

Analyzer for Total Hardness

PACON 5000 is a compact, easy-to-operate and high accuracy water quality analyzer provided by PRIMA for automatic on-line inspection of water quality residual hardness and quality control of water softening processes. This system controls the selectable limits based on the titration colorimetric principle, providing accurate measurement readings by extinction, and a variety of functions to ensure the reliability of real-time operation. Low maintenance and low reagent consumption, suitable for long time continuous operation, maintenance-free, especially suitable for the boiler room.



Applications



Process Water



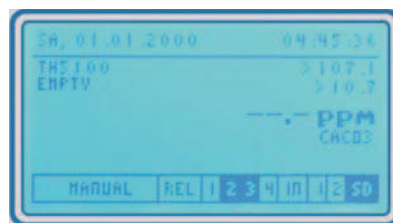
Water Treatment



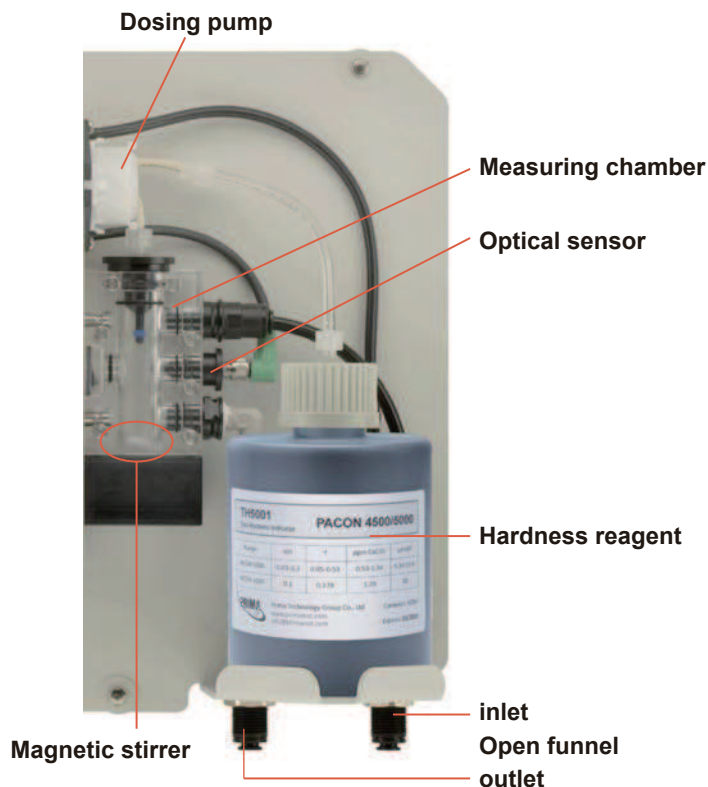
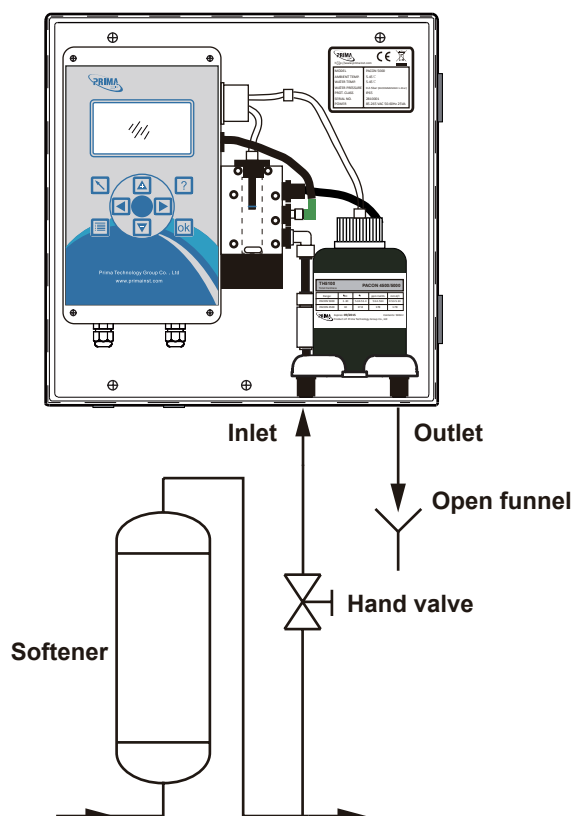
Drinking Water



Cooling Water



Components



Features

● Fully-automatic Measurement

Full-automatically measure the total water hardness with different ranges according to the selected reagent. The analysis process is more efficient than manual measurements and also more reliable than other indirect measurement methods, such as ion-selective electrode.

● Intelligent & Accurate

GB measurement method - titration colorimetric method, the instrument does not require calibration. The integrated measurement technique and the two-stage analysis process can identify external measurement effect, such as contamination of the cell, turbidity of the water sample and external light, and to eliminate these effects in the measurement.

● Optional Measurement Interval

Optional measurement interval: 5-360min

PACON 5000 can also control the start-up measurement of the instrument via an external switching signal.

● Compact Design

With size 300X300X200mm, it is suitable for direct wall mounting or install on the bracket.

● Least Maintenance Workload

The measuring slot must be cleaned according to the set measuring interval or the measuring frequency. It is recommended to replace the spare parts every year. The spare parts including: peristaltic pump head, reagent connection tube and seal, [Order No. 50-5000-10](#). No additional tools are required for maintenance and can be easily executed.

● Automatic Cleaning

Each analysis will automatically perform Rinsing and Cleaning, ensuring measurement accuracy, repeatability and reduced on-site maintenance.

● Low Reagent Consumption

It is very easy to replace the reagent bottle, 500ml reagent can measure 5000-10000 times. Reagent is valid for 2 years.

● LCD Display

Multi-language graphic backlit LCD display, showing measured values, reagent remaining, alarm values and relay status.

● SD Card Storage

2G data memory card, can be directly connected to the computer, to access to historical data and system failure information in excel format

● Output & Input

- > 0 / 4-20mA & CAN bus
- > Insufficient reagent
- > Alarm signal
- > External start analysis signal



Total Hardness Reagents

Order No.	Type	ppm CaCO ₃	mmol/l
50-5001-01	TH5001	0.53 - 5.34	0.005 - 0.053
50-5002-01	TH5002	1.1 - 10.6	0.011 - 0.106
50-5003-01	TH5003	1.6 - 16.0	0.016 - 0.160
50-5010-01	TH5010	5.34 - 53.4	0.053 - 0.534
50-5030-01	TH5030	16.0 - 160.2	0.160 - 1.602
50-5050-01	TH5050	26.7 - 267.0	0.267 - 2.670
50-5100-01	TH5100	53.4 - 534.0	0.534 - 5.340

Shelf life of the reagent: 2 years

Technical Data

General specification

Measurement method	Titration method with colour change
Environmental temperature	5 - 45°C
Measuring water temp.	5 - 40°C
Water inlet pressure	ca. 0.5-5bar, recommended 1-2bar
Inlet / Outlet connect	6mm hose
Requirements of the water quality	clear, colourless, no solid particles, without gas bubbles; pH: 4 - 10.5 ; Iron: < 3 ppm ; Copper: < 0.2 ppm ; Al: < 0.1 ppm ; Mn: < 0.2 ppm;
Humidity	20 - 90% RH
Supply Voltage	85 - 265VAC , 47-63Hz
Power consumption	25VA (in operation)
Dimensions	300 x 300 x 200 mm (W x L x H)
Weight	ca.5Kg
Protection class	IP65
Installation	Wall mounting in closed rooms

Analysis specification

Measurement range	The measurement range is defined by the reagent used. (see reagent label)
Measurement duration	ca. 3 minutes depending on the hardness of the water
Measurement accuracy	±5% of the upper value of the respective reagent
Repetition accuracy	±2.5% of the upper value of the respective reagent
Analysis cycle	Measuring interval(5 - 360min) / External signal
Flush time	15 - 1800s
Display	Multi-coloured and multi-lingual graphic display
Unit	mmol/l、dH、mg/l、ppm CaCO ₃
Analogue output	0/4~20mA, max. 750Ω
Interface	CAN bus
Relay output	4x potential free output NC/NO 250VAC/DC, 4A
Input	IN1: Start analysis, IN2: Cancel error

Applications



500ml reagent
ca. 5000~10000 analysis
Shelf life: 2 years

Order Guide

Order No.	Type	Descriptions
33-5000-00	PACON 5000	Total hardness analyzer
50-5000-10	Spare Parts Kit	Including pump head (including pump tube), all seals, stirrups, connection pipe of reagent bottle, recommend to exchange every year.