

# VHC IEN Series

8-Stage Bypass Control with C/B

## Product Specifications



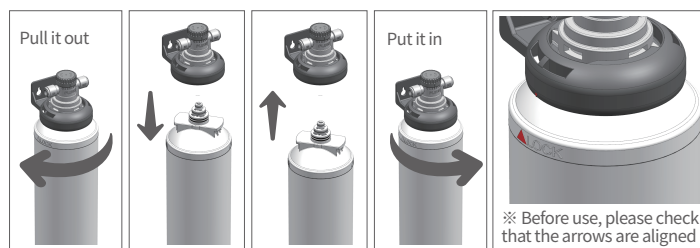
| System Model Name                  | VHC IEN 1500                                  | VHC IEN 3000          |
|------------------------------------|-----------------------------------------------|-----------------------|
| Capacity                           | 404 gallons (1,532 L)                         | 794 gallons (3,006 L) |
| Dimensions (W x D x H, mm)         | 113 x 119 x 348                               | 113 x 119 x 404       |
| Daily Sales Cups (based on 100 mL) | - 130 cups                                    | 130 - 270 cups        |
| Flow Rate                          | 0.26 GPM at 60 psi (1 LPM)                    |                       |
| Bypass                             | 0 - 70% (Variable - Refer to capacity table)  |                       |
| Working Pressure                   | 30 - 100 psi (2.1 - 7.0 kgf/cm <sup>2</sup> ) |                       |
| Water Temperature                  | 39 - 100 °F (4 - 38 °C)                       |                       |
| Reduction Claims                   | Chlorine Taste and Odor / Scale               |                       |
| Micron Rating (μm)                 | 5 Micron                                      |                       |
| Installation                       | Vertical                                      |                       |
| Tubing                             | 3/8 "                                         |                       |

## Features & Benefits

- One-touch quick-change bypass head system for easy and fast filter replacement.
- High-end carbon block solution for near-perfect purification.
- Effectively removes fine particles and impurities for cleaner, healthier water.
- Patented particle removal technology improves water quality and prevents early contamination.
- Phosphate addition maximizes scale and corrosion prevention inside pipes.
- Enhances equipment efficiency, reduces failure rates, and lowers maintenance costs.
- Minimized carbon fines allow safe use after only a short flushing.
- 8-step adjustable VHC head system precisely controls raw water flow.
- Precisely adjusts water hardness to meet your specific requirements.

## Installation Instructions

1. Before Installation : Shut off water supply and relieve pressure.
2. Rotate cartridge 1/4 turn anti-clockwise to remove.
3. To install new cartridge, rotate 1/4 turn clockwise.
4. Position cartridge vertically.
5. Turn on the water. If leaks occur, repeat steps.  
If it continues, stop use and contact your dealer.
6. Flush for 5 minutes or until water runs clear.



## How to change bypass setting

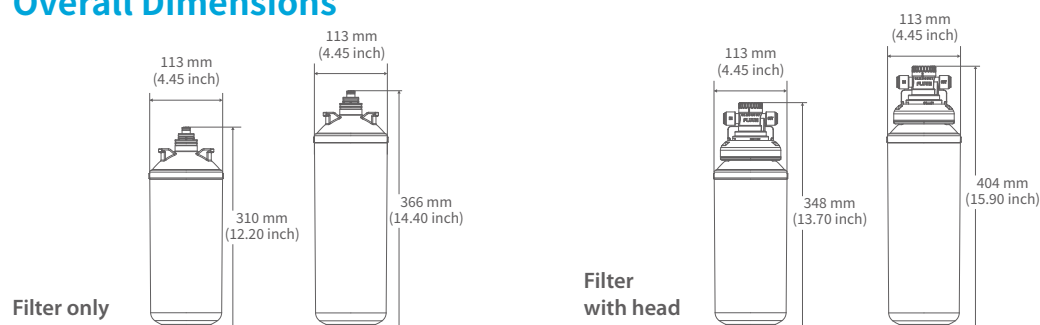
- Lift the dial located above the head.
- Turn dial to required bypass settings (factory set to setting #3 as standard).
- Push down dial to lock in bypass setting.



## Applications

- Coffee / Espresso Machine
- Vending Machine
- Dishwasher
- Combi Ovens
- Conventional Ovens
- \* Can be used flexibly for all applications

## Overall Dimensions



## Warning

1. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
2. For cold water only.
3. Replace cartridge when the flow rate becomes too slow, and contact your local dealer or place where you purchase.
4. The disposable filter cartridge must be replaced every 12 months, at the rated capacity or if a noticeable reduction in flow occurs.
5. This warranty shall not apply to any failures resulting from abuse, misuse, alteration, or failure to follow operating instructions.
6. In high pressure areas, a PLV (Pressure Limiting Valve) adjusted to 4 kgf/cm<sup>2</sup> should be fitted at all times.
7. Hold bracket firmly while adjusting the dial setting.
8. The system and installation shall comply with applicable state and local regulations.

## Standard Filter Shelf Storage Conditions

1. Store between 4 °C to 38 °C (39 °F to 100 °F). Avoid freezing or excessive heat.
2. Store in a dry, indoor environment. Avoid exposure to high humidity or direct water contact.
3. Keep the filters out of direct sunlight to avoid material degradation.
4. Storage near open flames, flammable materials, or chemicals is strictly prohibited.
5. Most sealed (unopened) filters have a shelf life of up to 2 years from the date of manufacture, if stored properly.  
After opening, the filter should be installed and flushed immediately or used within a short period.
6. Leave filters in their original sealed packaging until use to prevent contamination.

## Limited Warranty

MICROFILTER Co., Ltd. referred to herein as "we" or "us," manufactures its products ("Products") and parts ("Parts") using quality workmanship and materials.

Accordingly, we warrant to the original purchaser (i.e. the party that purchased the Product directly from us), referred to herein as "you," that water treatment systems and replaceable elements (filter cartridges and water treatment cartridges) by MICROFILTER will be free from defects in materials and workmanship under normal use and service for Six (6) months from the date of purchase from us (we reserve the right to require proof of purchase), or within the replacement period specified in the product specifications, whichever is shorter.

However, a longer statutory warranty period may apply in accordance with the consumer protection laws of the country of purchase.

This warranty does not cover the failures resulting from abuse, misuse, alteration or damage not caused by MICROFILTER or failure to follow installation and use instructions.

Additionally, the service life of the filter cartridge may vary depending on regional water conditions and water consumption, and Microfilter Co., Ltd. does not provide a warranty for the lifespan of the filter cartridge. \* For warranty exclusions applicable to all products and components, please refer to the Limited Warranty.

**MICROFILTER**

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**FLUUX**

Configuration of the cartridge cap and head of this product,  
'FLUUX' is registered trademarks of MICROFILTER Co., Ltd.

## Capacity chart VHC IEN 1500

- This table is an estimated capacity of VHC IEN 1500
- Estimated capacities were derived from the by pass (purified water ratio that is not passing through IER) amount
- Estimated capacities were calculated from the converted amount for the removable amount of Ca, Mg, assuming 4.0 eq/L of weak acid cation exchange resin

| CAPACITY (LITRES) |                |      |            |            |              |              |              |              |              |              |
|-------------------|----------------|------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Hardness (dH)     | Hardness (ppm) | Dial | 0          | 1          | 2            | 3            | 4            | 5            | 6            | 7            |
| 4                 | 71.2           | 7    | 4,098      | 4,512      | 4,920        | 5,378        | 5,840        | 6,367        | 6,755        | <b>7,218</b> |
| 5                 | 89             | 6    | 3,279      | 3,609      | 3,936        | 4,302        | 4,672        | 5,094        | <b>5,404</b> | 5,774        |
| 6                 | 106.8          | 5    | 2,733      | 3,008      | 3,281        | 3,586        | 3,894        | <b>4,246</b> | 4,504        | 4,813        |
| 7                 | 124.6          | 4    | 2,343      | 2,579      | 2,812        | 3,074        | <b>3,338</b> | 3,640        | 3,861        | 4,126        |
| 8                 | 142.4          | 4    | 2,049      | 2,256      | 2,460        | 2,689        | <b>2,920</b> | 3,184        | 3,378        | 3,609        |
| 9                 | 160.2          | 3    | 1,821      | 2,005      | 2,186        | <b>2,390</b> | 2,595        | 2,830        | 3,002        | 3,208        |
| 10                | 178            | 2    | 1,639      | 1,805      | <b>1,968</b> | 2,151        | 2,336        | 2,547        | 2,702        | 2,887        |
| 11                | 195.8          | 2    | 1,490      | 1,640      | <b>1,790</b> | 1,955        | 2,123        | 2,315        | 2,456        | 2,624        |
| 12                | 213.6          | 2    | 1,366      | 1,503      | <b>1,641</b> | 1,792        | 1,946        | 2,122        | 2,251        | 2,405        |
| 13                | 231.4          | 2    | 1,261      | 1,388      | <b>1,515</b> | 1,654        | 1,796        | 1,959        | 2,078        | 2,220        |
| 14                | 249.2          | 2    | 1,170      | 1,289      | <b>1,407</b> | 1,536        | 1,668        | 1,819        | 1,929        | 2,061        |
| 15                | 267            | 2    | 1,093      | 1,204      | <b>1,313</b> | 1,435        | 1,558        | 1,699        | 1,802        | 1,926        |
| 16                | 284.8          | 2    | 1,025      | 1,128      | <b>1,231</b> | 1,344        | 1,460        | 1,592        | 1,689        | 1,804        |
| 17                | 302.6          | 2    | 964        | 1,061      | <b>1,157</b> | 1,265        | 1,374        | 1,498        | 1,589        | 1,698        |
| 18                | 320.4          | 2    | 911        | 1,003      | <b>1,093</b> | 1,196        | 1,299        | 1,416        | 1,502        | 1,605        |
| 19                | 338.2          | 1    | 862        | <b>949</b> | 1,037        | 1,131        | 1,229        | 1,340        | 1,421        | 1,519        |
| 20                | 356            | 1    | 820        | <b>902</b> | 984          | 1,076        | 1,168        | 1,273        | 1,351        | 1,444        |
| 21                | 373.8          | 1    | 780        | <b>859</b> | 935          | 1,024        | 1,112        | 1,212        | 1,286        | 1,374        |
| 22                | 391.6          | 1    | 746        | <b>821</b> | 895          | 979          | 1,063        | 1,159        | 1,229        | 1,314        |
| 23                | 409.4          | 1    | 713        | <b>785</b> | 855          | 936          | 1,016        | 1,108        | 1,175        | 1,256        |
| 24                | 427.2          | 1    | 684        | <b>753</b> | 819          | 897          | 974          | 1,062        | 1,127        | 1,204        |
| 25                | 445            | 1    | 656        | <b>722</b> | 787          | 860          | 934          | 1,019        | 1,081        | 1,155        |
| 26                | 462.8          | 1    | 631        | <b>695</b> | 757          | 828          | 899          | 981          | 1,040        | 1,112        |
| 27                | 480.6          | 1    | 607        | <b>668</b> | 730          | 796          | 864          | 942          | 1,000        | 1,068        |
| 28                | 498.4          | 1    | 585        | <b>644</b> | 703          | 768          | 834          | 909          | 965          | 1,031        |
| 29                | 516.2          | 1    | 566        | <b>623</b> | 678          | 742          | 806          | 879          | 932          | 996          |
| 30                | 534            | 1    | 546        | <b>601</b> | 657          | 716          | 778          | 848          | 900          | 961          |
| 31                | 551.8          | 1    | 530        | <b>583</b> | 635          | 695          | 755          | 823          | 873          | 933          |
| 32                | 569.6          | 0    | <b>511</b> | 563        | 615          | 671          | 729          | 795          | 843          | 901          |
| 33                | 587.4          | 0    | <b>497</b> | 547        | 596          | 652          | 708          | 772          | 819          | 875          |
| 34                | 605.2          | 0    | <b>482</b> | 531        | 579          | 632          | 687          | 749          | 794          | 849          |
| 35                | 623            | 0    | <b>469</b> | 516        | 563          | 615          | 668          | 728          | 773          | 826          |

## Capacity chart VHC IEN 3000

- This table is an estimated capacity of VHC IEN 3000
- Estimated capacities were derived from the by pass (purified water ratio that is not passing through IER) amount
- Estimated capacities were calculated from the converted amount for the removable amount of Ca, Mg, assuming 4.0 eq/L of weak acid cation exchange resin

| CAPACITY (LITRES) |                |      |            |              |              |              |              |              |              |               |
|-------------------|----------------|------|------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Hardness (dH)     | Hardness (ppm) | Dial | 0          | 1            | 2            | 3            | 4            | 5            | 6            | 7             |
| 4                 | 71.2           | 7    | 7,070      | 7,783        | 8,488        | 9,277        | 10,075       | 10,985       | 11,653       | <b>12,451</b> |
| 5                 | 89             | 6    | 5,656      | 6,226        | 6,790        | 7,421        | 8,060        | 8,788        | <b>9,323</b> | 9,961         |
| 6                 | 106.8          | 5    | 4,714      | 5,190        | 5,658        | 6,186        | 6,718        | <b>7,324</b> | 7,770        | 8,302         |
| 7                 | 124.6          | 4    | 4,041      | 4,449        | 4,850        | 5,303        | <b>5,759</b> | 6,279        | 6,661        | 7,117         |
| 8                 | 142.4          | 4    | 3,535      | 3,892        | 4,243        | 4,638        | <b>5,037</b> | 5,492        | 5,827        | 6,226         |
| 9                 | 160.2          | 3    | 3,142      | 3,459        | 3,772        | <b>4,123</b> | 4,477        | 4,882        | 5,179        | 5,533         |
| 10                | 178            | 2    | 2,828      | 3,113        | <b>3,395</b> | 3,711        | 4,030        | 4,394        | 4,661        | 4,980         |
| 11                | 195.8          | 2    | 2,571      | 2,830        | <b>3,087</b> | 3,373        | 3,663        | 3,994        | 4,237        | 4,527         |
| 12                | 213.6          | 2    | 2,356      | 2,593        | <b>2,829</b> | 3,091        | 3,357        | 3,660        | 3,883        | 4,149         |
| 13                | 231.4          | 2    | 2,175      | 2,394        | <b>2,611</b> | 2,854        | 3,099        | 3,379        | 3,585        | 3,830         |
| 14                | 249.2          | 2    | 2,019      | 2,223        | <b>2,426</b> | 2,649        | 2,877        | 3,137        | 3,328        | 3,556         |
| 15                | 267            | 2    | 1,886      | 2,077        | <b>2,263</b> | 2,475        | 2,688        | 2,931        | 3,109        | 3,322         |
| 16                | 284.8          | 2    | 1,768      | 1,946        | <b>2,122</b> | 2,319        | 2,519        | 2,746        | 2,913        | 3,113         |
| 17                | 302.6          | 2    | 1,663      | 1,831        | <b>1,997</b> | 2,182        | 2,370        | 2,584        | 2,741        | 2,929         |
| 18                | 320.4          | 2    | 1,572      | 1,731        | <b>1,886</b> | 2,063        | 2,241        | 2,443        | 2,592        | 2,769         |
| 19                | 338.2          | 1    | 1,488      | <b>1,638</b> | 1,787        | 1,952        | 2,120        | 2,311        | 2,452        | 2,620         |
| 20                | 356            | 1    | 1,414      | <b>1,557</b> | 1,696        | 1,855        | 2,015        | 2,197        | 2,331        | 2,490         |
| 21                | 373.8          | 1    | 1,346      | <b>1,482</b> | 1,617        | 1,766        | 1,918        | 2,091        | 2,219        | 2,371         |
| 22                | 391.6          | 1    | 1,287      | <b>1,417</b> | 1,544        | 1,688        | 1,834        | 1,999        | 2,121        | 2,266         |
| 23                | 409.4          | 1    | 1,230      | <b>1,354</b> | 1,476        | 1,614        | 1,753        | 1,911        | 2,028        | 2,167         |
| 24                | 427.2          | 1    | 1,179      | <b>1,298</b> | 1,414        | 1,547        | 1,680        | 1,832        | 1,944        | 2,077         |
| 25                | 445            | 1    | 1,131      | <b>1,245</b> | 1,358        | 1,484        | 1,612        | 1,758        | 1,865        | 1,992         |
| 26                | 462.8          | 1    | 1,089      | <b>1,199</b> | 1,307        | 1,429        | 1,551        | 1,692        | 1,795        | 1,917         |
| 27                | 480.6          | 1    | 1,046      | <b>1,152</b> | 1,257        | 1,373        | 1,491        | 1,626        | 1,725        | 1,843         |
| 28                | 498.4          | 1    | 1,010      | <b>1,111</b> | 1,212        | 1,325        | 1,439        | 1,569        | 1,664        | 1,778         |
| 29                | 516.2          | 1    | 976        | <b>1,074</b> | 1,170        | 1,280        | 1,390        | 1,516        | 1,608        | 1,718         |
| 30                | 534            | 1    | 942        | <b>1,037</b> | 1,133        | 1,236        | 1,342        | 1,463        | 1,552        | 1,658         |
| 31                | 551.8          | 1    | 913        | <b>1,006</b> | 1,096        | 1,199        | 1,302        | 1,419        | 1,506        | 1,609         |
| 32                | 569.6          | 0    | <b>882</b> | 971          | 1,061        | 1,158        | 1,257        | 1,371        | 1,454        | 1,554         |
| 33                | 587.4          | 0    | <b>857</b> | 943          | 1,029        | 1,124        | 1,221        | 1,331        | 1,412        | 1,509         |
| 34                | 605.2          | 0    | <b>831</b> | 915          | 997          | 1,091        | 1,185        | 1,292        | 1,370        | 1,464         |
| 35                | 623            | 0    | <b>809</b> | 890          | 969          | 1,061        | 1,153        | 1,257        | 1,333        | 1,424         |