

*Hydro***FLOW**®



*i***CUSTOM
HYDRA**

HYDROPATH Technology | The home of *Hydro***FLOW**®



Electrical Specifications

Input Voltage	87-240V AC
Input Power	65W Maximum (20W typical) per sub-unit
Input Frequency	47-63 Hz

Viewed looking at connector
end of conditioner sub-unit

Material Specifications

Main unit: Anodised Aluminium
End plates: UL V-0 rated polycarbonate

Water and Dust Protection

IP Rating: IP68 IEC 60529

Built-in EMI Filter

Meets: FCC 20780 Class B
VDE 0871 Level A

Safety

Europe and Worldwide:
IEC61010-190+A1:92 +A2:95 ~EN61010
Tested accorded to CENELEC National Requirements
USA: UL3101-1
Canada: CSA22.2 No:1010.1-92

Over-voltage (Transients) 10 to 20% above nominal

Environmental Specifications

Installation category:
Cat II; Altitude: <2000 Mtrs (6562'); Operating Temperature: -20 to + 50° C (-4 to 122°F);
Maximum relative humidity; Max 80% up to 31°C (87° F) decreasing linearly to 50% RH at 40° C (104° F)

Overload Protection Continuous short or open circuit on all outputs.

Insulation Basic insulation with the metal enclosure bonded to earth.

Servicing

No user repairable parts are fitted. Repair must be undertaken by an authorised repair centre.

Panel Indicators

The PSU is fitted with LED indicator lights. The Green LED indicates that the power is on, and the Red indicates that a signal is being transmitted.

CSA Certification and CB Test Certificate

In accordance with the
International (IEC) and
UL/CSA standards listed
above.

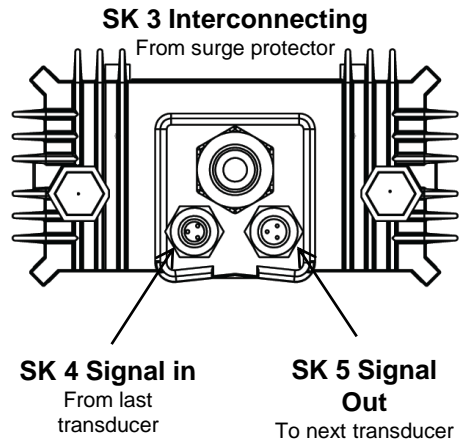


Manufactured to BSEN9002

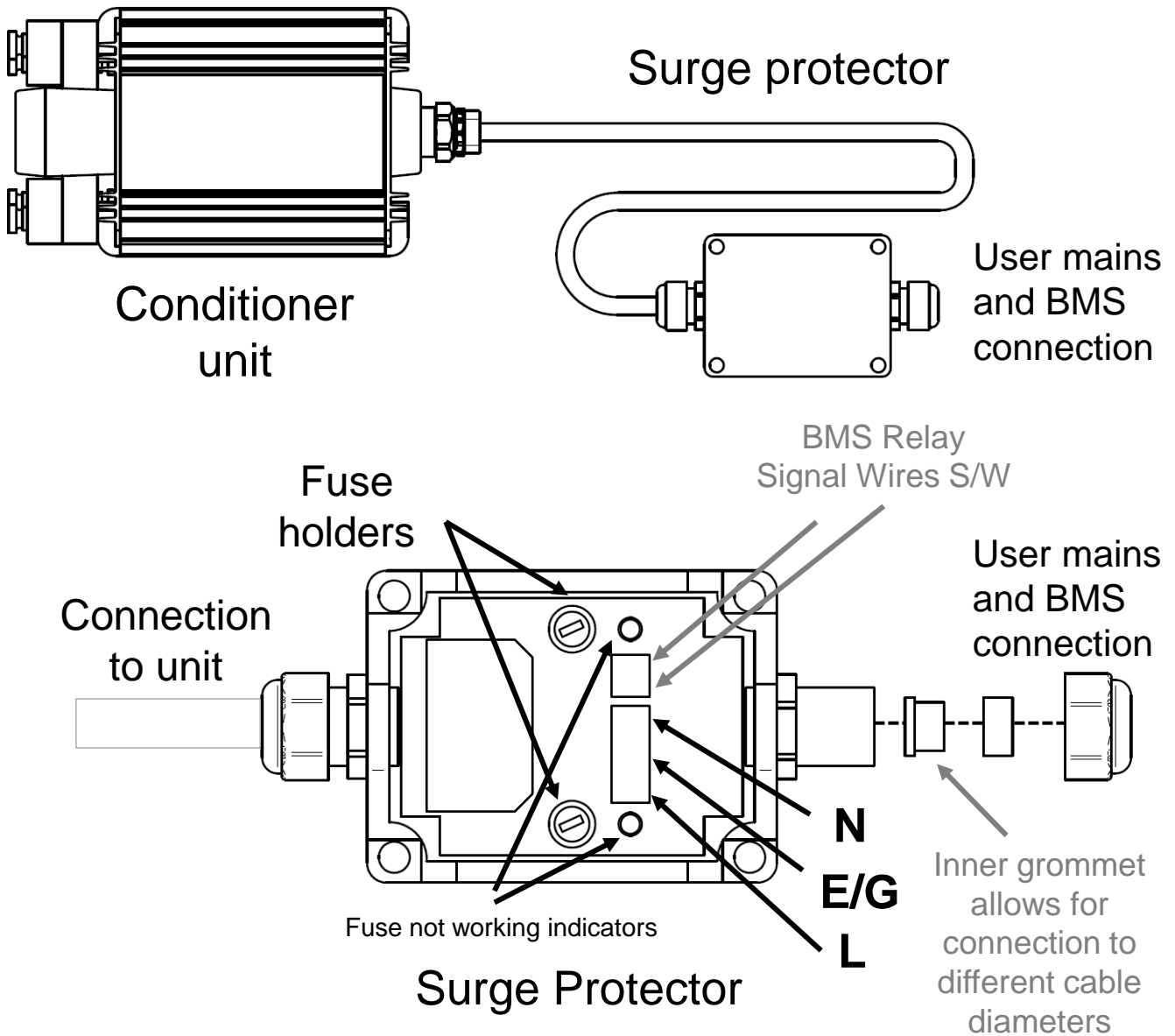
To be installed in accordance with the
latest IEE wiring instructions.
Fuse rating: 1A.



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Electrical Specifications



Remote Monitoring Facility

A volt free normally open contact closure is provided by the unit connection with a BMS (Business Management System) computer, to monitor that the unit is operating correctly. Connection to the BMS output is made via the junction box. A suitable 5 core approved cable can be used in order to make connection to the mains input and the BMS output.

Electrical Connection

The user must connect the electrical supply to the junction box in accordance with the on-site ruling safety legislation at the time of installation. This is the sole responsibility of the user and the site safety officer must be consulted before installation is undertaken.

*Hydro***FLOW** location criteria

*Hydro***FLOW** prevents and removes existing limescale. It enhances filtration by charging and flocculating particles. It breaks down chloramines and kills bacteria.

DO ensure that there is enough turbulence to allow the particles to mix and flocculate before the filter.

DO fit the unit immediately before the pump if possible.

DO remember that the unit acts by charging bacteria and particles only when they pass through the ferrite ring.

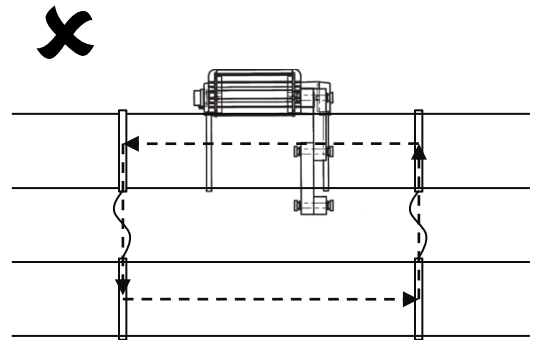
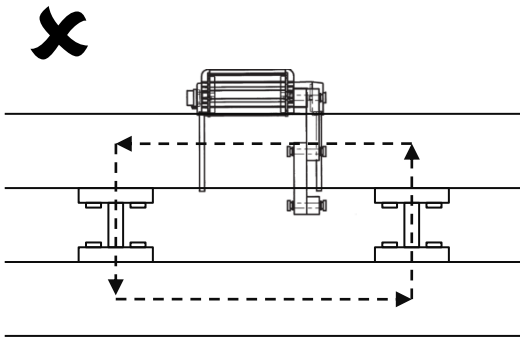
DO NOT fit the unit in an electrical loop.

DO NOT forget to backwash filters.

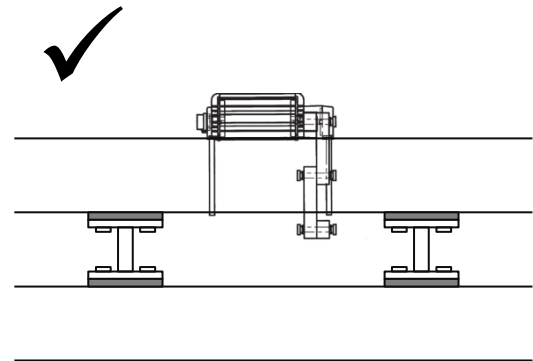
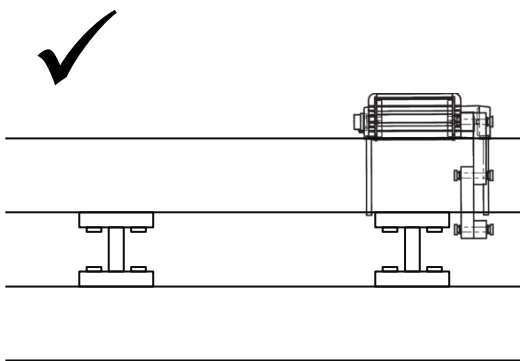
DO NOT expect a unit fitted before a pump to protect against limescale; an additional unit may be required.

If you are unsure of any details of fitting or installation, please contact your local Hydropath representative for technical support

Location criteria – electrical loops



An electrical loop is created whenever an electrical connection is made from one side of the ferrite loop to the other. This can be formed for instance by earth bonding, if the pipe is connected via metal brackets to another pipe or metal joist, or by the pipework itself. The presence of a loop will prevent the unit from operating correctly.

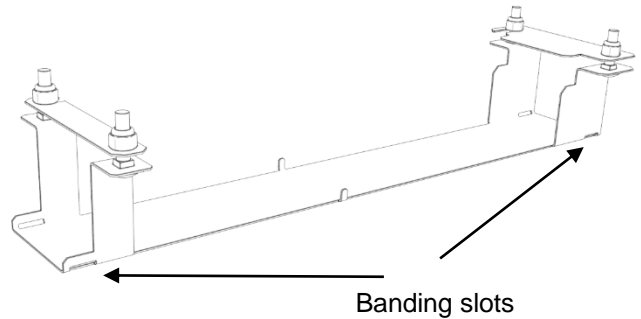


This problem can be solved by moving the unit outside the electrical loop. If this is not possible, the metal support brackets can be electrically insulated. Fitting the unit to a section of plastic pipe completely eliminates the possibility of an electrical loop.

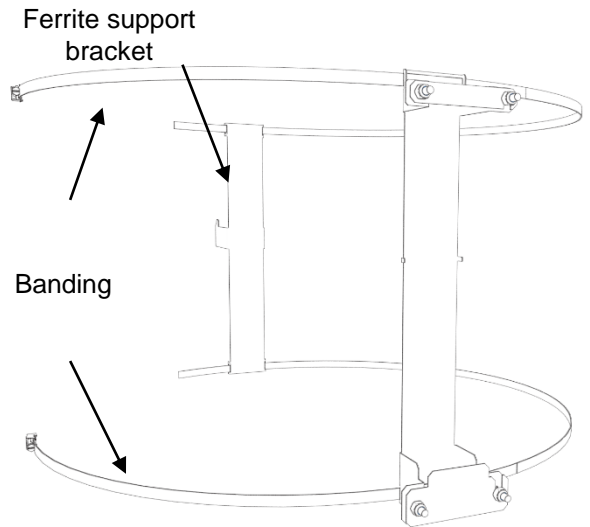
Assembly

DO NOT POWER UP UNIT UNTIL ALL FERRITES SUPPLIED ARE CONNECTED.

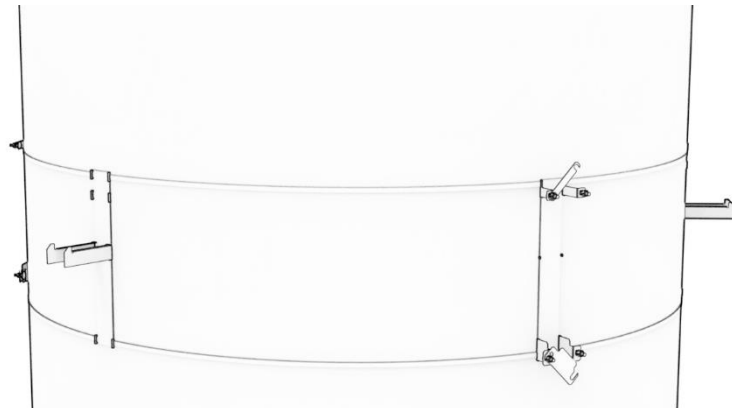
- The unit is supplied with a bracket for each subunit for ease of mounting to the pipe. The two upper plates should be loosely secured with bolts before installation.



- Pass the two stainless steel bands through the slots in the bracket.
- Then pass the banding through the slots in the ferrite support brackets.
- Alternate unit brackets and ferrite support brackets



- Place the brackets around the pipe approximately evenly.
- Secure straps by tightening clamps with hex key or hex driver



WARNING

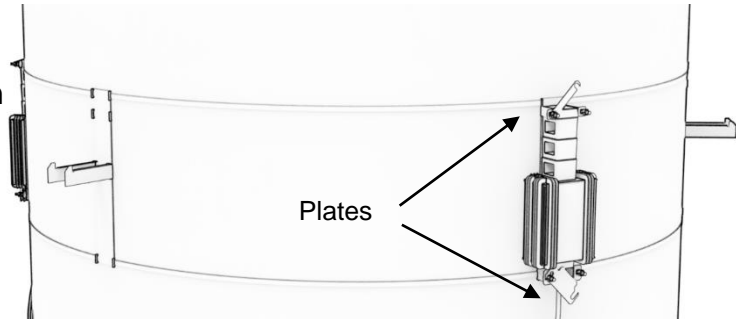
The system must be used as specified. Failure to do so will prevent correct operation of device and may impair safety.



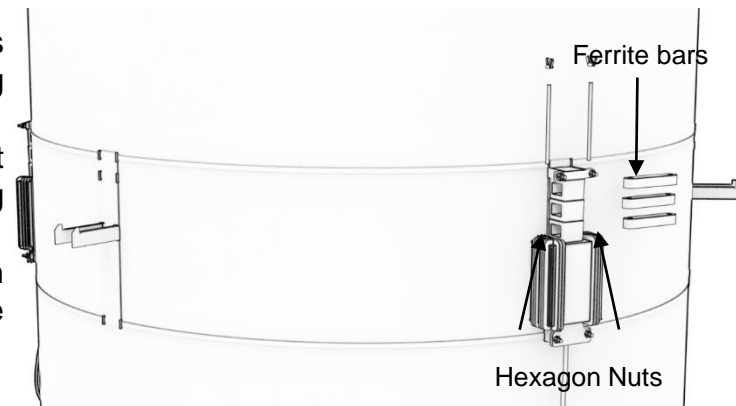
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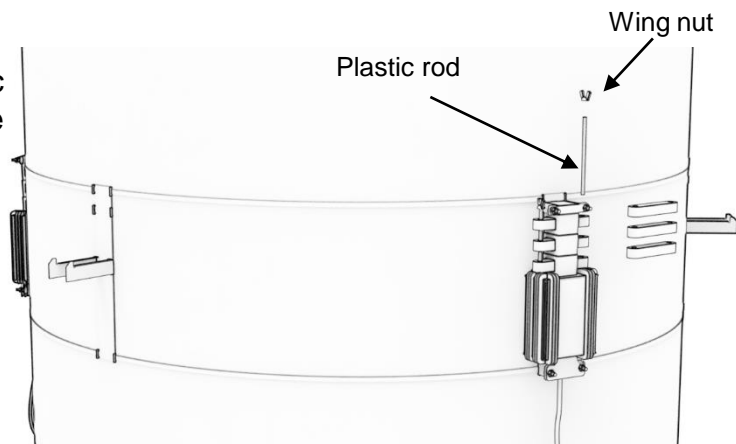
- Place the unit on the bracket and hold in place using the swinging plates.
- Secure by tightening the four steel nuts.



- Insert the two hexagon nuts into the holes in the end plate, next to the ferrite holding cage.
- If installing on a vertical pipe, place the unit with the ferrite cage upwards to ease fitting of hexagon nuts.
- Insert one of the ferrite bars through each hole in the holding cage until the holes line up with the hexagon nuts.



- Take another two ferrites, insert a plastic rod through the holes in both sets of ferrite bars and loosely screw into hexagon nut.
- Secure loosely using a wing nut.
- Repeat on opposite side.



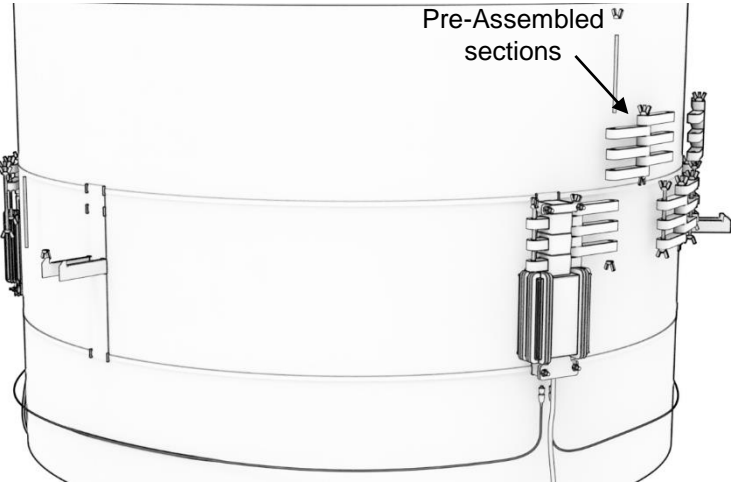
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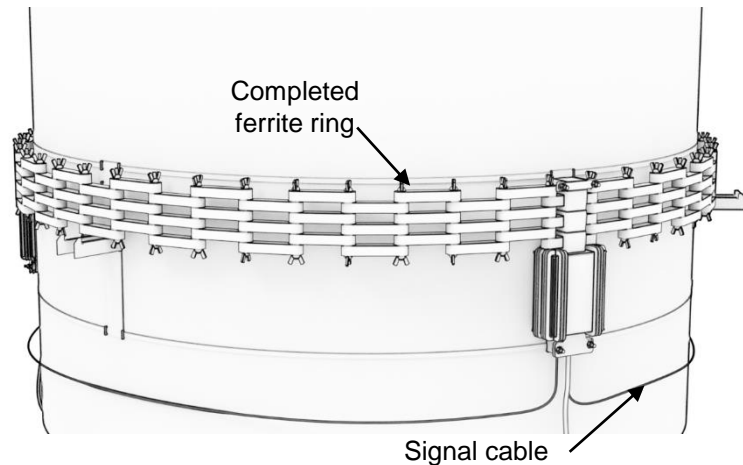
Assembly

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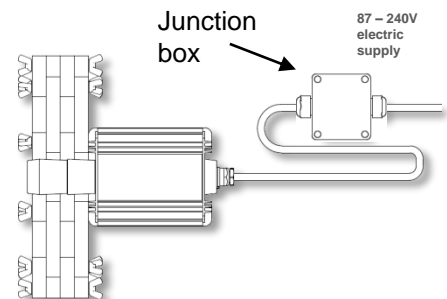
- Assemble **all** the other ferrites around the pipe according to the mechanical configuration specified for the unit.
- Loosely secure each ferrite with plastic rods and wing nuts.
- Ferrites can be pre-assembled in sections for convenience



- Adjust position of ferrite support brackets if necessary.
- Once the ferrite ring is complete, tighten all wing nuts until hand tight.
- **Do not over tighten as ferrites are fragile.**
- Connect fit signal cable (or cables) between sub-units. There is one fewer signal cable than there are sub-units.



- In accordance with local code and regulations, connect the junction box to the electrical power supply (87V-240V AC).
- Energize the electrical power supply and ensure that the Red and Green LED lights on the unit are glowing brightly.

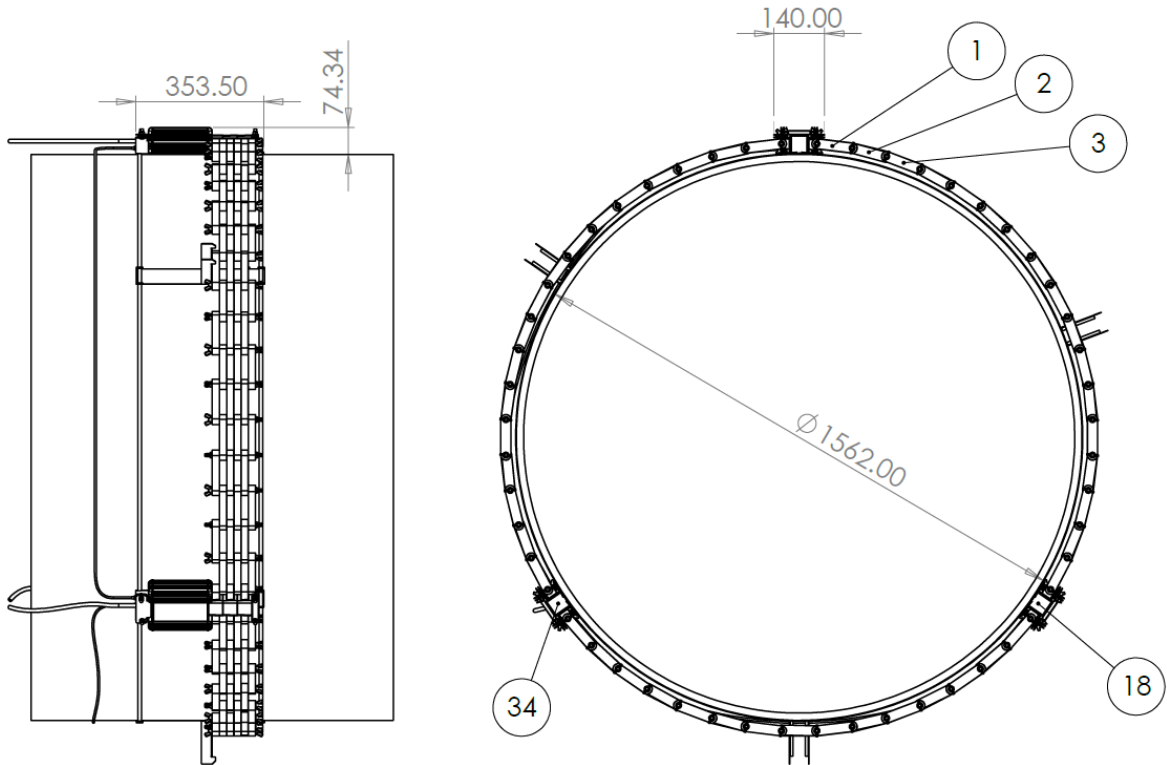


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MECHANICAL DETAILS

DETAILS FOR 60" UNIT



The 60" unit contains three transducer sub-units (heads).

The ferrite ring consists of three lines of 52 ferrites each (total 156 ferrites).

The units should be fitted 18 and 16 ferrites apart, as shown.

Take care: ferrites are extremely brittle. The unit is supplied with 8 spare ferrites and extra nuts, rods etc. in case of breakages.





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