

WATCH WATER®

DESIGNED EXCLUSIVELY FOR GE APPLIANCES



INSTALLATION AND OPERATING GUIDE

EXCLUSIVE AQUA COFFEE MG

ACMG.05

ACMG.1

ACMG.1.5

ACMG.2

ACMG.5

FOR GE
TECHNICAL REVIEW

Engineering draft for GE review. This document defines the proposed ACMG installation. Complete the release specifications on page 6 before field installation or beverage use. Prototype work requires an approved test setup.

01 – OVERVIEW

Purpose and design basis

Exclusive Aqua Coffee MG is a proposed cold potable-water conditioning system upstream of a GE coffee appliance. Each model combines CRA Reducing Media, TrappSorb and Catalytic Carbon MG, with its own maximum-flow regulator and a flow meter with total-litre recording.

CRA Reducing Media · 80%			10%		10%
			TrappSorb		Catalytic Carbon MG
Model	Maximum design flow	Total media	CRA 80%	TrappSorb 10%	Carbon MG 10%
ACMG.05	0.5 L/min	0.75 L	0.60 L	75 mL	75 mL
ACMG.1	1 L/min	1.50 L	1.20 L	150 mL	150 mL
ACMG.1.5	1.5 L/min	2.25 L	1.80 L	225 mL	225 mL
ACMG.2	2 L/min	3.00 L	2.40 L	300 mL	300 mL
ACMG.5	5 L/min	7.50 L	6.00 L	750 mL	750 mL

One hydraulic basis for all five models

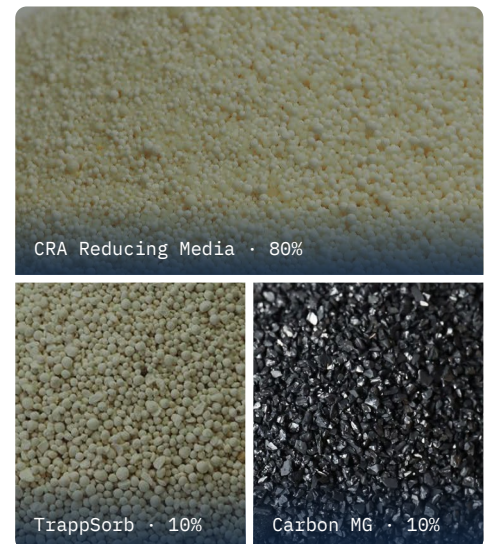
40

bed volumes per hour

90 s

nominal empty-bed contact time

At maximum design flow, every model operates at 40 bed volumes per hour with a nominal empty-bed contact time of 90 seconds. Media volume = flow in L/min × 60 ÷ 40. Percentages are by packed media volume; housing volume must also allow for expansion and internal components.

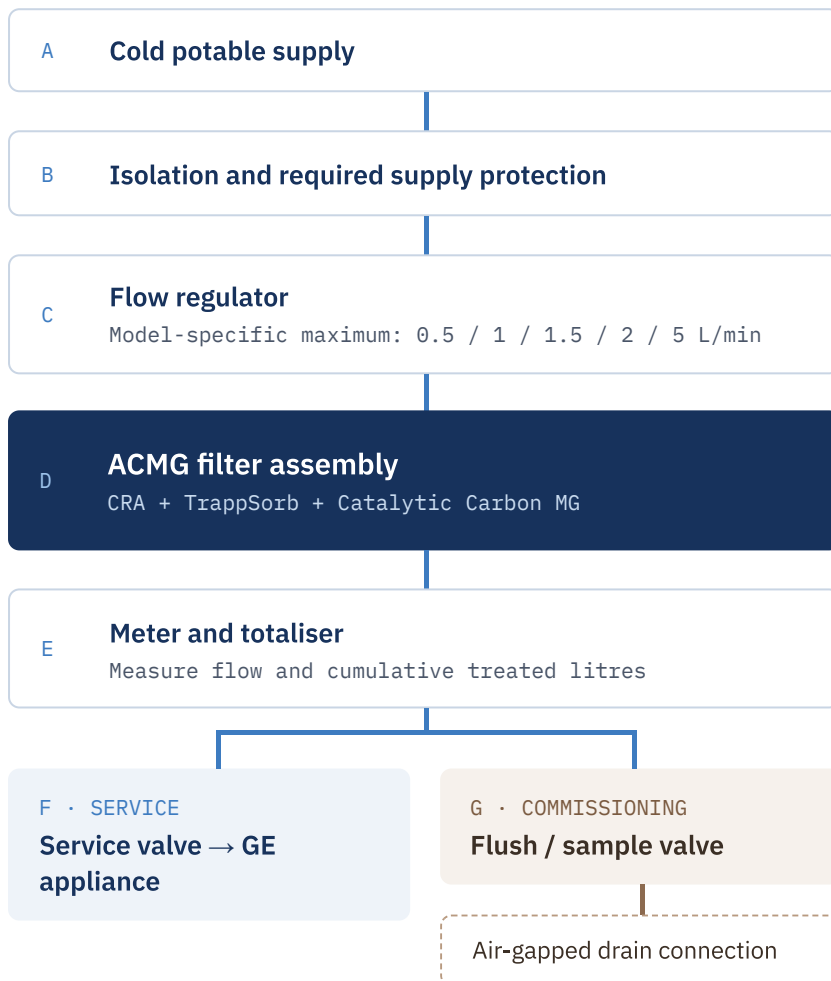

NOTE

The model number indicates design flow, not media volume or litres-treated capacity. Performance, capacity and approved operating limits remain subject to qualification.

02 — ARRANGEMENT

Installation arrangement

Proposed full-treatment path. Confirm the final component sequence and all part numbers on the approved assembly drawing.



Illustrative installation context.

Specify the control components

Use a pressure-compensating regulator selected for the model and qualified pressure range. A flow meter measures flow; it does not limit it. Select a meter accurate at the lowest operating flow and capable of recording short coffee-machine draws.

A pressure reducer, backflow device, gauges and upstream strainer may be required by the selected equipment and site. A pressure reducer and a flow regulator perform different functions. Provide a deliberate pressure-relief path for servicing.

03 — INSTALLATION · STEPS 01-05

Prepare and assemble

Installation is to be performed by a competent water-system installer using the released component instructions and the GE appliance requirements.

01 Confirm the model and the water supply

Match peak appliance demand to the ACMG design flow. Record inlet temperature, static and flowing pressures, pH, calcium, magnesium and total alkalinity. Confirm the source is potable; the ACMG concept is not a validated microbial purifier.

02 Confirm the hardware ratings

Check the approved housing, head, regulator, meter, hoses, seals and fittings as one assembly. The operating envelope must remain within the lowest applicable component rating, including pressure surges. Do not assume interchangeability with another filter brand.

03 Prepare the work area

Stop the appliance following GE instructions. Isolate the feed and relieve trapped pressure through the designated outlet. Choose a protected location with adequate access for cartridge removal, leak inspection and drainage; avoid freezing, heat and chemical exposure.

04 Mount the approved filter assembly

Support the assembly independently of its hoses. Use the qualified orientation and specified service clearance. Fit clean, undamaged seals and connections using the hardware supplier's assembly method and torque. Keep wetted surfaces protected during work.

05 Connect the flow-control path

Follow the component arrows and the released drawing. Install the model-specific regulator, meter and flush/sample connection. Route hoses without kinks, tension or unsupported loads. Verify the backflow and pressure-relief arrangements before opening the supply.

ACMG DESIGN ASSUMPTION

All service water passes through the complete mixed bed. Any adjustable blending path must be verified closed for this baseline. If bypass is introduced later, its fraction and effect on water quality require separate qualification.

Commission the filter

Keep commissioning water separate from the coffee appliance until the approved flushing and water-quality acceptance criteria have been met.

06

Verify readiness before pressurising

Confirm cartridge engagement, seal placement, meter setup and regulator identity. Keep the appliance service valve closed and route the flush outlet to an appropriate drain with an air gap. Use only the qualified flushing flow and procedure.

07

Fill, vent and inspect

Admit water gradually with the flush path open. Vent air through the designated outlet and inspect all joints. Stop immediately for leakage or mechanical movement. Isolate and depressurise before correcting an assembly issue.

08

Complete the qualified rinse

Record total rinse litres, time and flow. Continue to the model-specific validated rinse endpoint and check the specified chemical and particle criteria. Clear appearance alone does not establish acceptable pH, magnesium, hygiene or media release.

09

Measure maximum service flow

Check flow with the intended appliance demand and within the qualified pressure range. Verify the meter using collected volume and elapsed time. If flow exceeds the model limit, correct the regulator selection or installation.

$$\text{L/min} = \text{collected litres} \times 60 \div \text{seconds}$$

10

Confirm water quality and hand over

Measure the approved inlet/outlet parameters at consistent temperature and sampling conditions. Verify pressure drop, complete the leak check in static and flowing conditions, and open service only after acceptance. Log the meter reading at the start of service.

DEVELOPMENT TARGET

Approximately pH 7.5 is an initial aim, not a released acceptance limit. Watch Water® and GE must define acceptable pH, magnesium, calcium and alkalinity ranges and model-specific rinse volumes before commissioning for beverage use.

05 – SERVICE

Operation and fault response

Keep a service record for the installed model, media batch, regulator and totaliser. All service actions use the approved isolation and pressure-relief procedure.



Monitor performance during use

At the agreed inspection interval, record leakage, actual flow, pressure drop, cumulative litres and any change in taste or appearance. Recheck water chemistry when the inlet supply changes. Do not increase flow above the model limit to compensate for blockage or poor treatment.

Restart after standing

During qualification, sample the first 250 mL after overnight standing and compare it with subsequent flowing samples. Establish separate restart instructions for normal idle periods and prolonged shutdown. Until those instructions are released, the responsible test engineer must determine the rinse and sampling needed before reuse.

Replace the cartridge or media assembly

Use the approved replacement trigger: treated volume, elapsed time, water-quality breakthrough, unacceptable pressure drop or a hygiene event, whichever requires earlier action. Stop service, isolate and depressurise; fit the approved replacement; repeat commissioning and record the new batch and counter baseline. Field refilling or regeneration requires a separately approved procedure.

Observation	Action
Flow above model limit	Suspend service. Check regulator identity, installation direction, operating pressure and any unintended bypass.
Low flow or rising pressure drop	Check supply pressure, valves, hoses and component restrictions. Replace the affected item under the approved service procedure.
Leakage or damaged housing	Isolate immediately and relieve pressure safely. Replace defective parts; do not tighten or dismantle under pressure.
Water chemistry outside limits or persistent particles	Hold water from beverage use. Check sampling, inlet quality, flushing, flow and media condition; obtain technical review.

CAUTION

Do not route appliance descaling chemicals through the ACMG media without explicit compatibility approval. Contaminated-source incidents require a specific recovery decision; ordinary filtration does not establish microbiological safety.

06 – RELEASE

Release and installation record

Complete this page for the approved hardware configuration. A final field guide must replace the open items with validated values and procedures.

Release specification	Required approved value or document	Done
Mechanical assembly	Head/housing part numbers, media retention, orientation, dimensions, wet weight, mounting and service clearance.	☐
Operating envelope	Minimum and maximum pressure, surge limit, temperature limits, pressure drop and material compatibility.	☐
Flow control and connections	Regulator tolerance and pressure range for each model; meter accuracy; fittings, thread/seal type, torque and backflow provisions.	☐
Water-quality acceptance	Feed-water envelope and outlet pH, magnesium, calcium, alkalinity, particles, extractables and hygiene criteria.	☐
Commissioning and maintenance	Rinse volume/flow by model, restart rules, capacity, replacement interval and component service schedule.	☐

Installation record

SITE / GE APPLIANCE

DATE / INSTALLER

ACMG MODEL / SERIAL

MEDIA BATCH

REGULATOR / METER IDS

APPROVED SPECIFICATION

STATIC / FLOWING PRESSURE

TEMPERATURE / MEASURED FLOW

RINSE LITRES / SERVICE START READING

WATER TEST REPORT / ACCEPTANCE

ADDRESS

Watch Water® GmbH
Fahrlachstraße 14, D-68165
Mannheim, Germany

CONTACT NUMBER

+49 (0) 621 879510 · Central Office
+49 (0) 621 87951-99 · Fax

EMAIL / WEB

info@watchwater.de
www.watchwater.de