後服務據點一覽表	TC21

AR12	طريقة الاستخدام
AR13	الصيانة
AR15	ستبدال العبوة
AR16	عند قطع إمداد الماء
AR16	حين لا يتم استخدام المنتج لفترة طويلة
	عند نقل الوحدة الرئيسية
AR18	سين وجيم
AR19	فبل طلب خدمة التصليح
AR20	لملحقات الاختيارية
AR20	المواصفات

	المحتويات
<b>AR3</b>	
ات المرفقةا	التركيب 1 أسماء الأجزاء والتحقق من الملحة
AR7	التركيب 2 التحقق من الصنبور
AR8	
AR10	التركيب 4 تركيب مرشحة الماء
AR11	التركيب 5 التركيب التأكد بعد التركيب

## **Safety Precautions**

Please make sure to follow these instructions

In order to prevent accidents to people or damage to property, always follow the instructions below.

■ The following is an explanation of danger and damage caused due to incorrect usage according to severity.

**MARNING** 

Indicates serious injury or death.

**CAUTION** 

Indicates risk of injury or property damage.

■ The symbols are classified and explained as follows. (The following are examples of symbols.)



This symbol indicates prohibition.



This symbol indicates requirement that must be followed.

# **WARNING**

## Water supply



- Do not use water sources other than qualified drinking water.
   (Doing so may cause health problems.)
  - The Water Purifier cannot sterilize water or remove harmful substances.

# **CAUTION**

### Installation location



- Do not block the main spout or bend, twist, flatten, pull or clamp the hose.
   (Doing so may cause water to leak, prevent the output of water or cause other malfunctioning.)
- Do not connect a hose or any other appliances to main spout.
   (Doing so may cause water leaks or malfunctions.)
- Do no use the product with the outlet pipe loosened. (Doing so may cause water leaks or damage.)
  - If it has come loose, screw it in securely.

## Storing purified water



Use purified water immediately after it is produced. When storing it for future consumption, pour into a clean sealed container, and consume it within 1 day if it is kept at room temperature or within 2 days if it is kept in the refrigerator.
 (The Water Purifier removes sterilizers (such as chlorine) so the water may go bad over time, possibly causing health problems.)

## Safety Precautions Please make sure to follow these instructions

(continued)

# **⚠** CAUTION

## Non-consumable purified water, applications



 Do not use purified water for the care of fish, etc. (The environment may change as a result, and the fish, etc. may die.)





- At the beginning of daily use, run water about 1.5 liters (about 15 seconds) before using.
- If 2 days or more have passed after the last use, run water about 18 liters (about 3 minutes) before using.

(Using residual water inside the main unit may cause ill health.)

## **Accidental ingestion**



- Do not leave the supplied accessories within reach of infants or toddlers. (Doing so may result in accessories being swallowed by mistake.)
  - Consult a doctor immediately if you suspect that an accessory has been swallowed.
- Do not allow infants or toddlers to play with packaging material. (Doing so may cause suffocation.)

EN4

TK-CS200\_01\_EN. indd 2 2022/10/26 14:27:00

# English

# **Operating Precautions**

## Water supply

- Do not drink water in case of the following conditions.
  - Water which is very turbid, or water containing a great deal of red rust (Doing so may shorten the service life of the cartridge.)

#### Installation

- Do not install the Water Purifier in any of the following locations.
  - Near hot areas such as heating appliances (above 60 °C)
    - (Doing so may cause it to become deformed.)
  - In an area in direct sunlight or where it may be exposed to wind and rain (Doing so may cause incorrect operation or malfunctions.)
  - Where it may freeze
     (Doing so may cause cracking in the water pipes or cartridge.)
  - Where it may be covered with oil (Doing so may cause cracking in the main unit.)
  - In a bathroom or where the Water Purifier will be exposed to water or steam (Doing so may cause incorrect operation or malfunctions.)
- Do not connect the Water Purifier to a hot water-only faucet.

(Doing so may cause malfunction.)

- Do not extend the main spout using a commercially sold hose, etc.
   (Doing so may cause malfunction.)
- Do not disassemble, repair or remodel the unit.

(Doing so may cause malfunction.)

- → Please contact a dealer or subordinate service station of Panasonic for inspection or maintenance.
- In an unstable location (Doing so may cause malfunction.)

## **Usage**

- Do not place this product upside down. (Doing so may cause malfunction.)
- The table below shows the temperatures of water that can be used. Use water at these temperatures.

(Doing so may cause malfunction.)

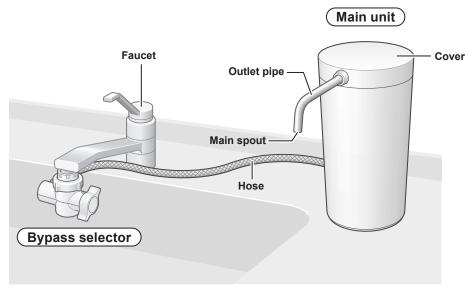


Position of bypass sele	ctor Water temperature
When using purified water	
· 🖒 : Purified	
9.0	Under 35 °C
When using tap water	
•    : Unpurified (Foam str	raight)
7. 77	Under 80 °C

EN5

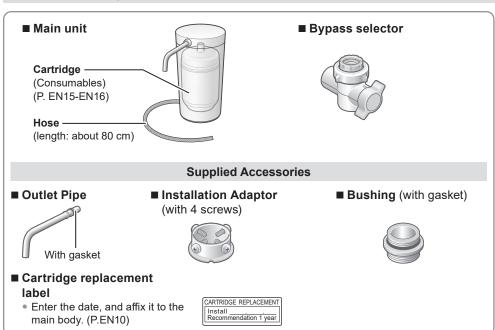
TK-CS200\_01\_EN. indd 3 2022/10/26 14:27:01

# Installation 1 Names of the Parts and Check the supplied accessories



If any are missing, contact your dealer.

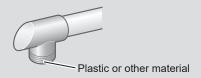
## Items in the package



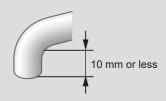
# **Installation 2** Checking the faucet

## Water faucet which cannot install the Water Purifier

## Faucet without a metal lip end







### Shower nozzle



### Faucet with sensor



### Note

### Faucet with a flaring end

 Water faucet which can attach the Water Purifier using options.



EN7

TK-CS200\_01\_EN. indd 5 2022/10/26 14:27:02

# Installation 3 Attaching the bypass selector

Keep all parts that are not used during installation, as they may be needed later if the unit is moved or the faucet is changed.

### Outside-screwed faucet

### Inside-screwed faucet

• Water faucet which can attach the Water Purifier without an accessory.



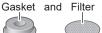
Aerator (not used) Do not use the removed aerator.



• Do not use the removed aerator.

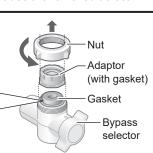
## Remove the nut and adaptor.





Do not remove the gasket and the filter inside the bypass selector. If these are moved, return to the original position.

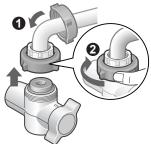
Make sure foreign matter is not attached to the filter and the gasket is not inclined.



Attach the nut and adaptor.



- Attach the bypass selector and tighten the nut until the bypass selector does not turn.
  - Do not use any tools. (This may damage the nut.)
  - Make sure the bypass selector is not inclined.



Screw in the bushing. Insert into the adaptor.



- Attach the nut and adaptor.
  - The adaptor should be screwed on straight. Screwing it on tilted may strip the threads, resulting in water leaks.



Attach the bypass selector and tighten the nut until the

bypass selector does not turn.

- Do not use any tools. (This may damage the nut.)
- Make sure the bypass selector is not inclined.

## Faucet without an aerator

• Water faucet which can attach the Water Purifier with accessory.

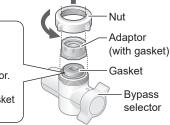


- 1 more than 10 mm
- 2 13 mm or more, less than 24 mm
- Remove the nut and adaptor.

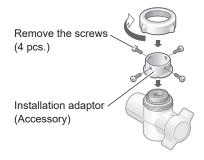


Do not remove the gasket and the filter inside the bypass selector. If these are moved, return to the original position.

Make sure foreign matter is not attached to the filter and the gasket is not inclined.



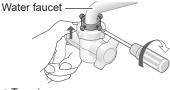
2 Insert the installation adaptor, and tighten it with the nut.



Tighten the 4 screws temporarily and loosen the nut to leave a 3 - 4 mm gap.



4 Push the bypass selector against the faucet and install the 4 screws as shown below.



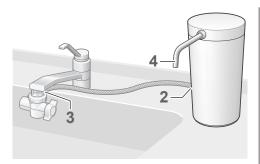
Top view



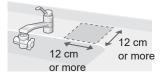
- ① Water faucet ② Installation adaptor
  - 3 Screws
- 5 Tighten the nut until the bypass selector does not turn.
  - Do not use any tools. (This may damage the nut.)
  - Make sure the bypass selector is not inclined.



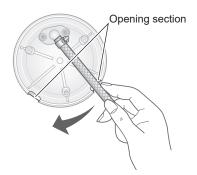
# Installation 4 Installing the Water Purifier



1 Choose a stable, level surface.



2 Determine the most convenient location for the main unit, and then decide the direction to extend the hose (using the opening section).



# 3 After completing the preparations, connect the hose.

- ① Remove the hose fastening nut from the bypass selector, and pass the hose through the nut.
- ② Insert the hose into the bypass selector as far as it will go.
- ③ Tighten up the hose fastening nut securely.
  - Do not use any tools for this assembly (since the hose fastening nut may be damaged).



## 4 Attach the outlet pipe.

- Push it in firmly as far as it will go.
- Ensure that the gasket does not come off or protrude from the groove, preventing it from twisting (since this may cause the water to leak).
- Do not lift the unit by taking hold of the outlet pipe (otherwise damage may result).



# 5 Affix the cartridge replacement label.

 Enter the use start date with an oilbased pen, and affix it to the main body.

CARTRIDGE REPLACEMENT
Install \_\_\_\_\_
Recommendation 1 year

**EN10** 

TK-CS200\_01\_EN. indd 8 2022/10/26 14:27:04

# Run purified water for about 5 minutes to expel the air inside the main

How to run purified water (P. EN12-EN13)

- ① Set the bypass selector to "· ♠ ".
- 2 Turn on the water faucet to let the water flow.

### Note

- Purified water may contain some black powder (activated carbon). The amount will decrease as more water flows, so continue checking the water condition for a while.
- 2 Check the items on P. EN11-EN12 for any malfunctions.

Check item	Trouble inspection location and remedial action	Reference page
Is water coming out of the main spout?  Main spout	<ul> <li>Is the hose bent or flattened?</li> <li>→ If it is, straighten it out.</li> </ul>	EN10
Is any water leaking from where the bypass selector is connected?	<ul> <li>Has the bypass selector been installed securely on the faucet?         <ul> <li>Check again the instructions for "Attaching the bypass selector", and install it securely.</li> </ul> </li> <li>Have the parts inside the bypass selector been Inserted properly?         <ul> <li>If not, install them properly.</li> </ul> </li> <li>Are there any cracks at the end of the faucet (in the insulating cap, for instance)?         <ul> <li>Consult a plumber.</li> </ul> </li> </ul>	EN8-EN9  EN8-EN9
Is there any water leaking from where the hose is connected?	<ul> <li>Has the hose been attached securely to the bypass selector?</li> <li>→ Insert it as far as it will go, and use the hose fastening nut to secure it.</li> <li>&lt; OK &gt; &lt; NG &gt; </li> <li>Gap</li> </ul>	EN10

# Installation 5 Checks after installation (continued)

Check item	Trouble inspection location and remedial action	Reference page
Is there any water leaking from where the outlet pipe is connected?	<ul> <li>Has the outlet pipe been attached securely to the main unit?         → Insert it securely as far as it will go.     </li> <li>Is the gasket installed on the outlet pipe or is it twisted?         → Install the gasket properly.         Gasket     </li> </ul>	EN10
Is water leaking from the faucet?	<ul> <li>Is the gasket on the faucet old?         <ul> <li>Consult a plumber.</li> </ul> </li> <li>Are there any cracks in the faucet (in the insulating cap, for instance)?         <ul> <li>Consult a plumber.</li> </ul> </li> </ul>	-

## **How to Use**

- Set the bypass selector to
  - "·◊": Purified water







EN12

TK-CS200\_01\_EN. indd 10 2022/10/13 10:12:19

## How to Use (continued)

## 2 Open the faucet.

At the beginning of daily use, run water about 1.5 liters (about 15 seconds) before using.
 (P. EN4)





## 3 After use, close the faucet.

Water may come out slightly from the main spout even after the water flow is stopped.
 It is not a malfunction. (This is water remaining in the outlet pipe.)

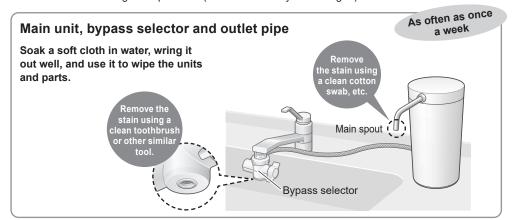
## **Maintenance**

#### Important

Do not use detergents, cleansers, paint thinners, benzine, alcohol or kerosene for cleaning purposes.
 If, for Instance, a detergent has been used by mistake, wipe the surface with a damp cloth to remove all traces of the detergent.

(Otherwise, the detergent may get mixed in with the water running through the Water Purifier or the plated parts may be damaged or peel off or the plastic parts may become damaged, discolored or deformed.)

- Use of cleansers may also impair the workings of the outlet pipe and cause trouble.
- Do not use brushes or other implements made of metal (since they may leave scratch marks).
- Do not use a tool to tighten up the nut (since the nut may be damaged).



**EN13** 

TK-CS200\_01\_EN. indd 11 2022/10/26 15:51:27

# Maintenance (continued)

## Bypass selector mounting part

# Remove the bypass selector, then rinse the filter and water intake.

 The water flow may decrease when the filter in the bypass selector connection area becomes clogged with impurities.

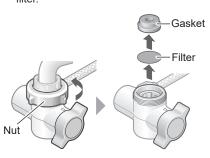


### ■ How to remove

① Set the bypass selector to "· \( \) ".



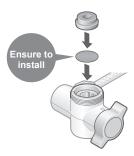
② Loosen the nut, remove the bypass selector, and take out the gasket and filter.



## ■ How to attach

Be sure to follow this order.

1) Reinstall



- ② Securely tighten the nut.
- ③ After mounting the bypass selector, set the lever to " · | | " and allow water to flow for about 5 seconds.



When the service life of the cartridge is to be expired or the purified water ability is reduced, please replace the cartridge with a new one.



## Cartridge replacement standard

There are 4 kinds of change standards. If 1 of the following conditions is met, please replace the cartridge.

The using time is about 1 year.

The total run through water volume reaches 12 000 L.\*

The flow of purified water suddenly decreases. (The cartridge is blocked.)

When there is smell or unpleasant smell

- \* Purification capacity (P. EN20)
- The cartridge's life will be shortened when the Water Purifier is used with a quality of water containing many clogging substances.

## Replacing method

- Before replacing the cartridge, turn off the faucet. Do not run water through the Water Purifier with the cartridge removed.
  - (Doing so will cause the water to overflow.)
- Dispose of the used cartridge in accordance with the applicable ordinances in the area concerned.
   (The material of the cartridge cover is ABS. For the type of the filter materials, refer to P. EN20.)

Cover

Preparation: Please turn off the faucet.

1 Remove the cover.

 Do not take the outlet pipe to turn the cover. (Doing so may cause damage.)

 Turn the cover to the direction indicated by the arrow.

② Remove.





3 Install the new cartridge.

Insert a new cartridge into the cover.



② Attach the cover to the casing.



Proceed to **Step 4** on the next page

EN15

TK-CS200\_01\_EN. indd 13 2022/10/26 14:27:06

English

# Replacing the Cartridge (continued)

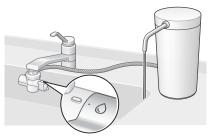
- Be sure to tighten the cover.
  - 1) Turn it to the convex on the main body.
  - 2 Turn it anticlockwise (180°).



- Affix the cartridge replacement label.
  - Enter the use start date with an oilbased pen in the cartridge replacement label included with the new cartridge, and affix it to the main body.

CA	RTRIDGE	REPL	ACEMENT
I	nstall		
R	ecomme	ndatio	n 1 year

Open the faucet, and run purified water through the Water Purifier.
(for about 5 minutes)



#### Note

 Purified water may contain some black powder (activated carbon).
 The amount will decrease as more water flows, so continue checking the water condition for a while.

# When the water supply is cut off

- The Water Purifier cannot be used. If the water is cut off during use, turn off the faucet.
- When the water supply is restored, set the bypass selector to " " and first run tap water into the sink to run out the air and turbid water inside the pipes. The Water Purifier may then be used again as usual. (This is because the cartridge life will be significantly reduced.)

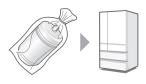
# When not in use for a long time

- When not used for about 1 week or longer
  - Remove the cartridge (P. EN15-16), and store it sealed in a vinyl bag in a refrigerator.
    - · Remove air from the bag, and close the opening.
- When not used for about 1 month or longer
  - Follow the above steps.

#### Note

- Storing the cartridge for a prolonged period may alter the quality of the water within the cartridge, so replacing the cartridge is recommended.
- To use this unit again
  - 1) Install the cartridge (P. EN15-16)
  - ② Run water for about 3 minutes, and check before using that there is no water leak.

EN16



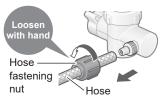
TK-CS200\_01\_EN. indd 14 2022/10/26 14:27:06

# When Moving the main unit

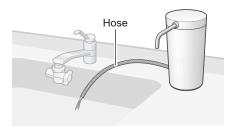
Remove water from the main unit with the following steps before moving the product.

Stand the main unit while moving. After removing the water, a small amount of water may remain, so
put the main unit in a bag, etc.

## 1 Disconnect the hose.



- After disconnecting the hose, attach the hose fastening nut to the original position of the bypass selector (loss prevention).
- **2** Remove the cartridge. (P.EN15)
- Put the tip of the hose at a position lower than the main unit, and discharge the water remaining in the hose.



4 Attach the cartridge and cover to the original position.
(P.EN15-EN16)

## 5 Loosen the nut, remove the bypass selector, and remove the water inside.



# ■ When the joint is difficult to remove

After tightening the nut firmly with hand, rotate it together with the bypass selector. Then it can be removed easily.

 If it still cannot be removed, use a tool such as a plier to nip the foam joint, and remove it.



 When using a tool such as a plier, protect the joint with cloth, etc. not to damage it, and pay attention to the rotation direction.

# Q&A

Question		Answer	
Cartridge	What is the part number of the cartridge for replacement?	TK-CS200C (P. EN20)	
ter	Can I use underground water or well water?	Only the water that has passed a test for drinking can be used.	
Tap water	Up to what temperature can I use for hot water?	Water with a temperature of less than 35 °C can be used. (P. EN5) When the bypass selector is adjusted to "•——", water with a temperature of less than 80 °C can be used.	
Purified water	How long do the purified water "keep"?	Use it within 1 day at room temperature.  When purified water is produced, the chlorine (sterilizer) in the tap water is removed off, making it easier for bacteria to proliferate.  • Even when storing purified water in the refrigerator, keep it in a clean sealed container, and use it within 2 days.	
Others	White powder is attached on the kettle or electric thermos flask.	It is the calcium from the water.  There is no problem if you drink the water, but if it bothers you, clean the containers concerned.  If the white powder is not removed by cleaning, obtain some citric acid from a pharmacy, mix 50 g with 1 liter of water, leave to soak in the containers for 2 or 3 days, and then rinse the deposit off. (Buy citric acid at a pharmacy.)	

# **Before Requesting a Repair Service**

First, check P. EN19.

If the problem is not solved after the following contents are checked, please contact a dealer or subordinate service station of Panasonic for handling.

Problem		Check point
Water leakage	Faucet and connection parts of bypass selector, hose, and outlet pipe	See P. EN11-EN12.
	Bypass selector (location other than the water outlet selected with the bypass selector) Though the bypass selector is adjusted to " · \( \rightarrow \)", water drips from the source water opening.	<ul> <li>The cause seems to be calcium, etc. depositing inside the bypass selector.</li> <li>→ Dissolve about 50 g of citric acid in 1 liter of water. Remover the bypass selector (P. EN14) and hose, soak them in the citric acid water for about 12 hours, and wash them with water.</li> <li>(Buy citric acid at a pharmacy.)</li> </ul>
Main spout	Water drips or trickles out of the main spout even when the water is cut off	<ul> <li>This is not a malfunction.</li> <li>(The water flows out is the water residing in the piping.)</li> </ul>
	No water or very little is discharged	<ul> <li>Is the faucet fully open?</li> <li>Is the filter of the bypass selector clogged?  → Perform maintenance. (P. EN13-EN14)</li> <li>Has the water supply been cut off ? (P. EN16)</li> <li>Is the hose bent or flattened?</li> <li>If the problem is still not solved after all of the above are checked, the cartridge may be clogged. Replace the cartridge. (P. EN15-EN16)</li> </ul>
	Not much water comes out of the Water Purifier after the cartridge has been replaced	<ul> <li>Did you run water for about 5 minutes after replacement?</li> <li>(P. EN16)</li> <li>(It is necessary to remove the air inside the cartridge)</li> </ul>
Odor, taste, turbidness,		<ul> <li>Purification performance of the cartridge is deteriorated.</li> <li>→ Replace the cartridge. (P. EN15-EN16)</li> </ul>

**EN19** 

TK-CS200\_01\_EN. indd 17 2022/10/26 14:27:07

# **Optional Accessories**

Obtain all optional accessories from your dealer. For details on how they are used, refer to the accompanying instructions.

### Consumables

Replacement cartridge Model No: TK-CS200C

## For use with large faucet

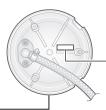
Large-diameter Faucet Fitting (inside diameter 32.5 mm)

Model No: WTK7205X7378

• For faucets whose end diameter is 24 - 32 mm

## Mark position of the manufacturing number





The manufacturing number is marked on this location.

# **Specifications**

Main materials	Main unit	ABS resin		
	Bypass selector	ABS resin		
	Hose	Vinyl chloride		
Main unit	Dimensions	About 133(W) × 133(D) × 251(H) mm		
	Weight	About 1.1 kg (approx. 2.6 kg when full of water)		
Temperature of water used by main unit		Under 35 °C (under 80 °C for bypass selector)		
The lowest applicable dynamic water pressure		40 kPa		
Pressure of water used by main unit (dynamic pressure)		40 kPa to 350 kPa		
Usable water service pressure (static pressure)		40 kPa to 750 kPa		
Filtration flow volume		6.0 L/min. [at 100 kPa water pressure]		
Cartridge Installed In the unit		TK-CS200C		
Purification capacity		Free residual chlorine	12 000 L	(*1)
		Turbidity	12 000 L	(*2)
Removable substances		Iron (particulate form)	Can be removed	(*3)
Guide for time to replace cartridge		About 1 year		(*4)
Filter material		Non-woven fabric, activated carbon		
Components which cannot be filtered out		Iron dissolved in water, heavy metals (silver, copper, etc.), salt (seawater)		

- All figures given are for a water temperature of 20 °C.
- This product cannot convert hard water into soft water.
- (\*1) This value is for a removal rate of 80 % based on JIS S 3201 tests
- (\*2) This value is for a filtration flow volume of 50 % based on JIS S 3201 tests
- (\*3) This substance is for a removal rate of 80 % based on specification standard tests (JWPAS B standards) stipulated by the Japan Water Purifier Association (JWPA)

  Note that it is not stipulated as part of purification capacity.
- (\*4) This period applies when 30 liters of water are used a day. If 60 liters are used a day, the cartridge usage limit will be approximately 1/2. The period may also be significantly less depending on the amount of water used and on its quality and pressure.

製造商:松下家電(中国)有限公司商品原產地:中國

進口商:台灣松下銷售股份有限公司公司地址:新北市中和區建六路57號電話號碼:0800-098800

Printed in China 中國印刷

باناسونيك كوربوريشن

Panasonic Corporation https://www.panasonic.com © Panasonic Corporation 2023



ZGS0TKCS2000Z H0423-0

TK-CS200\_00\_CV. indd 2 2022/10/11 16:49:15