BIN-X System

Water Treatment System for Legionella, other bacteria and particles in potable water.

☑ BIN-X provides an optimum barrier against Legionella, other bacteria, as well as particles and biofilm.

☑ Removes all particles and reduces calcium precipitation.

☑ Automatic flush function – controlled by a plc or electronic timer .

☑ Less wear on pumps, valves, pipes, fittings and other components.

☑ Environmentally friendly technology – pure mechanical filtration and no chemical handling.

☑ The risk of shutdown is avoided in case of possible contamination from water supply, and thus unnecessary additional costs.

☑ BIN-X System is approved for drinking water by The Drinking Water Inspectorate (DWI).

BIN-X Systems are widely used in hospitals and large commercial buildings. The system is installed directly after the water supply intake and it is ensures that Legionella and other bacteria do not gain access to the hospital´s internal water supply.

BIN-X Systems can be delivered in many variants: From small systems for single tap use, water coolers, coffee machines, and ice cube machines, and up to large systems that treats all incoming water.

In correct dimensioning, the cost of acquisition, depreciation and operation is less than 10% per filtered m³ water, and the BIN-X System is virtually maintenance-free, requiring only one annual service visit, where function and membrane density are checked. The specially developed BIN-X membrane is cleaned by an automatic and patented flushing function that rinses waste products at regular intervals to a foul drain. The system has a low energy consumption for electronic control, a moderate water consumption for flushing and works completely without the need for chemicals.

BIN-X System

Installation overview:
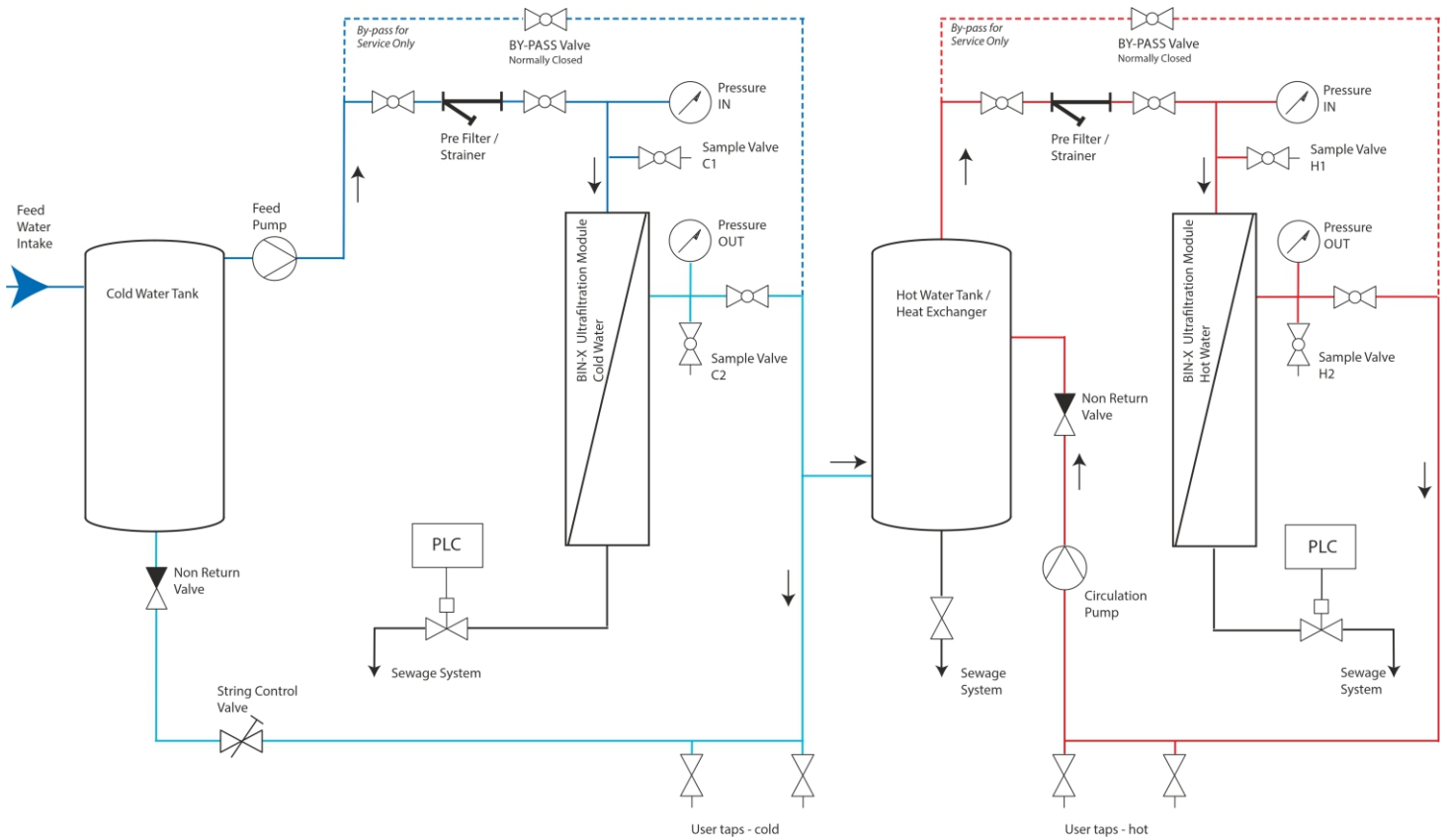
Model overview:

Type	Capacity	Dimensions in mm
C = cold water, max. 40°C / 6 bar	Volume per hour	Height * Width * Depth
H = hot water, max. 70°C / 5 bar		
UF 23, UF 25 & UF 35	25 - 125 l/hour	376 - 664 * 63 * 63
UF 45 C & UF 410 C	250 - 550 l/hour	820 - 1.400 * 150 * 150
UF 45 H & UF 410 H	250 - 550 l/hour	820 - 1.400 * 150 * 150
UF 410 C2 - C4	900 - 1,800 l/hour	1.750 * 1.300 * 500
UF 410 H2 - H4	900 - 1,800 l/hour	1.750 * 1.300 * 500
UF 610 C1 - C2	1.200 - 2,400 l/hour	1.250 * 200 - 600 * 200
UF 815 C1 - C4	5,000 - 20,000 l/hour	1.850 * 1.720 * 1.010
UF 815 H1 - H4	4,000 - 16,000 l/hour	1.850 * 1.720 * 1.010

*Demonstration module of BIN-X System*

Flow rates are approximate and can vary depending on model and specific feed-water quality. Bespoke systems are available to meet specific site flow requirements

Installation Principle

BIN-X System UF 815 C1 / H1

By-pass Valve **V3**

Closed under normal production

Inlet Valve **V1**

Outlet Valve Clean Water **V2**

External components - not included in delivery

DN40

DN40

DN40

DN40

DN40 ISO-flange

DN40 ISO-flange

DN40

Mounted on Stainless steel stand

Pre-filter 1½"/ 100 µm

DN15

MV 2   S

DN15

Pressure IN

V4

V5

Pressure OUT

PLC

230 VAC

SV1

Service Valve IN

SV2

Service Valve OUT

U1

Victaulic clamps

U2

BIN-X Ultrafiltration Module

MV1   S

U3

SV3 Service Valve DRAIN

DN40
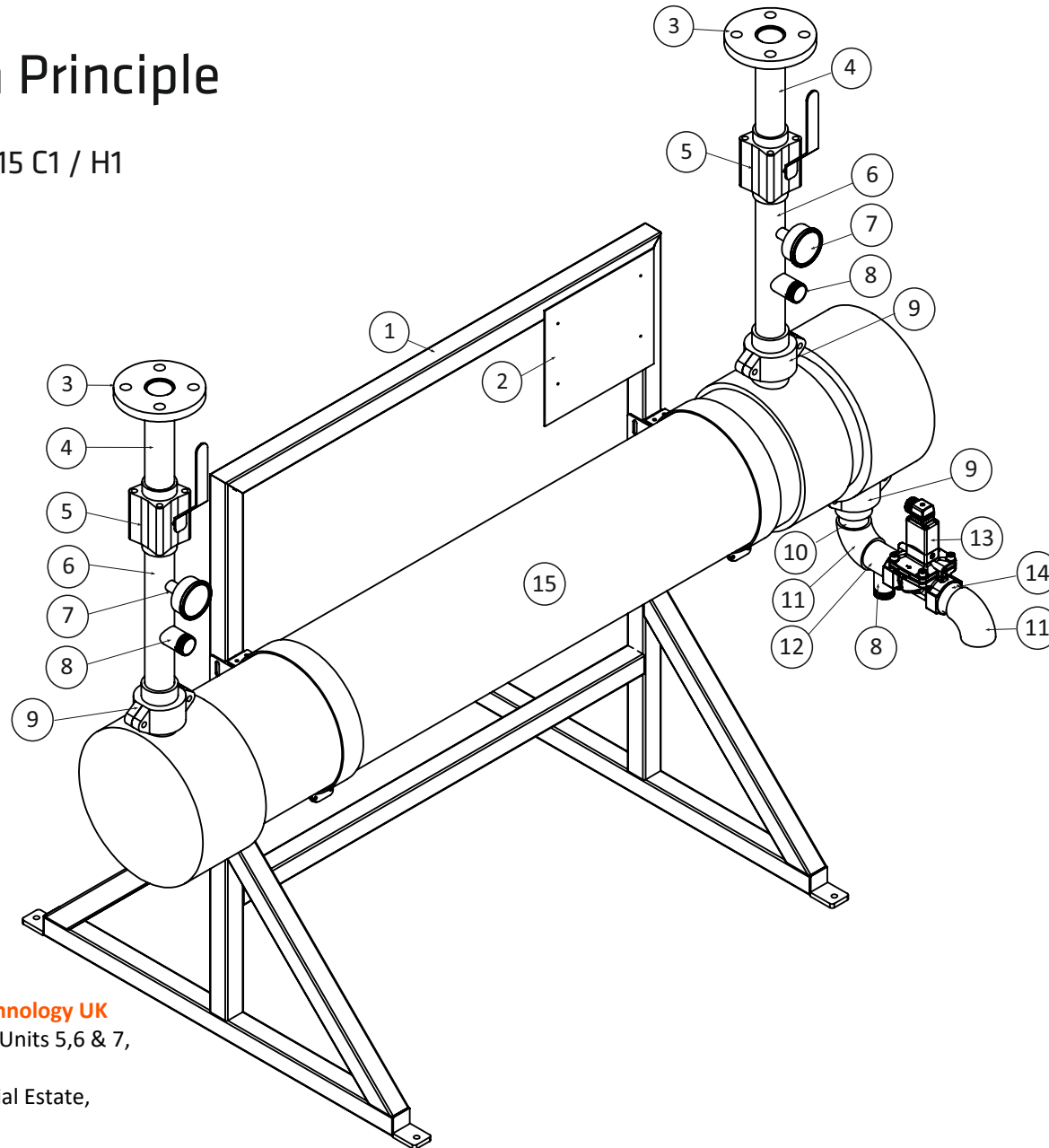
FS Flow Sensor

To open drain

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Principal Diagram MS 05.22
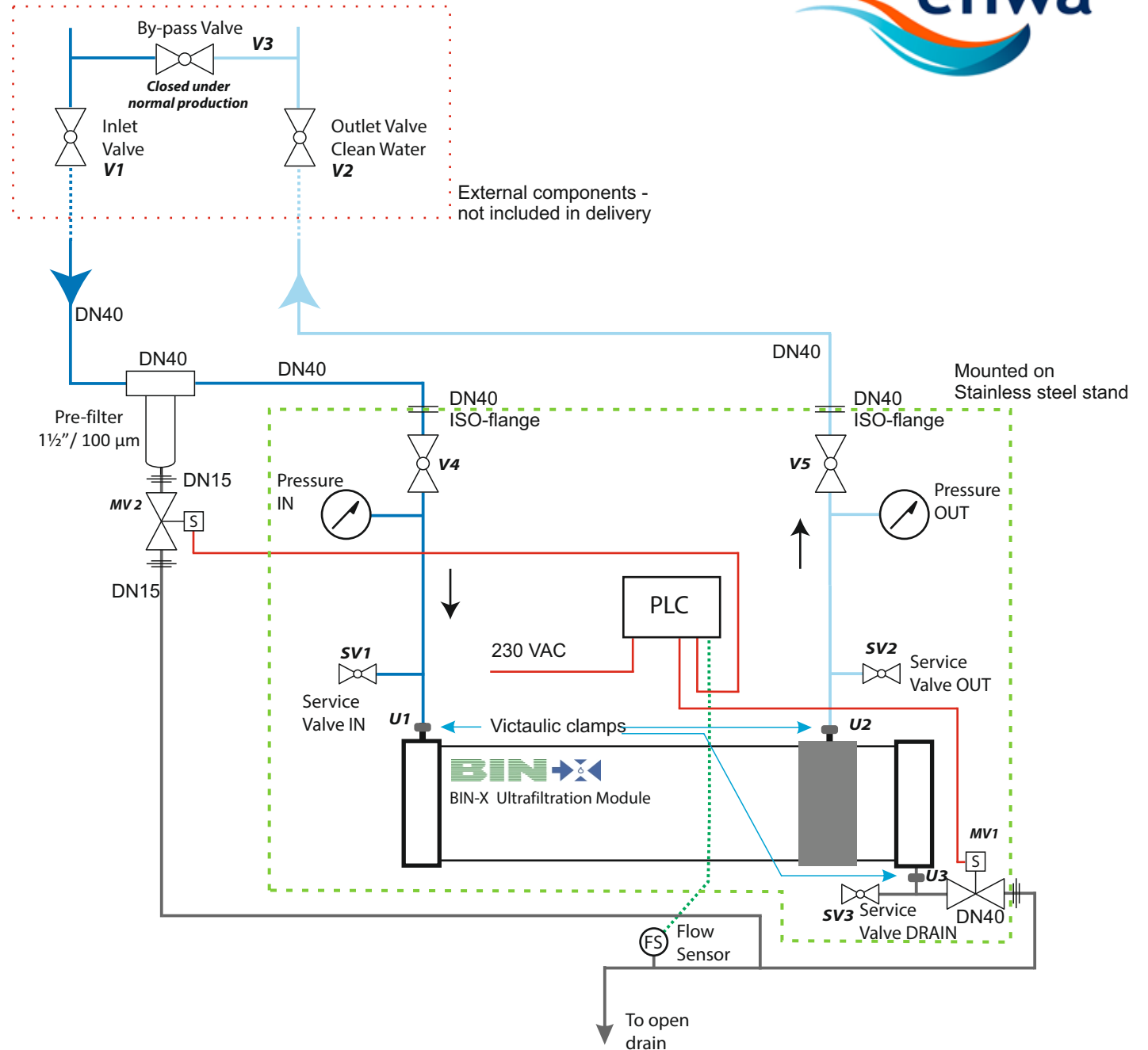
Installation Principle

BIN-X System UF 815 C1 / H1

1	Stainless steel mounting frame
2	Mounting plate for plc
3	IS0 40 flange
4	Pipe Ø 48,3x3 L=50
5	1½" DN40 ball valve
6	Pipe Ø 48,3x3 L=400, 2 holes for sockets
7	Pressure gauge Ø 63, 0-6 bar
8	Socket for 1" service valve/sample valve
9	2" Victaulic Style 75 flexible coupling
10	Nipple, Victaulic-48,3 Ø
11	90° elbow
12	Pipe Ø 48,3x3, 1 hole for socket
13	Bürkert 5282 solenoid valve, DN40
14	Nipple DN40
15	BIN-X UF 815 C/H membrane module

Principal Diagram MS 05.22

Installation Principle

BIN-X System UF 815 C1 / H1

341 1000

250

348,80

371

1110

661,50

537,40

45°

800
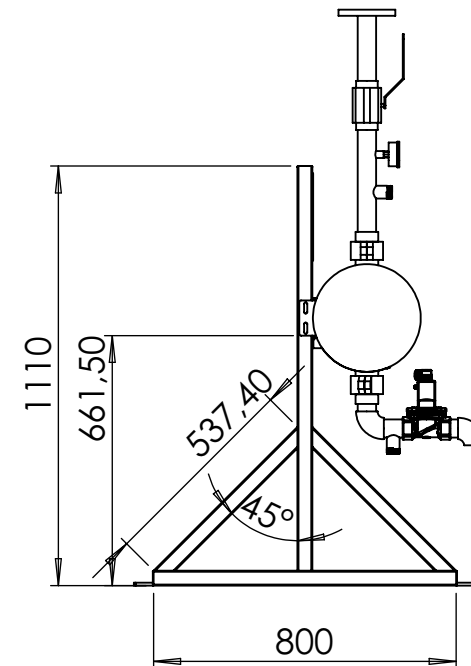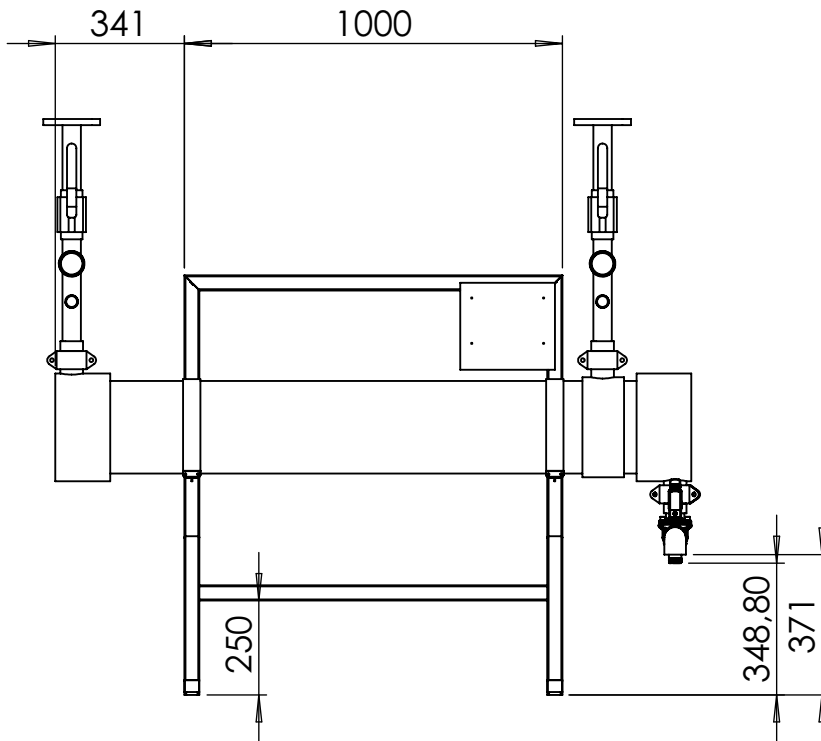
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Schematic of full water pathway

BIN-X Ultrafiltration system

End cap
O-ring sealing
Mechanical lock strip
Sealing, «Potting»

Filter housing
Clean water chamber

Capillary straw
Capillary inner surface
<= 0.03 μm

Clean water, permeate

Feed water

Solenoid valve, normally closed, controlled by plc

Concentrate:
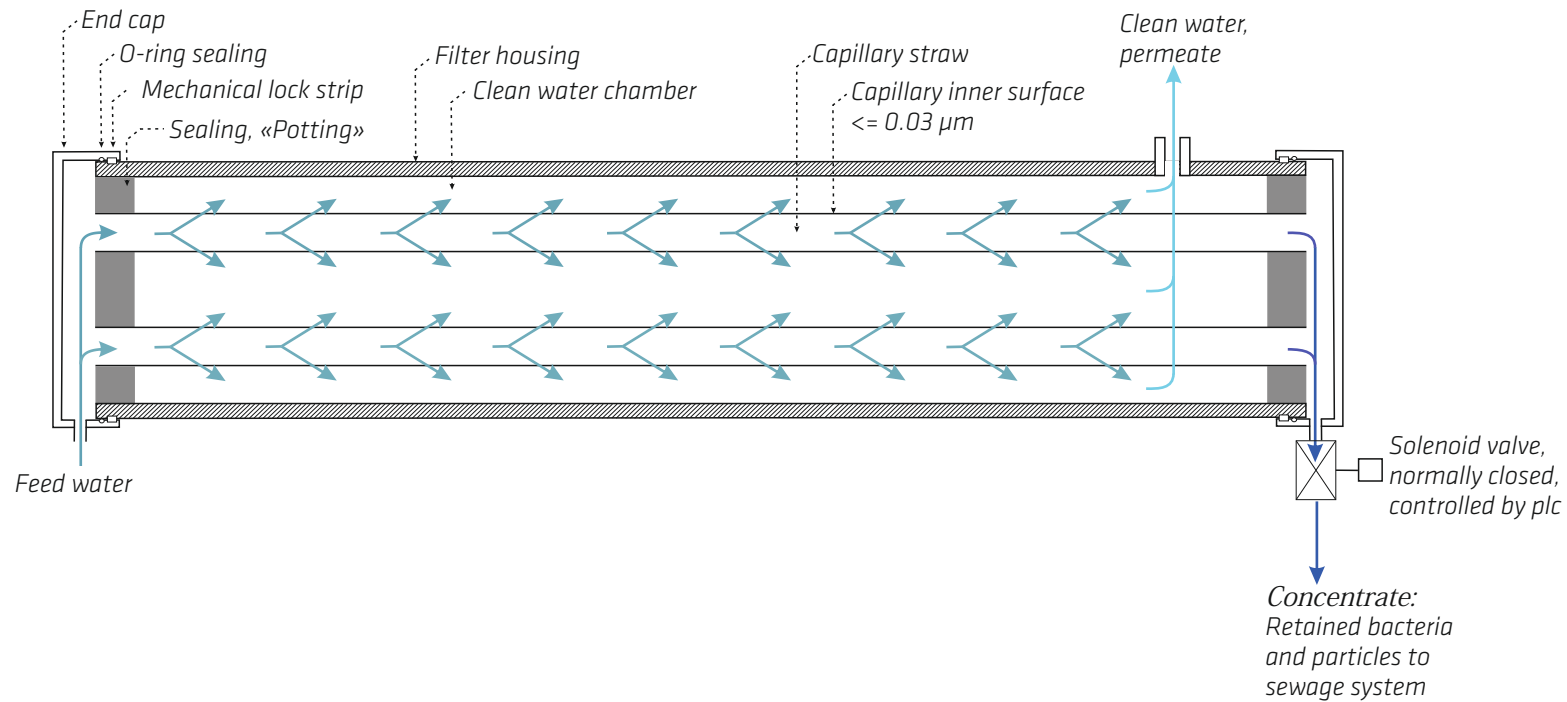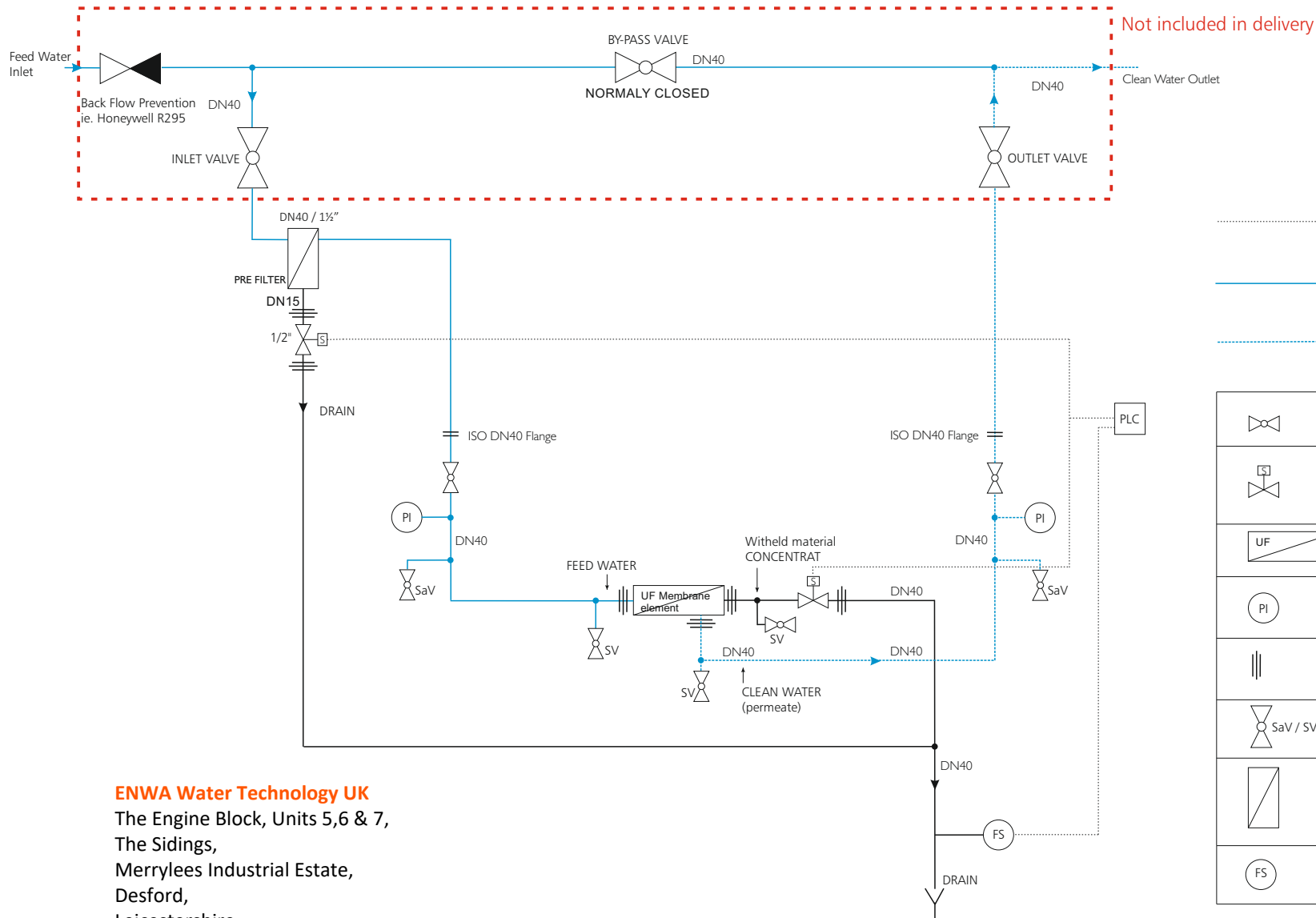Retained bacteria and particles to sewage system

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Principal Diagram MS 05.22

PI diagram BIN-X System UF 815 C1 / H1

Not included in delivery

Feed Water Inlet

Back Flow Prevention ie. Honeywell R295

DN40

INLET VALVE

BY-PASS VALVE
DN40
NORMALY CLOSED

DN40

OUTLET VALVE

Clean Water Outlet

DN40 / 1½"

PRE FILTER

DN15

1/2" S

DRAIN

ISO DN40 Flange

PI

DN40

SaV

FEED WATER

UF Membrane element

SV

Witheld material CONCENTRAT

S

SV

DN40

CLEAN WATER (permeate)

SV

DN40

DN40

DN40

ISO DN40 Flange

DN40

PI

SaV

PLC

DN40

FS

DRAIN

Control wire - PLC

Feed water - Water supply

Clean water (permeate)

⋈	Ball Valve
S (valve symbol)	Solenoid Valve (normaly closed) DN40 1½" Bürkert 5282 DN15 ½" Bürkert 5282
UF	Ultrafiltration Membrane Module
PI	Pressure Indicator
‖‖	2" Victaulic adaptor/clamp Style 75 ½" Union, pre filter
SaV / SV	SaV : DN8 ¼" Sample Valve SV : DN25 1" Service Valve
(filter symbol)	Mechanical pre filter (100 μm)
FS	Flow sensor

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