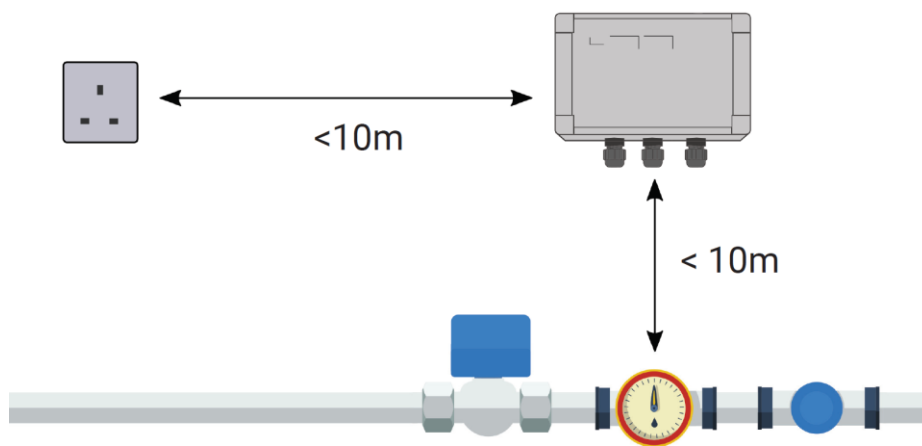


The LeakNet system consists of 3 parts:

- Control Base
- Water meter \*
- Valve \*

\* These parts are plumbed in and specified based on the pipe size of the proposed site, which can be categorised as small, medium, or large.

- **Small** – suitable for 15mm or 22mm size pipes, such as those supplying up to a 4-bed house (or equivalent)
- **Medium** – suitable for 28mm or 35mm size pipes, such as those supplying up to a 5-story office block (or equivalent)
- **Large** – suitable for 42mm or 54mm size pipes, such as those supplying large commercial buildings



The WiFi Base should be no more than 10m from power outlet, and no more than 10m from meter and valve.

A WiFi router or 3G gateway is used when WiFi is unavailable (see page 5).

## Control Base



**Connectivity:** WiFi as standard (upgradable to 3G)

**Wifi Security:** Security: WPA, WPA2-PSK, WAPI

**Internet ports used:** 5683 (CoAP), 80 (HTTP)

**Power:** 5V (no valve) or 12V DC, 0.8A

**Dimensions:** 14.5cm x 11.2cm x 4.7cm

**Weight:** 230g

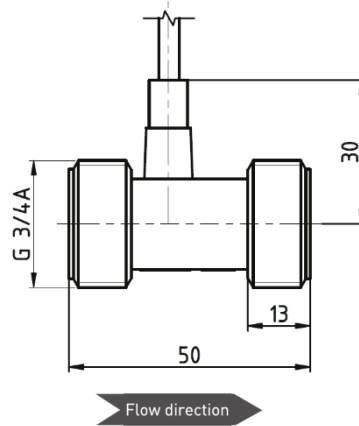
**Enclosure material:** ABS

**IP rating:** IP52

**Temperature rating:** 40°C

Wall mountable with 2 x 5mm screws.

## Small Meter

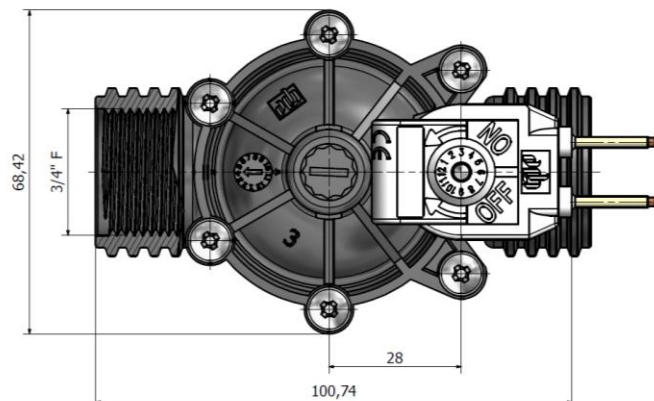
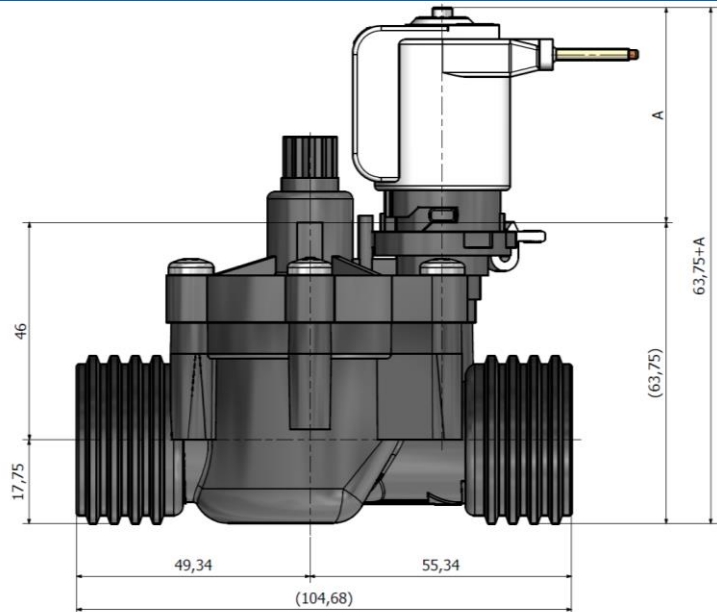


**Thread size:** 3/4" male BSPP  
**Pressure rating:** 10 bar  
**Temperature rating:** 70°C  
**Nominal flowrate:** 1.8 m<sup>3</sup>/h  
**Pressure loss:** 0.25 bar @ 0.9 m<sup>3</sup>/h  
**Durability:** 25,000 m<sup>3</sup> @ 0.9 m<sup>3</sup>/h  
**WRAS approval number:** 1605300  
**Body material:** PPO Noryl GFN3

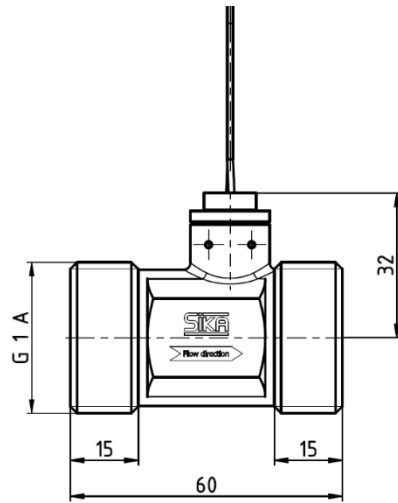
## Small Valve



**Thread size:** 3/4" female BSPP  
**Pressure rating:** 10 bar  
**Temperature rating:** 60°C  
**WRAS approval number:** 1901033  
**Body material:** PA 6,6 30% fiber glass  
**Internal materials:** NBR (buna), stainless steel

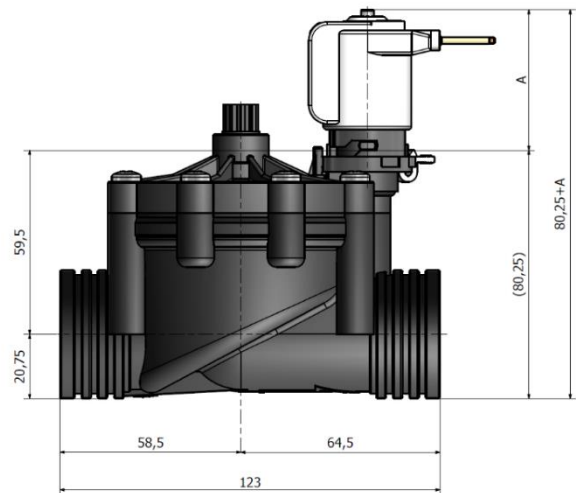
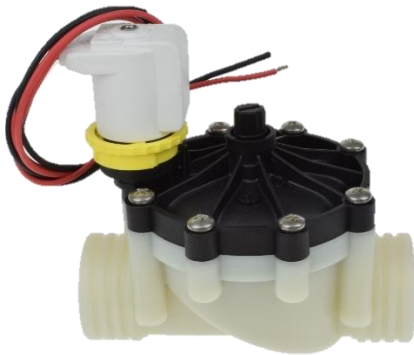


## Medium Meter

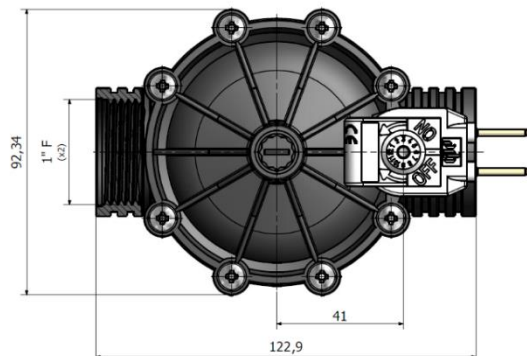


**Thread size:** 1" male BSPP  
**Pressure rating:** 16 bar  
**Temperature rating:** 90°C  
**Nominal flowrate:** 3.6 m<sup>3</sup>/h  
**Pressure loss:** 0.08 bar @ 1.8 m<sup>3</sup>/h  
**Durability:** 125,000 m<sup>3</sup> @ 1.8 m<sup>3</sup>/h  
**WRAS approval number:** 1705302  
**Body material:** Brass CW617N

## Medium Valve



**Thread size:** 1" female BSPP  
**Pressure rating:** 10 bar  
**Temperature rating:** 60°C  
**WRAS approval number:** 1901033  
**Body material:** PA 6,6 30% fiber glass  
**Internal materials:** NBR (buna), stainless steel



## Large Meter

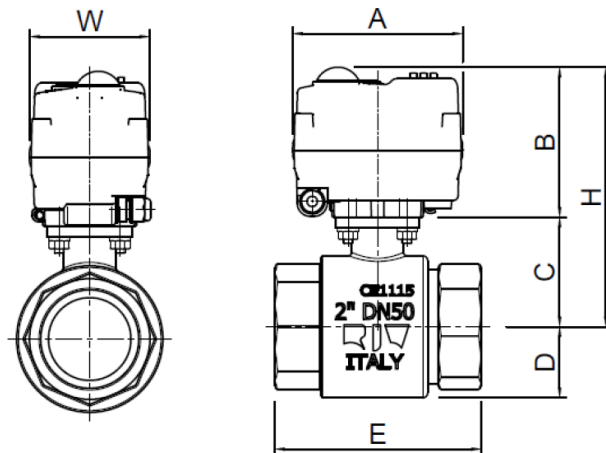


**Length** = 300  
**Width** = 170  
**Height** = 190  
**Weight** = 5.45 kg

**Thread size:** 2" male BSPP  
**Pressure rating:** 16 bar  
**Temperature rating:** 30°C  
**Nominal flowrate:** 16 m<sup>3</sup>/h  
**Pressure loss:** 0.16 bar @ 8 m<sup>3</sup>/h  
**WRAS approval number:** 1512046

## Large Valve

Full bore 2 piece construction, providing full unrestricted flow and a very low pressure drop across the valve. Turning the ball through 90° fully opens the valve, turning back through 90° fully closes the valve and isolates the flow.



**Dimensions:**  
**A** = 102mm  
**B** = 88mm  
**C** = 66mm  
**E** = 124mm  
**H** = 154mm  
**W** = 70mm  
**Weight** = 3 kg

**Thread size:** 2" female BSPP  
**Pressure rating:** 40 bar at ambient temperature  
**Temperature rating:** 60°C as standard (95°C with extra mounting kit)  
**Durability:** 20,000 actuations  
**WRAS approval number:** 1702052  
**Valve material:** Nickel plated brass, chrome plated brass

## 3G Module

Upgrade one LeakNet unit to a 3G cellular/mobile connection using this module which fits inside the Control Base.



**Network Standards:**

UMTS/HSUPA/HSPA+/GSM/GPRS/EDGE  
IEEE 802.11 b/g/n

**Ports:**

Micro USB Interface  
Standard 6-pin Sim Card Interface

**Battery:**

Li 1500 mAh (roughly 6 days capacity)

**Operating Temperature:**

-10 to 50°C

**Length** = 93mm

**Width** = 60mm

**Height** = 14mm

**Weight** = 0.12 kg

## WiFi Router



Used if WiFi signal is weak and needs boosting, or if physical LAN connection is possible.

**Network Standards:**

IEEE 802.11b  
IEEE 802.11a  
IEEE 802.11g  
IEEE 802.11n  
IEEE 802.3  
IEEE 802.3u

**Ports:**

4x 10/100 LAN

**Power:**

12V 1A UK Mains Power Adapter

**Operating Temperature:**

0 to 40°C

**Length** = 188mm

**Width** = 151mm

**Height** = 31mm

**Weight** = 0.23 kg

## 3G/4G Industrial-grade cellular gateway



Upgrade a system of up to 100 LeakNet units to 3G cellular/mobile connection using this gateway which can support an external antenna for challenging environments such as a block of apartments.

**Network Standards:**

4G LTE/DC-HSPA+/HSPA+/EDGE/GPRS/GSM  
IEEE 802.11 b/g/n

**Ports:**

1x 10/100M LAN (RJ45 interface to connect daisy chain other WiFi routers with CAT5e cable).  
SMA connectors (for external MIMO antenna).  
Standard 6-pin Sim Card Interface

**Power:**

DC9V 1A UK Mains Power Adapter

**Operating Temperature:**

-30 to 70°C

**Length** = 260mm

**Width** = 190mm

**Height** = 65mm

**Weight** = 0.4 kg

## External antenna



Fullband MIMO outdoor antenna in a robust housing with pole mount bracket (U-Bolt fixing holds up to 40mm diameter poles).

For use with the 3G/4G INDUSTRIAL-GRADE CELLULAR GATEWAY when placed near an outside wall where cell signal is weak.

Supplied with 2 x 5m long low loss coax cables which connect to the MAIN and AUX ports of the 3G/4G cellular gateway.

This antenna is for use in an outdoor location and should be positioned in a location with a good network signal.

**Length** = 125mm

**Width** = 50mm

**Height** = 400mm

**Weight** = 2 kg