

USER INSTRUCTIONS

HydroFLOW™

AQUAKLEAR P RANGE

P60 P100 P120 P160



www.hydropath.com

HYDROPATH TECHNOLOGY
PATENTED



Electrical Specifications

Transducer unit

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

Water and Dust Protection

IP Rating:
Transducer IP68 IEC 60529
PSU IP66 IEC 60529

Built-in EMI Filter

Meets: FCC 20780 Class B
VDE 0871 Level A

Safety

Europe and Worldwide:
IEC51010-190+A1:92 +A2:95 ~EN61010
Tested accorded to CENELEC National Requirements

USA: UL3101-1
Canada: CSA22.2 No:1010.1-92
CAN/CSA-22.2 No. 0.4-M1982

Over-voltage (Transients)

10 to 20% above nominal

Remote Monitoring Facility

Normally open circuit or 5V output
(Special terminated cable can be provided to facilitate connection)

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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Fuse rating: 1A.

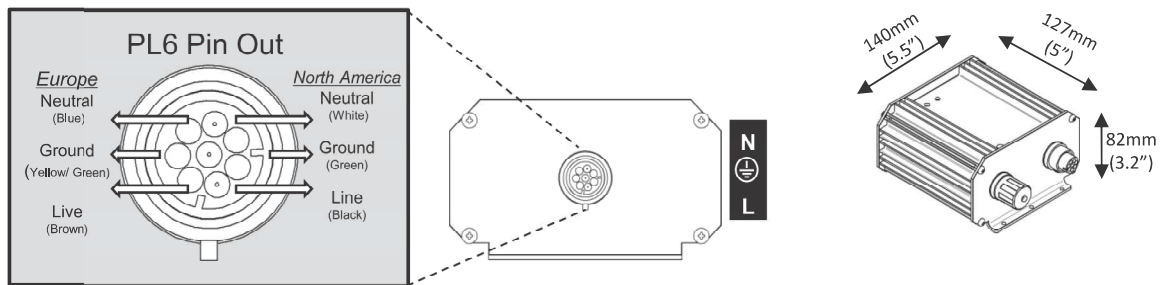
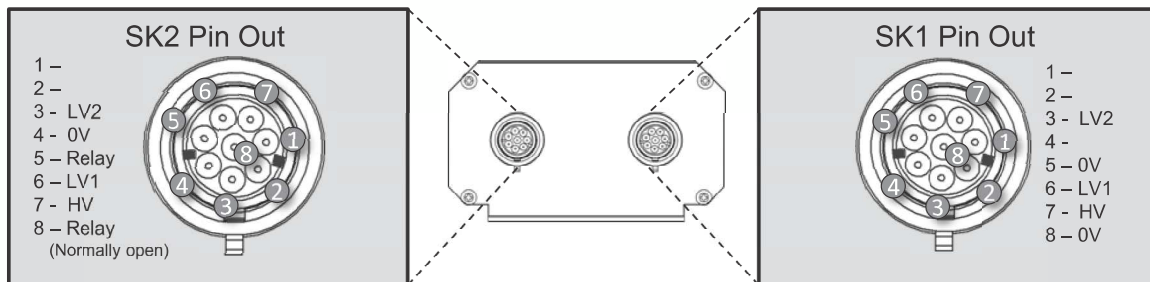
Electrical Specifications

PSU Input voltage: 87 – 240V AC

Frequency: 47 – 63 Hz

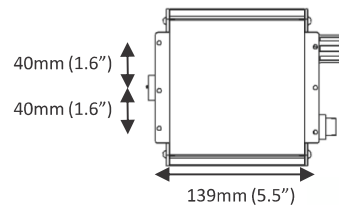
PSU Model	LV1	LV2	HV	Input Power	Fuse Rated 250 V	Output Power
DEL638	+12V	+15V	+24 or 30 V*	20W max	1.6A (T)	14W
CP1	+12V	+15V	+24 or 30V*	25W max	1.0A (T)	15W
CP2	+12V	+15V	+35 or 90V*	65W max	1.0A (T)	45W

* Voltage depends on transducer model used



PSU Panel Indicators

GREEN: Power ON
RED: Signal is being transmitted

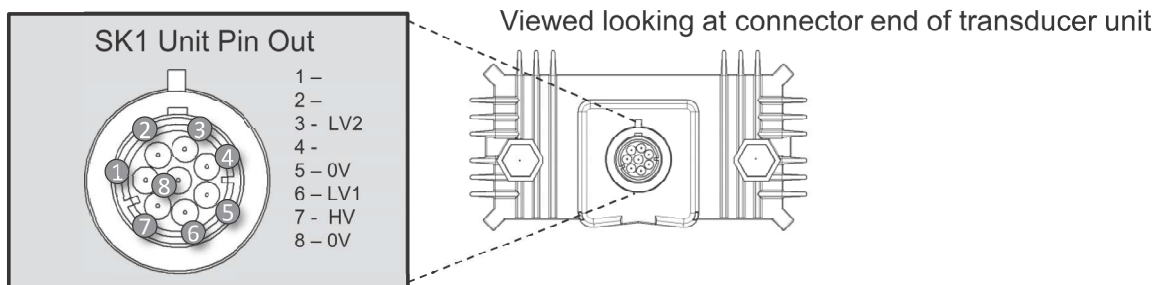


Transducer DC Input Voltage:

PSU Model	LV1	LV2	HV	Input Power
DEL638	+12V	+15V	+24 or 30V*	14W
CP1	+12V	+15V	+24 or 30V*	15W
CP2	+12V	+15V	+35 or 90V*	45W

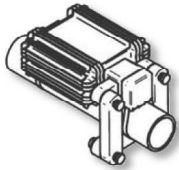
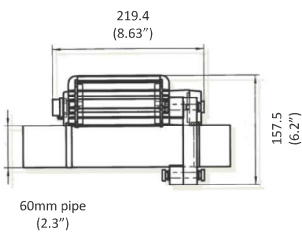
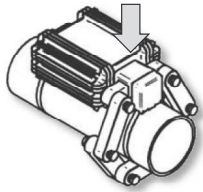
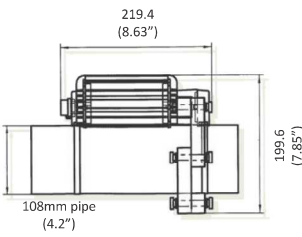
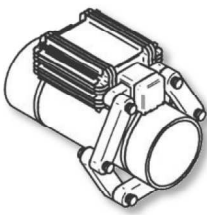
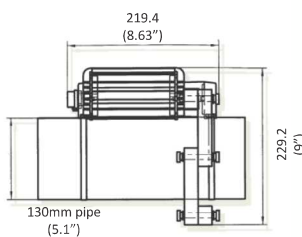
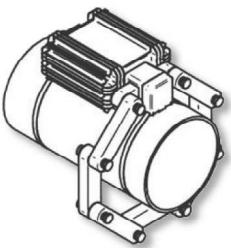
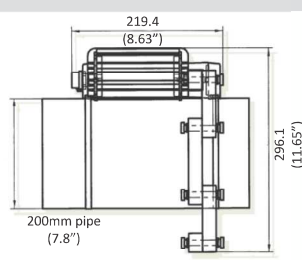
* Voltage depends on transducer unit used

Hydropath may at times replace a particular unit with one of a higher specification without notice.



Mechanical Details

The *AquaKLEAR* P Range water conditioner is specifically designed to improve water quality via flocculation to enhance filtration and biofouling control. P Range units are most commonly used on Swimming Pools and Cooling Towers.

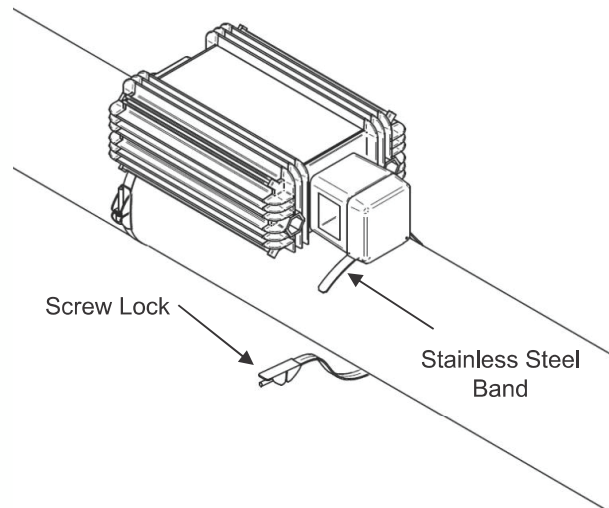
Model	Ferrite Arrangement	Dimensions mm (inches)	Ferrites	Total Weight kg (lbs)
P60		 60mm pipe (2.3")	4 x 126mm (5.0")	4.2 (9.2)
P100	Arrow indicates longer 126mm ferrite 	 108mm pipe (4.2")	5 x 109mm (4.25") 1 x 126mm (5.0")	4.4 (9.7)
P120		 130mm pipe (5.1")	6 x 126mm (5.0")	4.6 (10.1)
P160		 200mm pipe (7.8")	8 x 126mm (5.0")	5.8 (12.8)

- All units draw less than 1 amp of current at 120V AC
- Listed weights include: Transducer unit, power supply, ferrites, cables and mounting hardware.

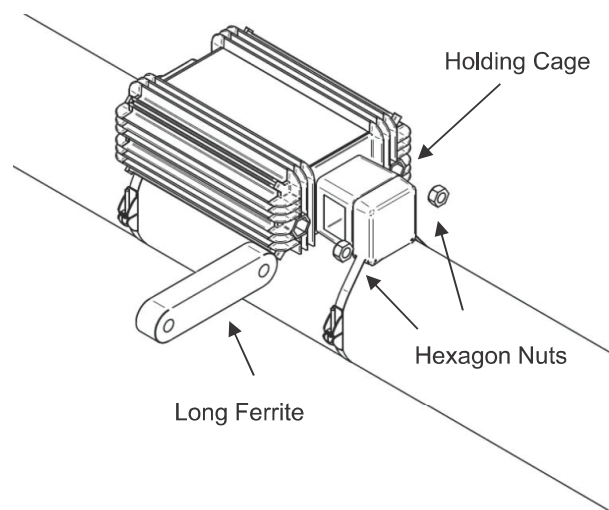
Assembly

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

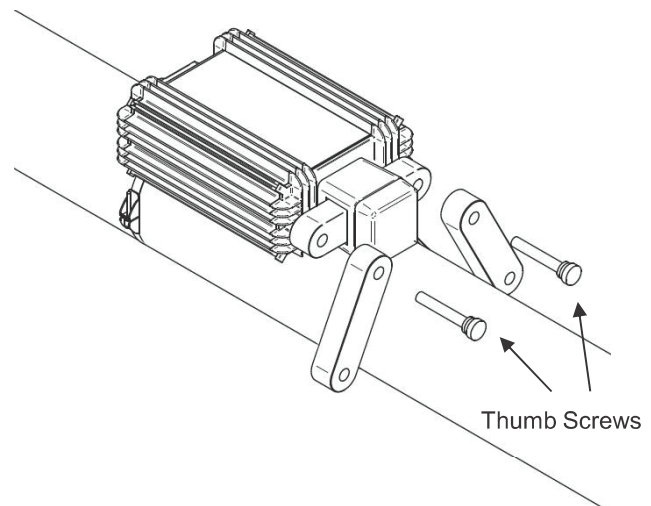
- Secure the transducer unit firmly on the pipe using the two steel bands.
- Pass the bands through the slots in both end caps, pass around the pipe and secure using screw locks.



- 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.
- The transducer unit is supplied with at least one **long** ferrite bar. Insert this through the holding cage until the holes line up with the hexagon nuts.



- Take a second ferrite, insert a plastic thumb screw through the holes in both ferrite bars and loosely screw into hexagon nut.
- Repeat on opposite side.



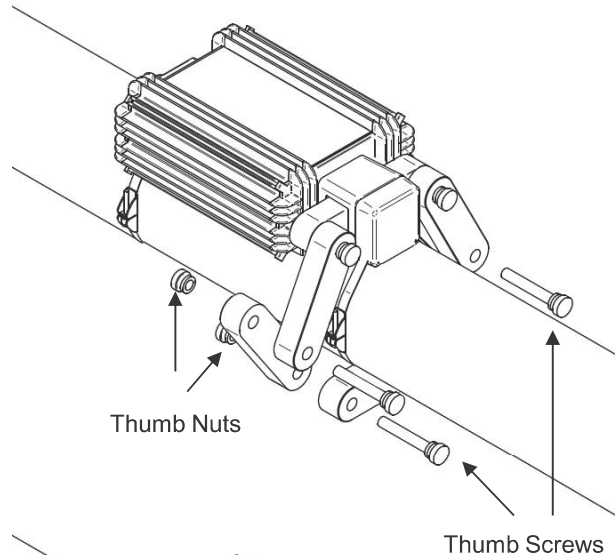
WARNING

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

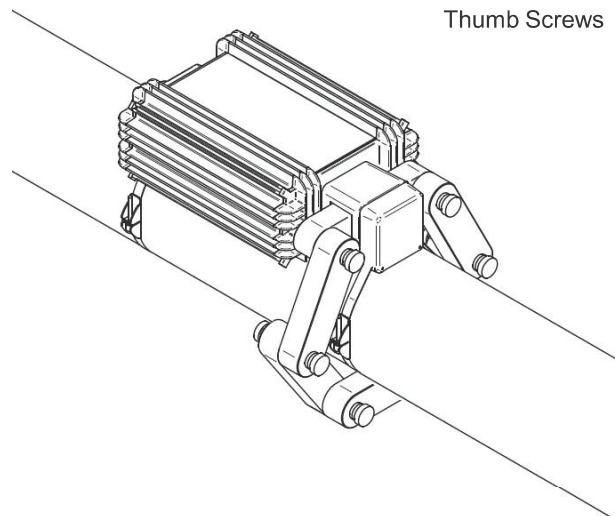
Assembly

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

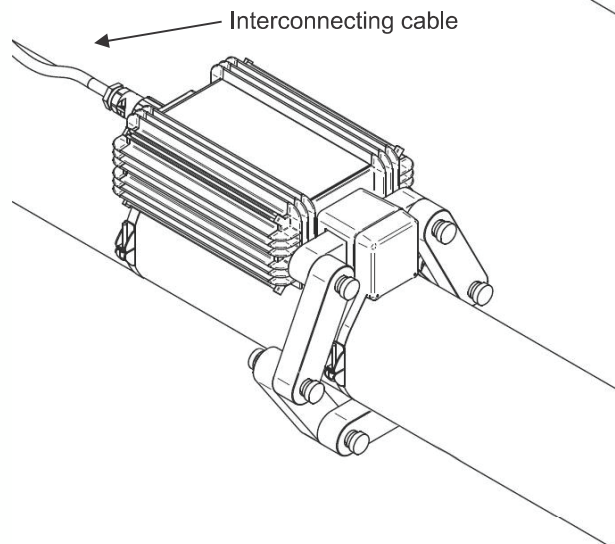
- Assemble **all** the other ferrites around the pipe according to the mechanical configuration specified for the unit.
- Loosely secure each ferrite with thumb nuts and thumb screws.



- Once the ferrite ring is complete, tighten all thumb nuts and screws until hand tight. **Do not over tighten as ferrites are fragile.**



- Insert one end of the interconnecting cable into the rear of the transducer unit. Secure the connection by fully tightening the screw cover.



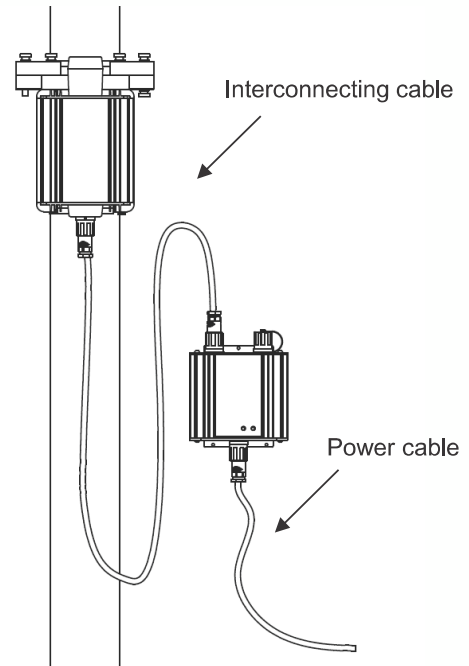
WARNING

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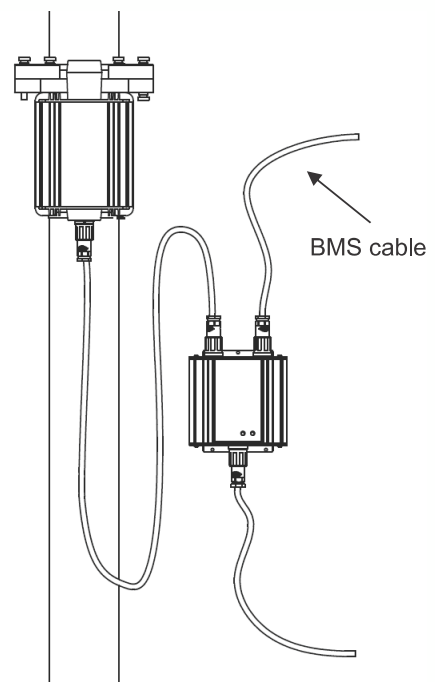
Assembly

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

- Install the Power Supply Unit (PSU) in a convenient position so that the LED lights can be easily viewed.
- In accordance with local code and regulations, connect the PL6 port to the electrical power supply (87V-240V AC).
- Connect between the PSU SK1 and the transducer SK1 port using the supplied interconnecting cable .
- Energize the electrical power supply and ensure that the Red and Green LED lights on the PSU are glowing brightly.



- **Remote Monitoring** is available for use with Building Management Systems (BMS). The cable (supplied separately) plugs into the SK2 port of the PSU, which is normally fitted with a protective cap.
- For additional information please contact an authorised representative.



WARNING

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

AquaKLEAR Location Criteria

AquaKLEAR enhances filtration by applying a charge to particles that pass through it in order to flocculate suspended material. It also eliminates bacteria and algae. Most systems have a pump before a filter and this is the best location. The turbulence produced by the pump allows the particles to mix, join up and aggregate and these can then be removed by the filter.

DO

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

Fit *AquaKLEAR* immediately before the pump if possible.

Remember that *AquaKLEAR* acts by charging bacteria and particles only when they pass through the ferrite ring.

DO NOT

Fit *AquaKLEAR* in an electrical loop.

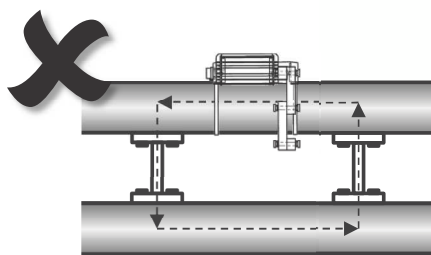
Forget to backwash filters.

Expect an *AquaKLEAR* fitted before a pump to protect against limescale; an additional unit may be required.

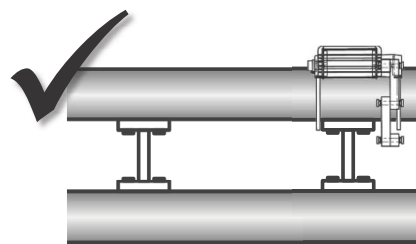
Electrical Loops

An electrical loop is created whenever an electrical connection is made from one side of the ferrite loop to the other, e.g. by metal supports, wiring or pipework. A loop will prevent the unit from operating correctly.

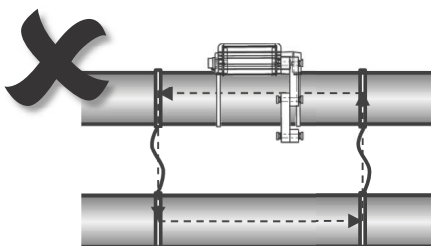
This problem can be solved by moving the unit outside the electrical loop. If this is not possible, the metal support brackets can be electrically insulated. Installing the unit on a section of plastic pipe eliminates the possibility of an electrical loop.



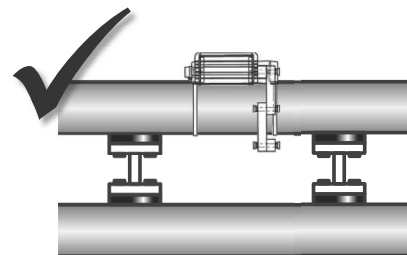
Brackets create loop



Move unit out of loop



Wiring creates loop



Electrically insulate brackets

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

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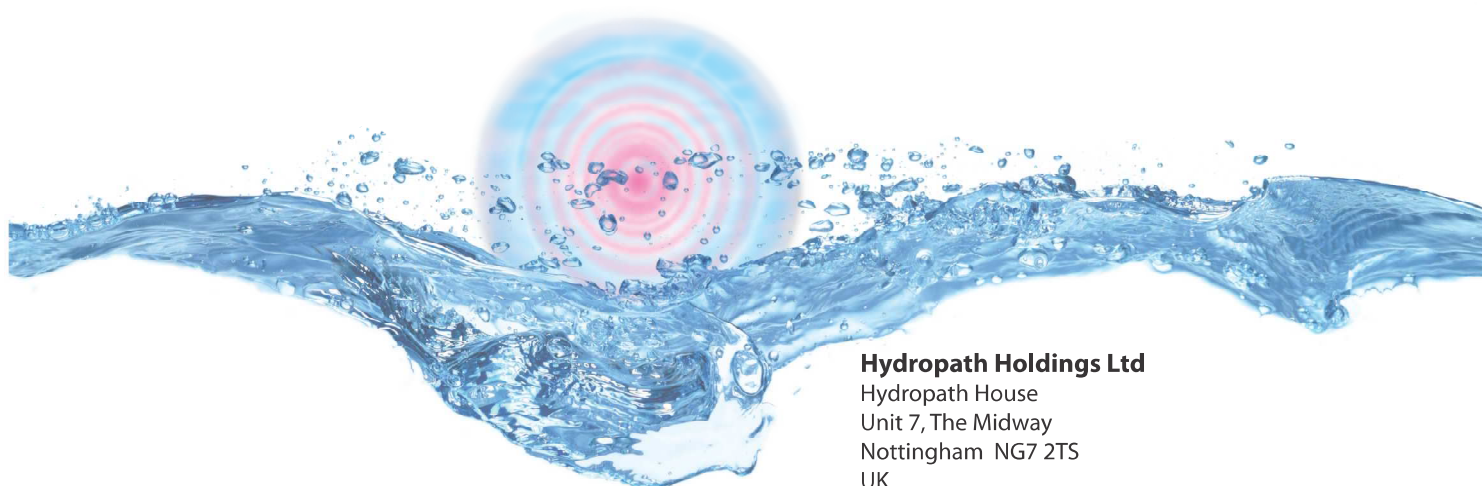
FRANCE



Model	Short Ferrite Quantity	Long Ferrite Quantity	Stainless Steel Banding (mm)	Screw Lock	Screw	Nut	Thumb Nut
P60	-	4	2 x 280	2	4	2	2
P100	5	1	2 x 470	2	6	2	4
P120	-	6	2 x 470	2	6	2	4
P160	-	8	2 x 700	2	8	2	6

The table above indicates the parts included with each *AquaKLEAR* Model. Please refer to the User Instructions for further details on the complete installation process.

Box Contents List:	
Transducer (Model)	Power Supply (PSU)
Mains Cable	Interconnecting Cable
User Instructions	Ferrites & Fixings (refer to table above)



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