

GW-DD F2 Automatic Sprinkler

WWHEC (Wall Horizontal Extended Coverage)

15 mm, K-80, Quick Response



GW SPRINKLER A/S

DESCRIPTION

The GW sprinkler series offers high quality, European manufactured, modern compact design, that meet the rigid test requirements set out by the world leading approval authorities. The unique GW PTFE / double groove seal in combination with high end heat responsive frangible glass bulbs guarantee durable operation and reliable performance. The use of precisely CNC-machined hot forged frames eliminates the risk of porosity.

All manufacturing and testing processes are performed strictly in compliance with our quality management system, certified to ISO 9001:2008.

GW "WWHEC" sprinklers are manufactured in brass, fitted with a stainless steel deflector, and available with QR-bulbs having release temperatures of 57°C, 68°C and 79°C. GW "WWHEC" sprinklers are approved by LPCB (UK) and VdS (Germany).

APPLICATION



GW-DD F2 WWHEC Quick Response sprinklers are used in fixed fire protection systems. The GW WWHEC sprinkler is a special application sprinkler with an extended coverage for protection of **light hazard** risks, such as hotel rooms. Care must be exercised that RTI, orifice size, temperature rating, deflector style and sprinkler type is in accordance with the latest published standards i.e. EN12845, CEA4001 or NFPA13.

TECHNICAL SPECIFICATION

STYLE	WWH EC (wall horizontal ext. coverage)
RTI-VALUE	RTI < 50, Quick Response
GLASS BULB DIAMETER	Ø 3 mm
TEMPERATURE RATING	57, 68, 79°C
ORIFICE:	Ø 11 mm
K-FACTOR:	80 lpm / bar ^{1/2}
NOMINAL THREAD:	15 mm (1/2" BSPT), length: 14mm
MAX. WORKING PRESSURE	12 bar
SYSTEM TEST PRESSURE	20 bar
FACTORY TEST PRESSURE	35 bar
WEIGHT	85 grams
OVERALL LENGTH	70 mm
DEFLECTOR WIDTH	45 mm
FINISHES	Natural (Brass), chrome plated, polyester powder coated (RAL)



APPROVALS

				
VdS (Germany)	VKF (Switzerland)	LPCB (UK)		

NOTE:

Not all bulb temperatures and material options are approved by all authorities. Please consult GW for specific

Finishes available include chrome plated, electro nickel plated, white painted (to RAL 9010). Custom coloured paint finishes are also available to order.

The GW sprinkler range is complemented by a unique range of installation efficient colour matching single and recessed two piece rosettes (escutcheons) and by other accessories such as guards, water shields and spanners.

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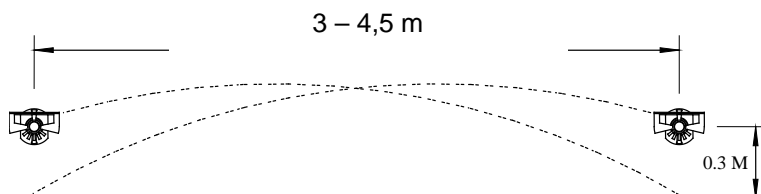
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INSTALLATION

Install WWHEC type sprinklers in the horizontal position. Horizontal distance between WWHEC sprinklers shall be 3 - 4,5m



Modern sprinklers incorporate highly sensitive and fragile glass bulbs and the utmost care must be taken during handling and installation not to damage the glass bulb in any way!

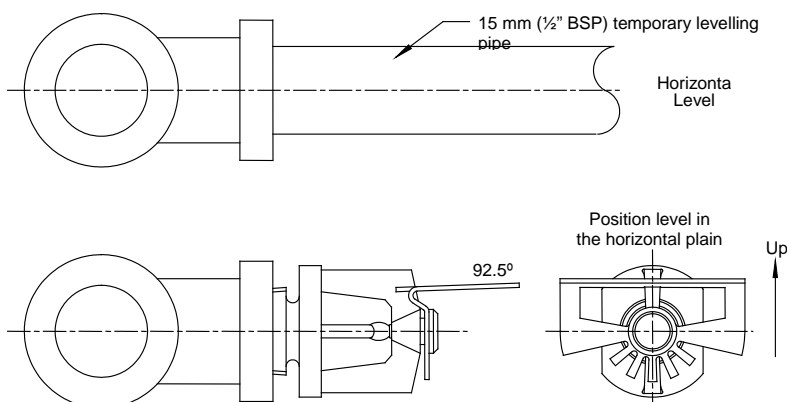
Never install sprinklers that have been dropped, damaged or fully or partly lacks glass bulb fluid.

Install only sprinklers in pipework that is in place to prevent mechanical damage of the sprinklers.

Use only GW sprinkler wrench or box-spanner. Recommended torque to obtain leak tight joint: 10–20 Nm.

Brass sprinklers should only be installed in non-corrosive environments and environments free of ammonia, chloride vapors and cleaning solutions. Install sprinklers according to latest edition of relevant sprinkler system design codes – e.g. EN 12845, CEA 4001 or NFPA 13.

It is essential that the WWHEC sprinkler is always installed so that the axis and deflector are **truly horizontal**, in order to ensure correct spray distribution. This should be checked by using a spirit level on a 15mm (½" BSP) length of temporary pipe, hand tightened in to the sprinkler female fitting of the pipework.



INSTALLATION RULE ESSENTIALS (CEA 4001)

WWHEC sprinklers may be used for light hazard risks in rooms with a floor area of up to 126 m² bounded by partitions with a fire resistance rating of 30 min, and a maximum height of 4.1 m

The protected area per sprinkler shall not exceed 21 m². The sprinkler shall not be more than 6.5 m from the opposite wall. In rooms more than 6.5m wide up to a maximum of 11m in width, sprinklers shall be installed off-set on two opposite walls.

The sprinkler shall not project more than 300 mm from the wall. The distance between any two WWHEC sprinklers shall be between 3m and 4.5m along the same wall, unless sprinkler shields are used. The distance to the ceiling shall be between 100mm and 250mm. The sprinkler shall be located at least 0.5m from the corner of the room. Minimum water pressure at sprinklers installed in maximum room sizes shall be 2.5 bar in rooms with ceiling height up to 2.8m, otherwise min. 3 bar (max. ceiling height is 4.1m).

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MAINTENANCE

The sprinkler system should be inspected and maintained according to e.g. NFPA 25.

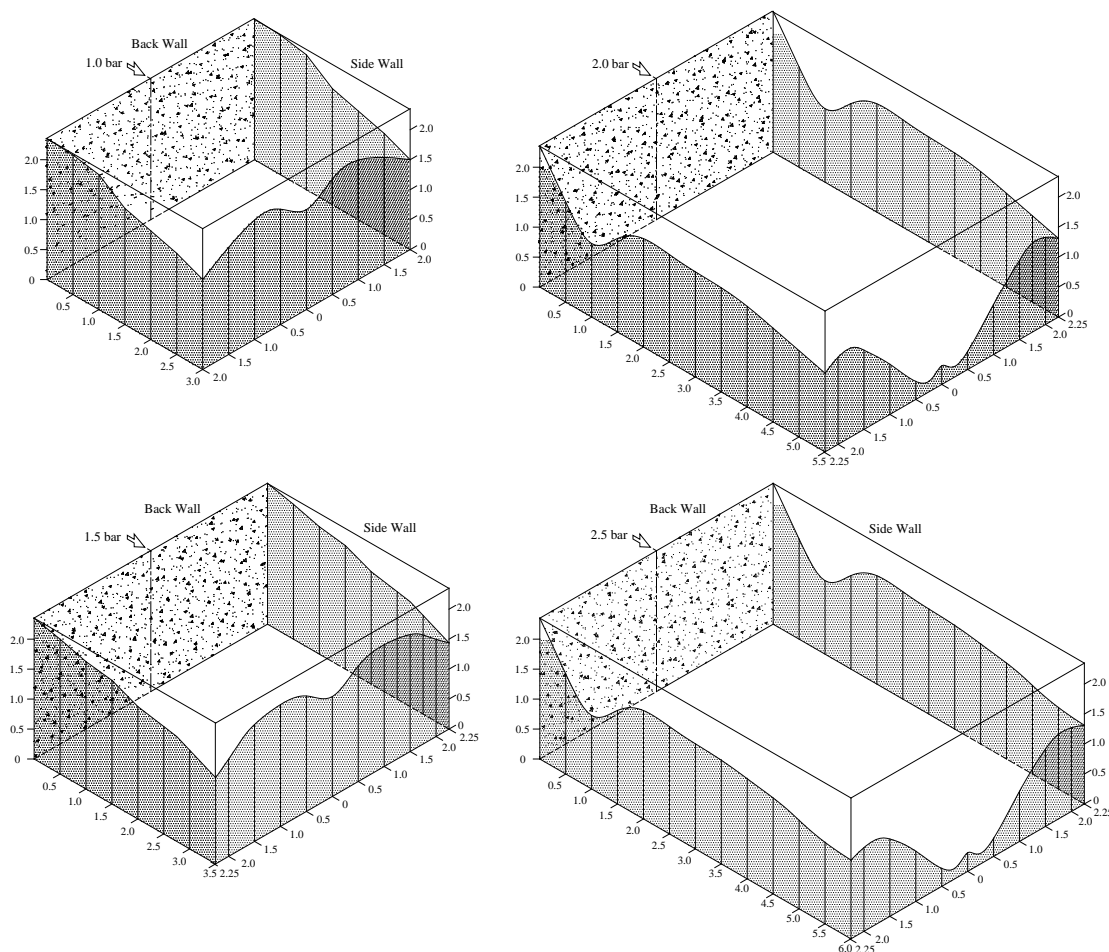
Sprinkler heads should be inspected on an annular basis. Ensure that the sprinklers are not used for hanging any objects, and do not show signs of leakage or corrosion. Sprinklers found to be painted, coated or otherwise altered after leaving the factory must be replaced. Also replace any sprinkler that has a cracked bulb or has lost liquid from its bulb.

Dusty sprinklers can be gently cleaned using a feather duster – or similar gentle method/tool.

Automatic sprinklers are recommended to be inspected, tested and maintained by a qualified Inspection Service in accordance with local requirements and/or national codes.

GW-S sprinklers are supplied in special purpose built Styrofoam boxes for maximum protection – and spare sprinklers should always be stored / kept in the original packaging until installation.

WATER DISTRIBUTION (showing wall wetting)



Mounting height (metres)	Pressure (bar)	Flow (l/min)	Area W x L (metres)	Coverage (mm/min.)
2.35	1.0	80.0	4.0 x 3.0	2.7
2.35	1.5	98.0	4.5 x 3.5	2.8
2.35	2.0	113.0	4.5 x 5.5	2.7
2.35	2.5	126.5	4.5 x 6.0	3.0

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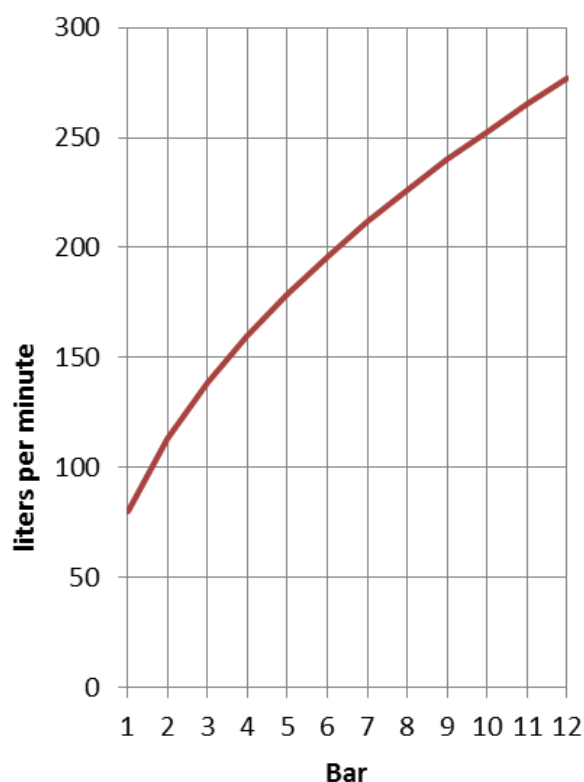


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MOUNTING HEIGHT	MINIMUM PRESSURE	ROOM SIZE & AREA
1,5 – 2,7 M	2,5 bar	4,5 x 4,5 (20,25 M ²) 3,0 x 6,5 (19,50 M ²)
2,7 – 4,0 M	3,0 bar	4,5 x 4,5 (20,25 M ²) 3,0 x 6,5 (19,50 M ²)

Water Distribution tested in accordance with CEA standards. Refer to CEA 4001/4043 Table 4.01: Requirements for water distribution of single Extended Coverage Sidewall Sprinklers.

PRESSURE / FLOW CURVE



DIMENSIONS (mm)

