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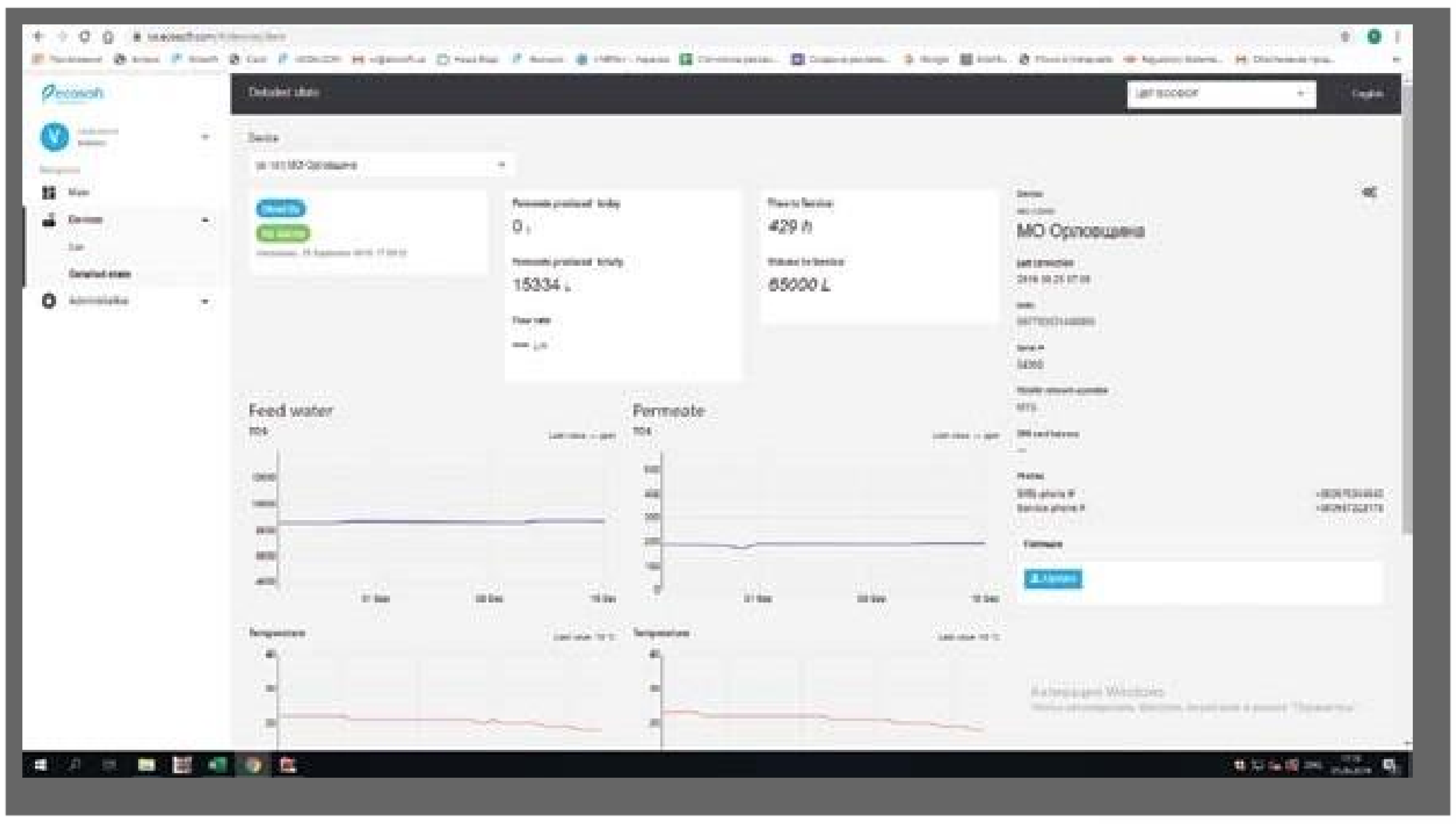
REVERSE OSMOSIS SYSTEMS

COMMERCIAL REVERSE OSMOSIS SYSTEMS

Ecosoft's numerous customers who operate swimming pools, water kiosks, boiler rooms, garden centers, restaurants, etc. can attest to excellent quality and efficiency of Ecosoft reverse osmosis machines.

ECOSOFT MO
IDEAL SOLUTION FOR BUSINESS WITH INTERNET OF FILTERS

ECONNECT — ALWAYS STAY IN TOUCH WITH YOUR FILTER



ECONNECT FUNCTIONALITY ALLOWS TO KEEP TRACK OF:

- How much water is used
- Water purification effectiveness
- Remaining time before scheduled maintenance
- Sensor readings
- Real time system status

MORE MAINTENANCE REVENUE

Online system monitoring allows to maximize timing and cost effectiveness of maintenance service

Easy planning of your service team schedule

PERFECT WATER FOR COOKING AND DRINKS

Reverse osmosis is a natural and economical method for obtaining safe purified water

Purified water will remain invariably safe even if supply water quality deteriorates

HARMONIOUS COMBINATION OF EFFECTIVE SOLUTIONS

- Great reliability thanks to high quality parts and equipment and careful engineering
- Easy to operate and maintain thanks to innovative architecture
- Filmtec™ XLE membranes and Grundfos® CM pumps save up to 50% energy
- Attractive exterior design
- Excellent quality confirmed by CE and ISO certificates

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HIGH PERFORMANCE WITH THE SMALLEST FOOTPRINT

ECOSOFT MO-6500 COMMERCIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Steam boilers, heating and cooling circuits, breweries and beverage production, livestock and poultry farms, glazing factories, laundry and car wash, greenhouses etc

EQUIPMENT

- Grundfos® CM 1-10 pump
- 300 psi membrane vessel
- Filmtec™ XLE-4040 membranes
- BB10 sediment prefilter
- Electrical panel w/ Ecosoft controller
- Danfoss solenoid valves
- Piping, instrumentation, frame
- Wooden crate

Model M6VCOTFWE is equipped with OC6000 controller with Econnect functionality providing online access to the RO machine

KEY FEATURES

- High reliability due to high quality engineering and components
- Saves up to 30% of space*
- Easy to use thanks to smart architecture
- Saves up to 50% of energy* thanks to DOW Filmtec™ XLE membranes and Grundfos pumps
- Original design
- CE marked and confirmed to be safe in accordance with EC New Approach Directives

* Compared to industrial models of Ecosoft RO

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

PHYSICAL PARAMETERS

Mains. concentrate, permeate	G ½″	
Antiscalant dosing port	G ½″	
Approx. weight (bare system / crate)	60 kg	90 kg
Dimensions (bare system, W × D × H)	0.55 × 0.42 × 1.50 m	
Dimensions (crate, W × D × H)	0.60 × 0.50 × 1.65 m	

System architecture may be amended on manufacturer's discretion without violating the process design

ECOSOFT MO-6500 COMMERCIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow rate, L/h (GPH)	Membranes	Pieces on pallet
M6VCTFWE	Ecosoft MO–6500	200–300 (50–80)	1/40 x 40	4
M6VCOTFWE	Ecosoft MO–6500 EConnect	200–300 (50–80)	1/40 x 40	4

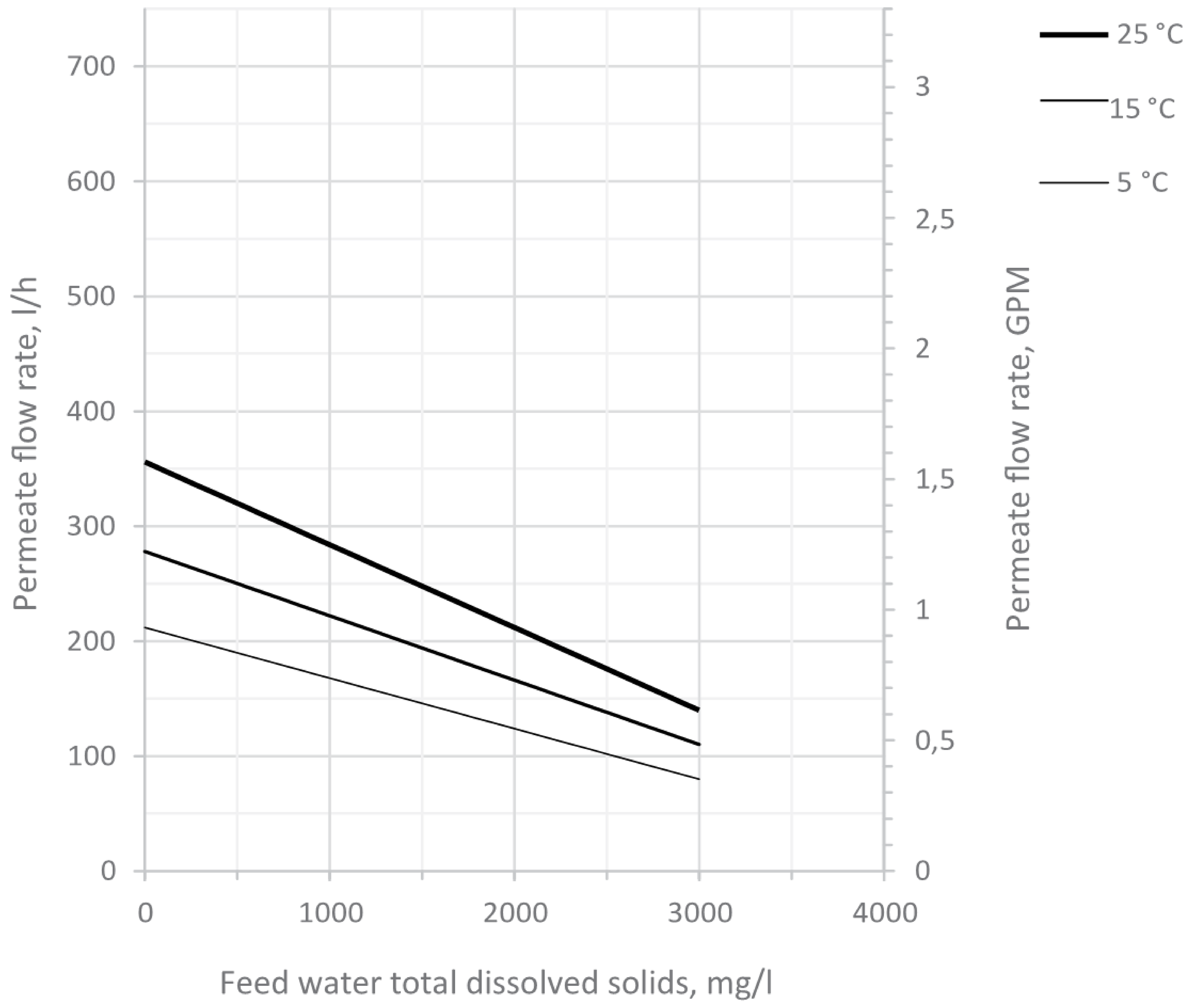
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**250 l/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	320…400 l/h (service)
	1500…2000 l/h (rinse)
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	230 V, 50 Hz (1 ph)
Electrical power	0.7 kW
Prefilter rating	5 μm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

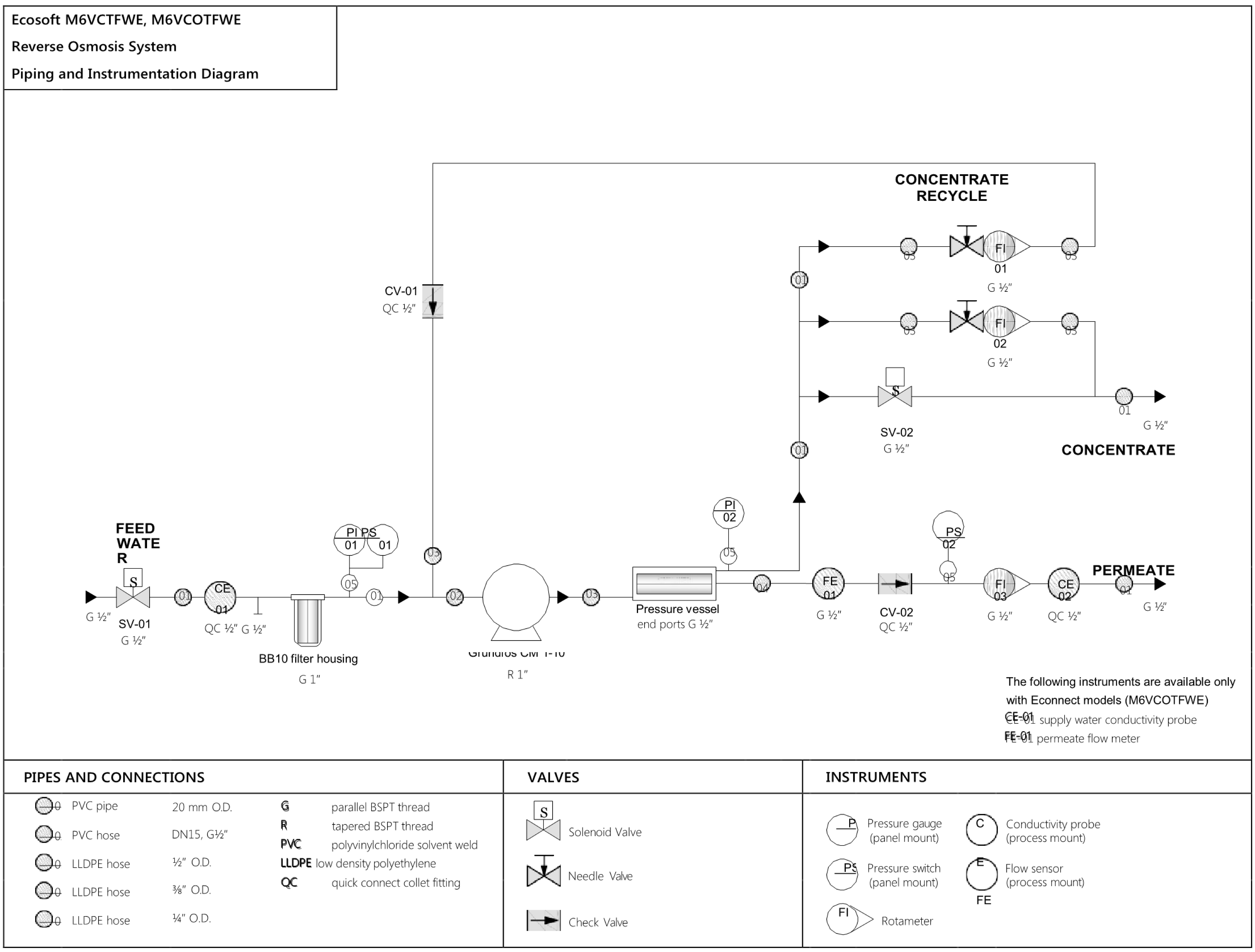
[2] for low scaling/fouling water

ECOSOFT MO-6500 FLOW CAPACITY



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PIPES AND INSTRUMENTS DIAGRAM



HIGH PERFORMANCE WITH THE SMALLEST FOOTPRINT

ECOSOFT MO-12000 COMMERCIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Steam boilers, heating and cooling circuits, breweries and beverage production, livestock and poultry farms, glazing factories, laundry and car wash, greenhouses etc

EQUIPMENT

- Grundfos® CM 1-10 pump
- 300 psi membrane vessels
- Filmtec™ XLE-4040 membranes
- BB10 sediment prefilter
- Electrical panel w/ Ecosoft controller
- Danfoss solenoid valves
- Piping, instrumentation, frame
- Wooden crate

Model M10VCOTFWE is equipped with OC6000 controller with Econnect functionality providing online access to the RO machine

KEY FEATURES

- High reliability due to high quality engineering and components
- Saves up to 30% of space*
- Easy to use thanks to smart architecture
- Saves up to 50% of energy* thanks to DOW Filmtec™ XLE membranes and Grundfos pumps
- Original design
- CE marked and confirmed to be safe in accordance with EC New Approach Directives

* Compared to industrial models of Ecosoft RO

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

System architecture may be amended on manufacturer's discretion without violating the process design

PHYSICAL PARAMETERS

Mains. concentrate, permeate	G ½″	
Antiscalant dosing port	G ½″	
Approx. weight (bare system / crate)	70 kg	100 kg
Dimensions (bare system, W × D × H)	0.55 × 0.42 × 1.50 m	
Dimensions (crate, W × D × H)	0.60 × 0.50 × 1.65 m	

ECOSOFT MO-12000 COMMERCIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow rate, L/h (GPH)	Membranes	Pieces on pallet
M10VCTFWE	Ecosoft MO–12000	400–550 (100–150)	2/40 x 40	4
M10VCOTFWE	Ecosoft MO–12000 EConnect	400–550 (100–150)	2/40 x 40	4

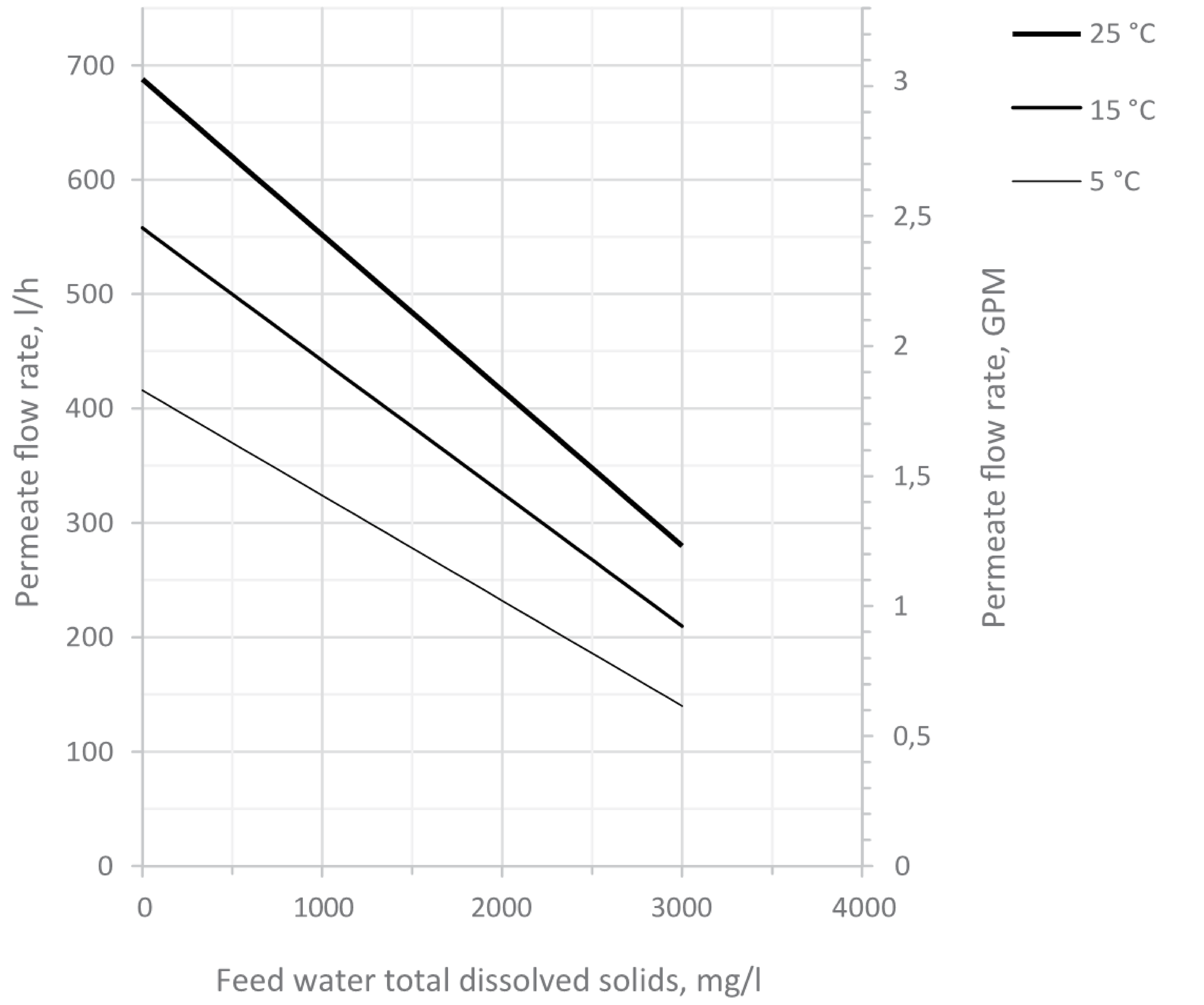
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**500 l/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	650…800 l/h (service)
	1500…2000 l/h (rinse)
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	230 V, 50 Hz (1 ph)
Electrical power	0.7 kW
Prefilter rating	5 μm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

[2] for low scaling/fouling water

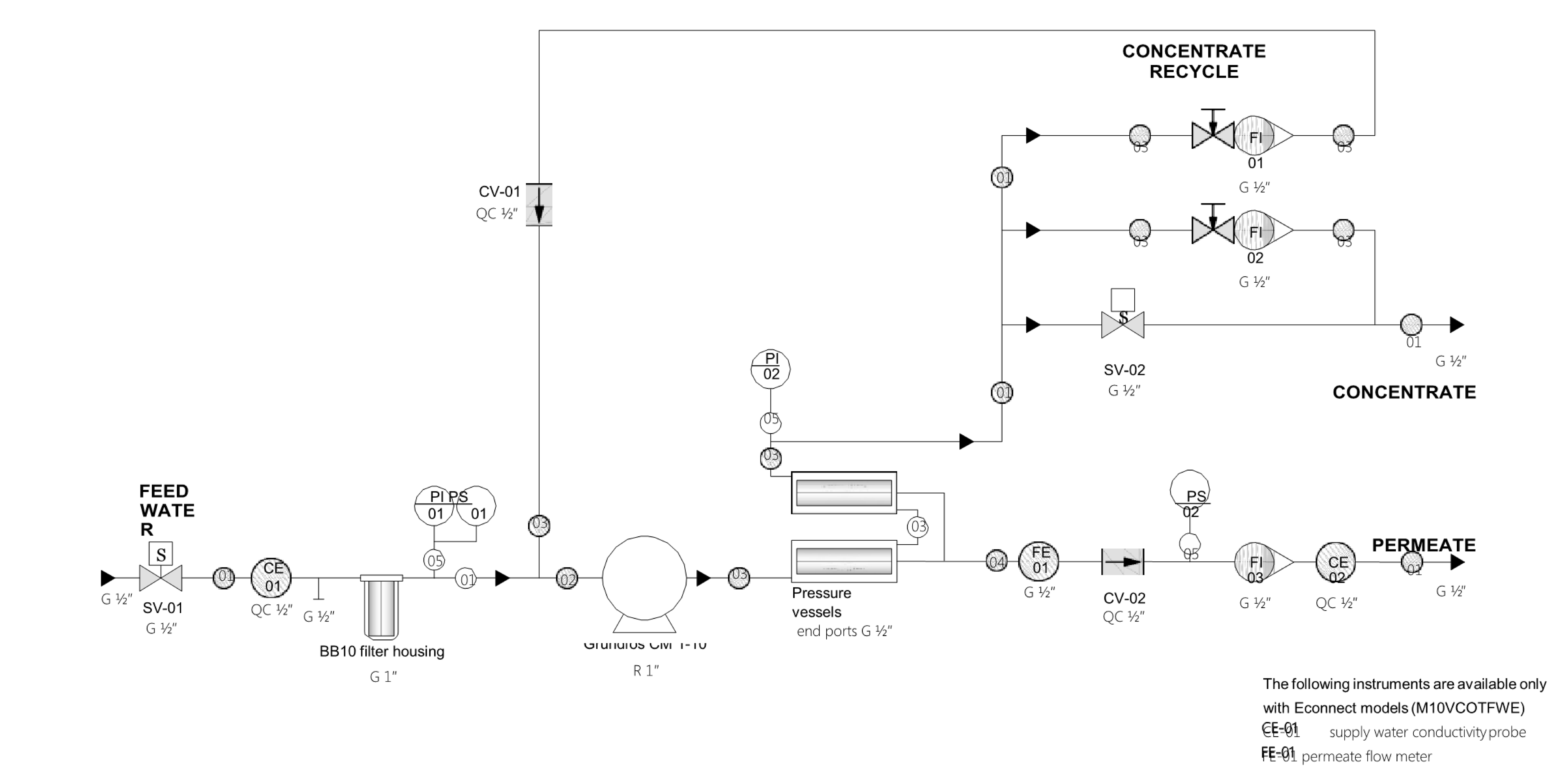
ECOSOFT MO-12000 FLOW CAPACITY



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PIPES AND INSTRUMENTS DIAGRAM

Ecosoft M10VCTFWE, M10VCOTFWE
Reverse Osmosis System
Piping and Instrumentation Diagram



PIPES AND CONNECTIONS

10	PVC pipe	20 mm O.D.	G	parallel BSPT thread
10	PVC hose	DN15, G½"	R	tapered BSPT thread
03	LLDPE hose	½" O.D.	PVC	polyvinylchloride solvent weld
04	LLDPE hose	⅜" O.D.	LLDPE	low density polyethylene
10	LLDPE hose	¼" O.D.	QC	quick connect collet fitting

VALVES

- S Solenoid Valve
- Needle Valve
- Check Valve

INSTRUMENTS

- PI Pressure gauge (panel mount)
- CE Conductivity probe (process mount)
- PS Pressure switch (panel mount)
- FE Flow sensor (process mount)
- FI Rotameter

INDUSTRIAL PERFORMANCE WITH SIMPLE DESIGN

ECOSOFT MO-24000 COMMERCIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Steam boilers, heating and cooling circuits, breweries and beverage production, livestock and poultry farms, glazing factories, laundry and car wash, greenhouses etc

EQUIPMENT

- Grundfos® CM 3-14 pump
- 300 psi membrane vessels
- Filmtec™ XLE-4040 membranes
- BB20 sediment prefilter
- Electrical panel w/ Ecosoft controller
- Danfoss solenoid valves
- Piping, instrumentation, frame
- Wooden crate

Model M24VCOTFWE is equipped with OC6000 controller with Econnect functionality providing online access to the RO machine

KEY FEATURES

- High reliability due to high quality engineering and components
- Saves up to 30% of space*
- Easy to use thanks to smart architecture
- Saves up to 50% of energy* thanks to DOW Filmtec™ XLE membranes and Grundfos pumps
- Original design
- CE marked and confirmed to be safe in accordance with EC New Approach Directives

* Compared to industrial models of Ecosoft RO

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

System architecture may be amended on manufacturer's discretion without violating the process design

PHYSICAL PARAMETERS

Mains. concentrate, permeate	G 1″	
Antiscalant dosing port	G ½″	
Approx. weight (bare system / crate)	100 kg	160 kg
Dimensions (bare system, W × D × H)	0.70 × 0.60 × 1.50 m	
Dimensions (crate, W × D × H)	1.00 × 0.75 × 1.90 m	

ECOSOFT MO-24000 COMMERCIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow rate, L/h (GPH)	Membranes	Pieces on pallet
M24VCTFWE	Ecosoft MO–24000	1000–1200 (250–330)	4/40 x 40	1
M24VCOTFWE	Ecosoft MO–24000 EConnect	1000–1200 (250–330)	4/40 x 40	1

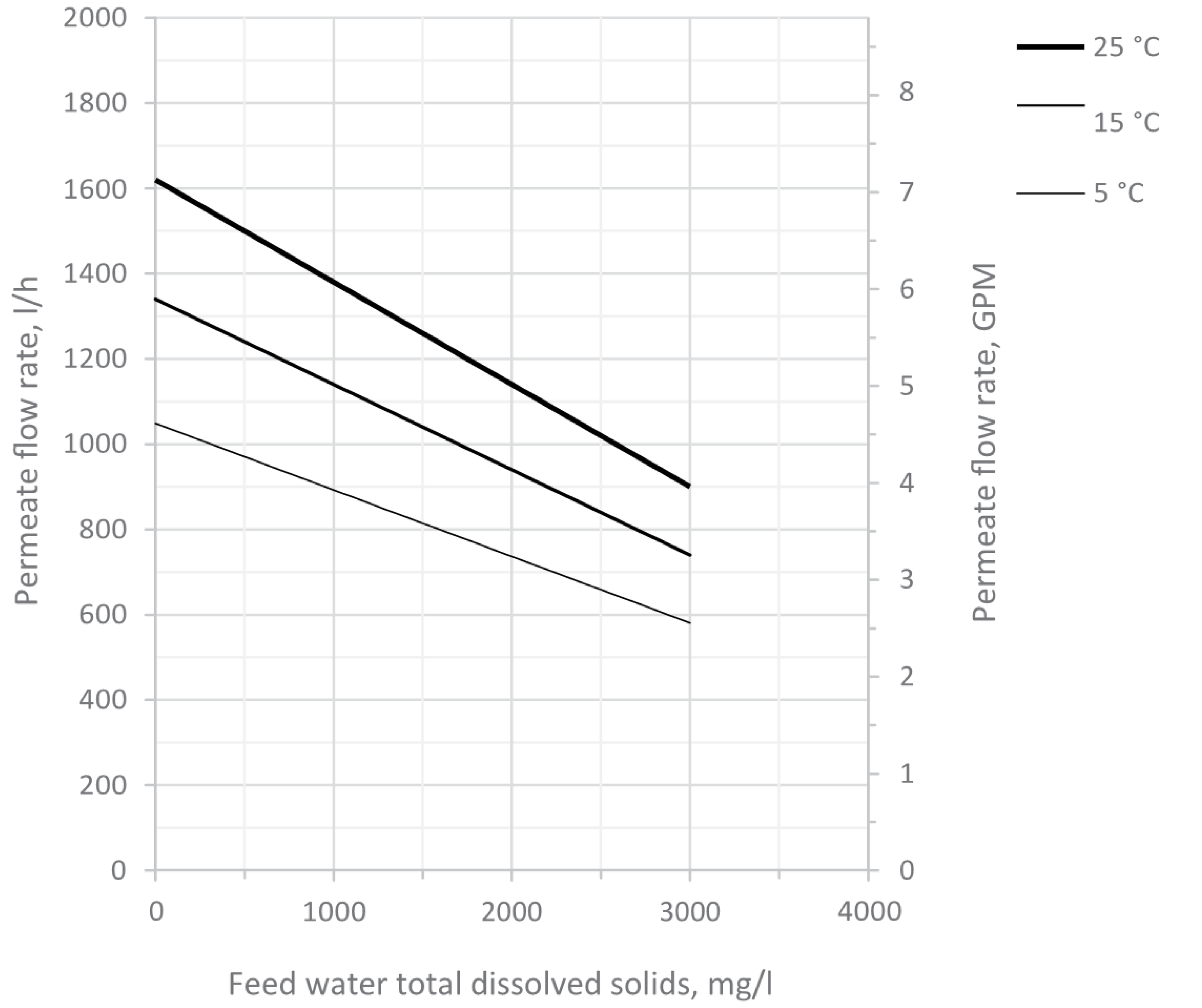
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**1000 l/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	1300…1500 l/h (service)
	3000…4000 l/h (rinse)
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	230 V, 50 Hz (1 ph)
Electrical power	2.0 kW
Prefilter rating	5 µm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

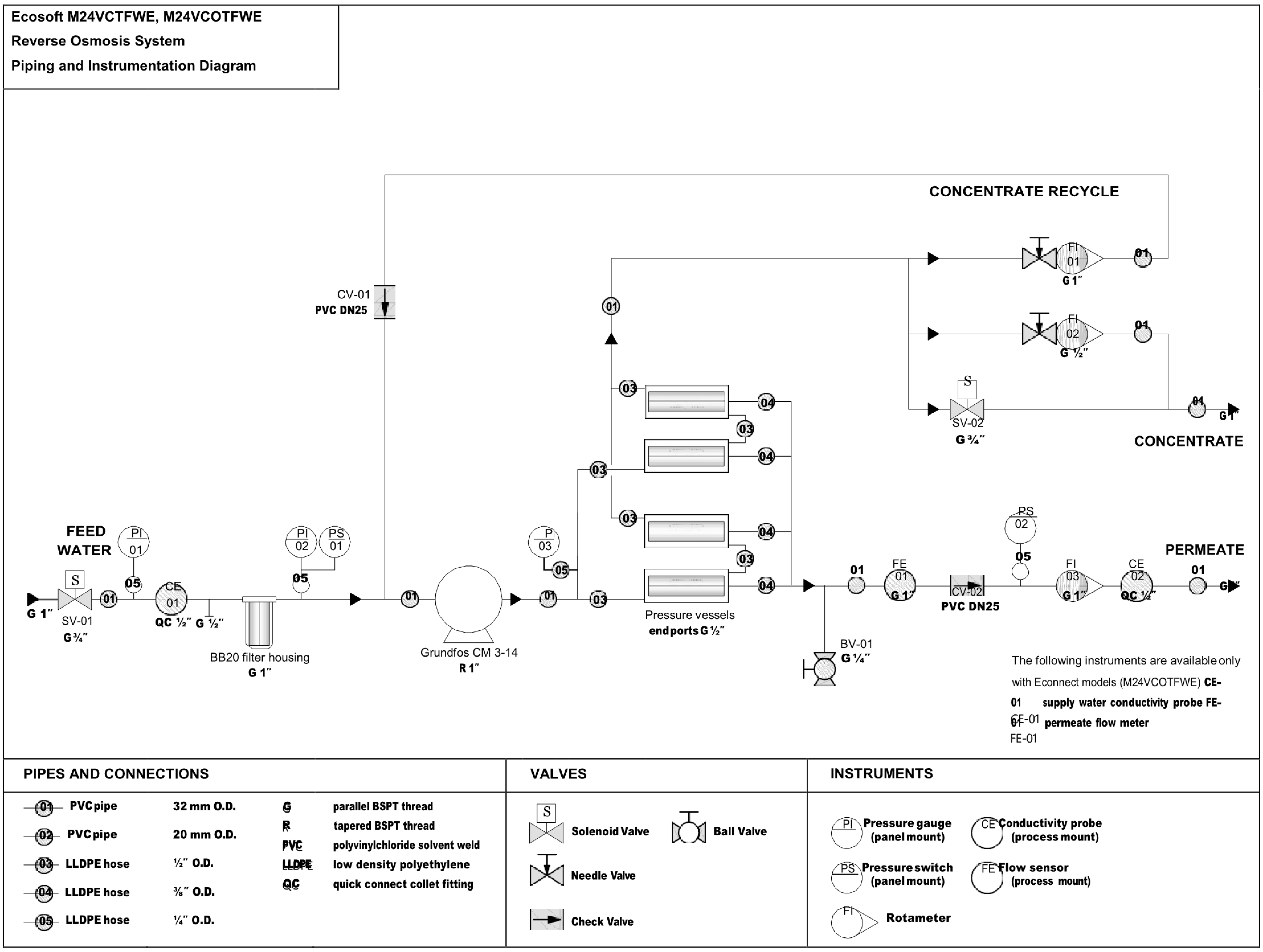
[2] for low scaling/fouling water

ECOSOFT MO-24000 FLOW CAPACITY



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PIPES AND INSTRUMENTS DIAGRAM



INDUSTRIAL
PERFORMANCE WITH
SIMPLE DESIGN

ECOSOFT MO-36000 COMMERCIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Steam boilers, heating and cooling circuits, breweries and beverage production, livestock and poultry farms, glazing factories, laundry and car wash, greenhouses etc

EQUIPMENT

- Grundfos® CM 3-14 pump
- 300 psi membrane vessels
- Filmtec™ XLE-4040 membranes
- BB20 sediment prefilter
- Electrical panel w/ Ecosoft controller
- Danfoss solenoid valves
- Piping, instrumentation, frame
- Wooden crate

Model M36VCOTFWE is equipped with OC6000 controller with Econnect functionality providing online access to the RO machine

KEY FEATURES

- High reliability due to high quality engineering and components
- Saves up to 30% of space*
- Easy to use thanks to smart architecture
- Saves up to 50% of energy* thanks to DOW Filmtec™ XLE membranes and Grundfos pumps
- Original design
- CE marked and confirmed to be safe in accordance with EC New Approach Directives

* Compared to industrial models of Ecosoft RO

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

System architecture may be amended on manufacturer's discretion without violating the process design

PHYSICAL PARAMETERS

Mains. concentrate, permeate	G 1″	
Antiscalant dosing port	G ½″	
Approx. weight (bare system / crate)	120 kg	180 kg
Dimensions (bare system, W × D × H)	0.90 × 0.60 × 1.50 m	
Dimensions (crate, W × D × H)	1.20 × 0.75 × 1.90 m	

ECOSOFT MO-36000 COMMERCIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow rate, L/h (GPH)	Membranes	Pieces on pallet
M36VCTFWE	Ecosoft MO–36000	1400–1600 (350–420)	6/40 x 40	1
M36VCOTFWE	Ecosoft MO–36000 EConnect	1400–1600 (350–420)	6/40 x 40	1

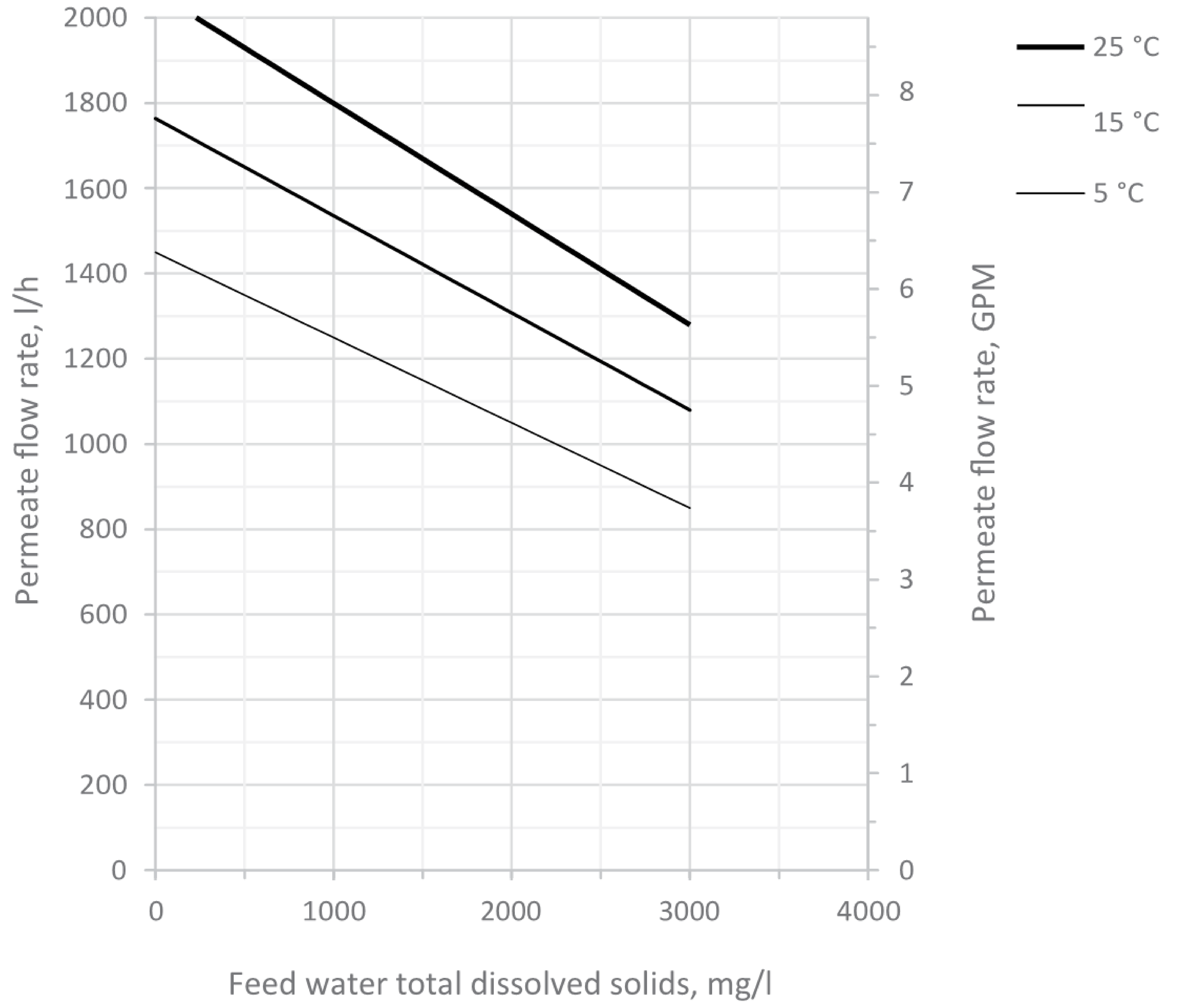
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**1500 l/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	2000…2500 l/h (service)
	3000…4000 l/h (rinse)
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	230 V, 50 Hz (1 ph)
Electrical power	2.0 kW
Prefilter rating	5 μm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

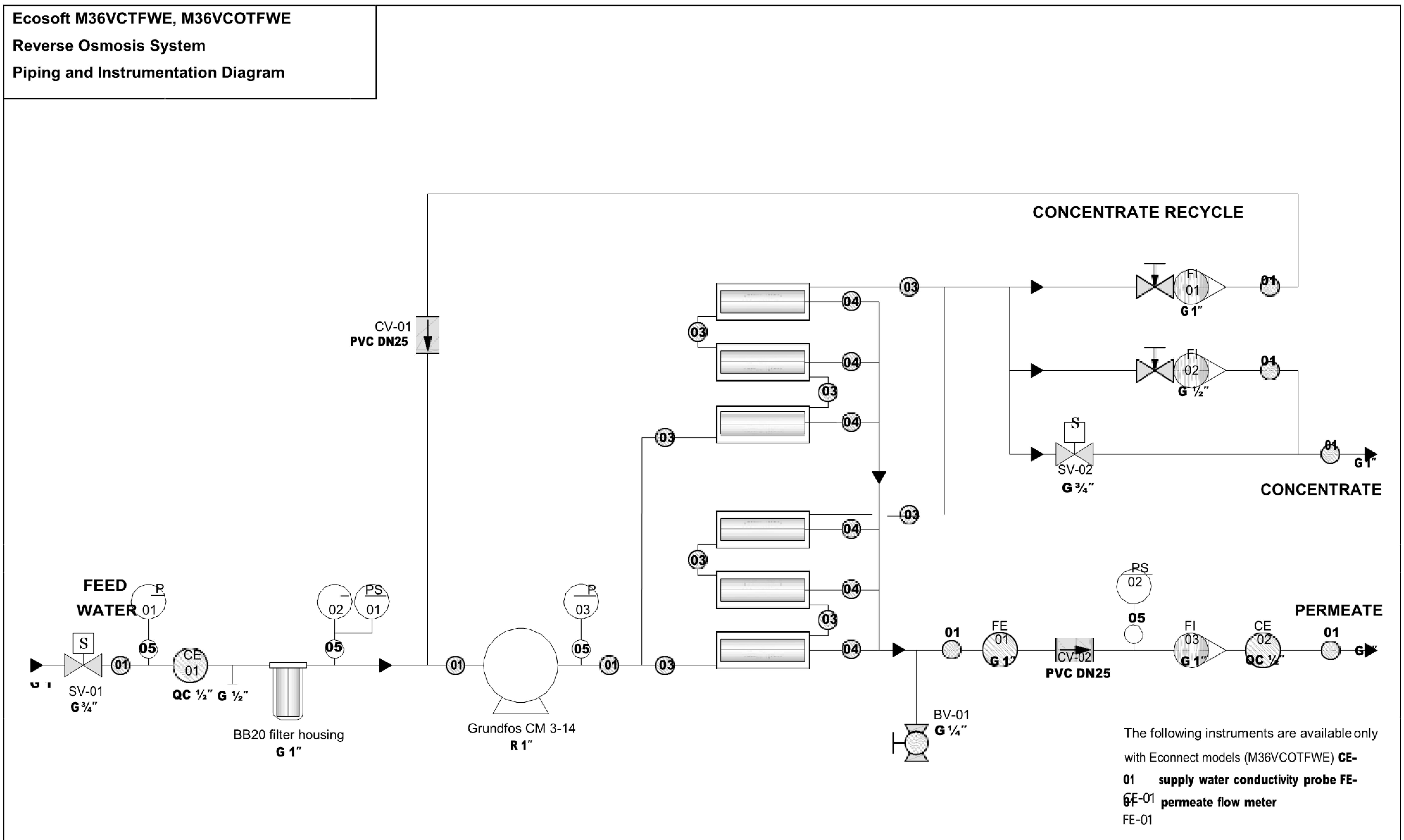
[2] for low scaling/fouling water

ECOSOFT MO-36000 FLOW CAPACITY



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PIPES AND INSTRUMENTS DIAGRAM



PIPES AND CONNECTIONS			
01 PVC pipe	32 mm O.D.	G	parallel BSPT thread
02 PVC pipe	20 mm O.D.	R	tapered BSPT thread
03 LLDPE hose	½″ O.D.	PVC	polyvinylchloride solvent weld
04 LLDPE hose	⅜″ O.D.	LLDPE	low density polyethylene
05 LLDPE hose	¼″ O.D.	QC	quick connect collet fitting

VALVES

- Solenoid Valve
- Ball Valve
- Needle Valve
- Check Valve

INSTRUMENTS

- PI Pressure gauge (panel mount)
- CE Conductivity probe (process mount)
- PS Pressure switch (panel mount)
- FE Flow sensor (process mount)
- FI Rotameter

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ECOSOFT MO-6500 BW
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.

EQUIPMENT

- Grundfos® CRN 1-36 high pressure pump
- 450 psi membrane vessel
- DOW Filmtec™ LCLE-4040 membrane
- BB10 sediment prefilter
- Electrical cabinet with Ecosoft controller
- Electrical inlet and flush valves
- Regulating needle valves
- Piping, valves, instrumentation, frame

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse

System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

CONNECTION PORT SIZES

Influent water Permeate Concentrate	G ½″ G ½″ G ½″
Antiscalant dosing port	G ½″
Approximate weight	
Bare system	140 kg
Crated system	200 kg
Dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	
Bare system	0.75 × 0.54 × 1.52 m
Crated system	1.0 × 0.8 × 1.8 m

ECOSOFT MO-6500BW INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, L/h (GPH)	Membranes
MO6500BW	Ecosoft MO-6500BW	200–300 (50–75)	1/40 x 40

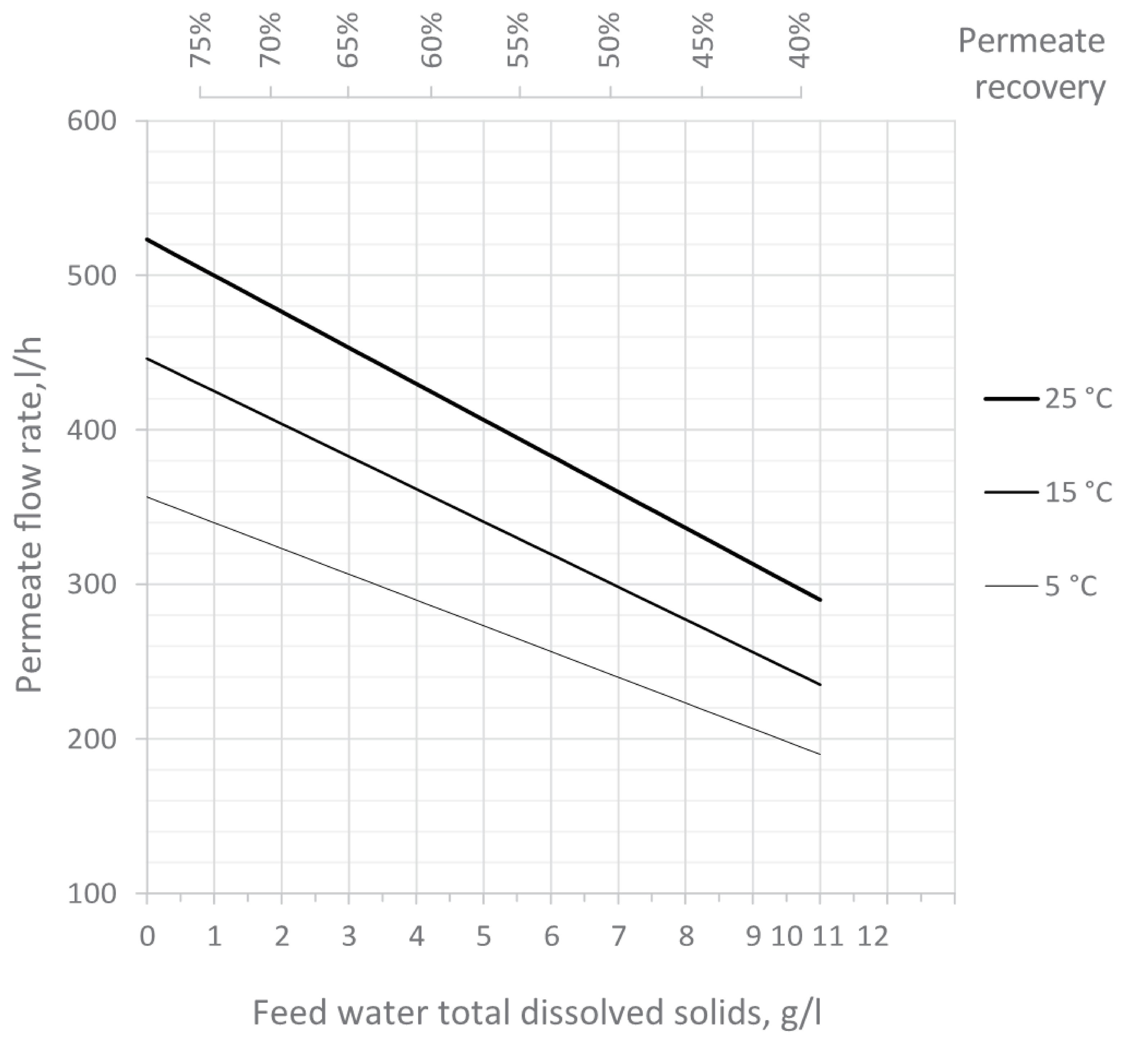
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**250 l/h**
Permeate recovery [2]	**depends on raw water TDS**
Maximum TDS	**10 000 mg/l (10 g/l)**
Influent flow demand	400…800 l/h (service)
	1500…2000 l/h (rinse)
Operating pressure	15…20 bar
Maximum pressure	25 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	2.2 kW
Prefilter rating	5 µm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

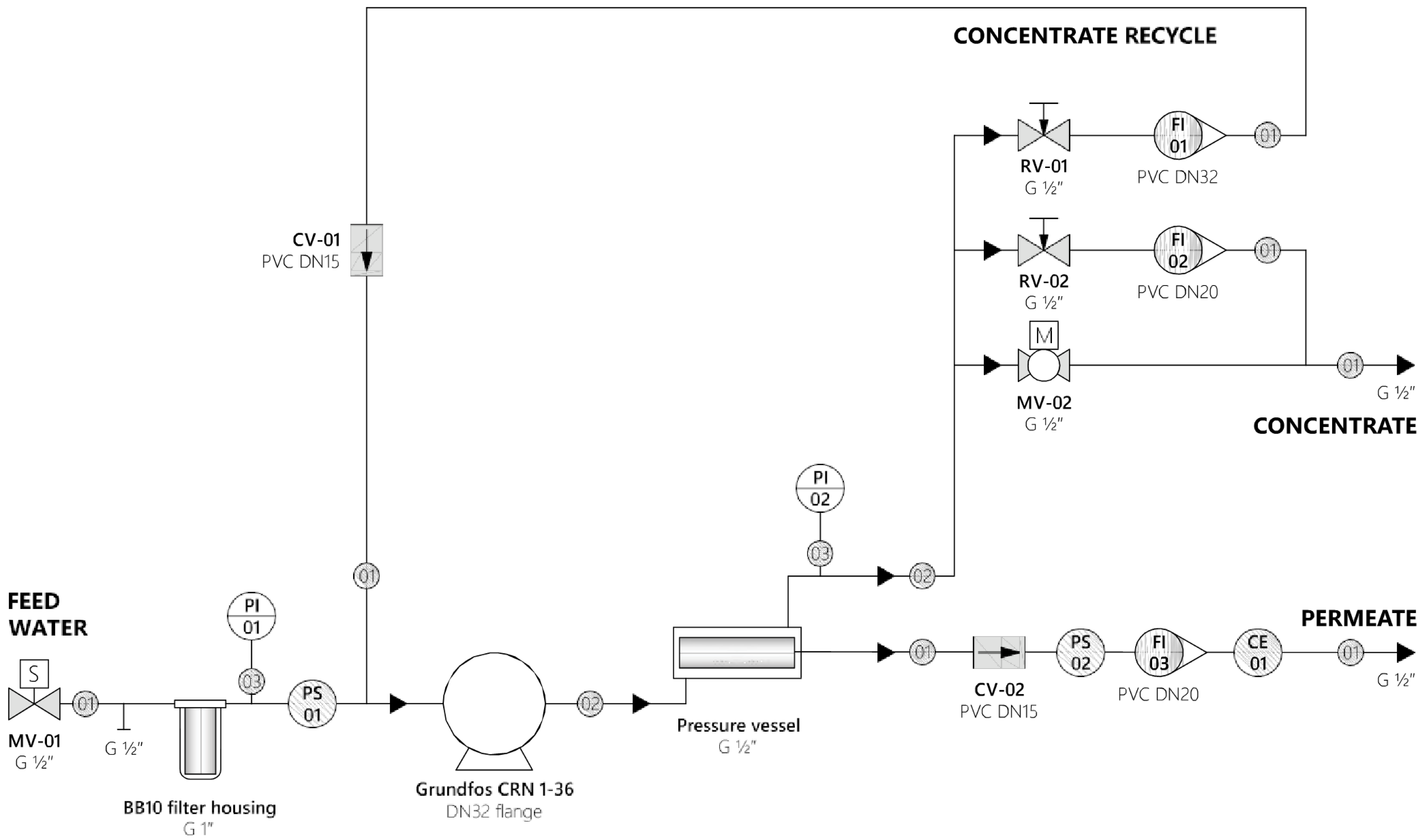
[2] for low scaling/fouling water

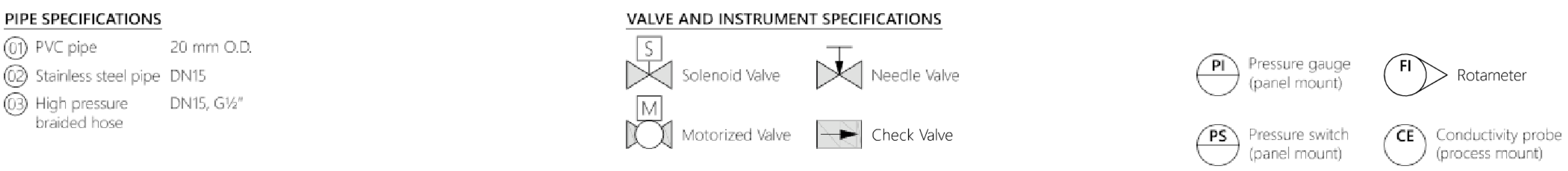
ECOSOFT MO-6500 BW RO FLOW CAPACITY GRAPH



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PIPES AND INSTRUMENTS DIAGRAM





ECOSOFT MO-6500 BW SS
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.

System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

EQUIPMENT

- Grundfos® CRN 1-36 high pressure pump
- 450 psi membrane vessel
- DOW Filmtec™ LCLE-4040 membrane
- BB10 sediment prefilter
- Electrical cabinet with Ecosoft controller
- Electrical inlet and flush valves
- Regulating needle valves
- Piping, valves, instrumentation, frame

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse

CONNECTION PORT SIZES

Influent water	G ½″
Permeate	G ½″
Concentrate	G ½″
Approximate weight	
Bare system	150 kg
Crated system	220 kg
Dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	
Bare system	0.75 × 0.54 × 1.52 m
Crated system	1.0 × 0.8 × 1.8 m

ECOSOFT MO-6500BW INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, L/h (GPH)	Membranes
MO6500BWTSS	Ecosoft MO-6500 BW SS	200–300 (50–75)	1/40 x 40

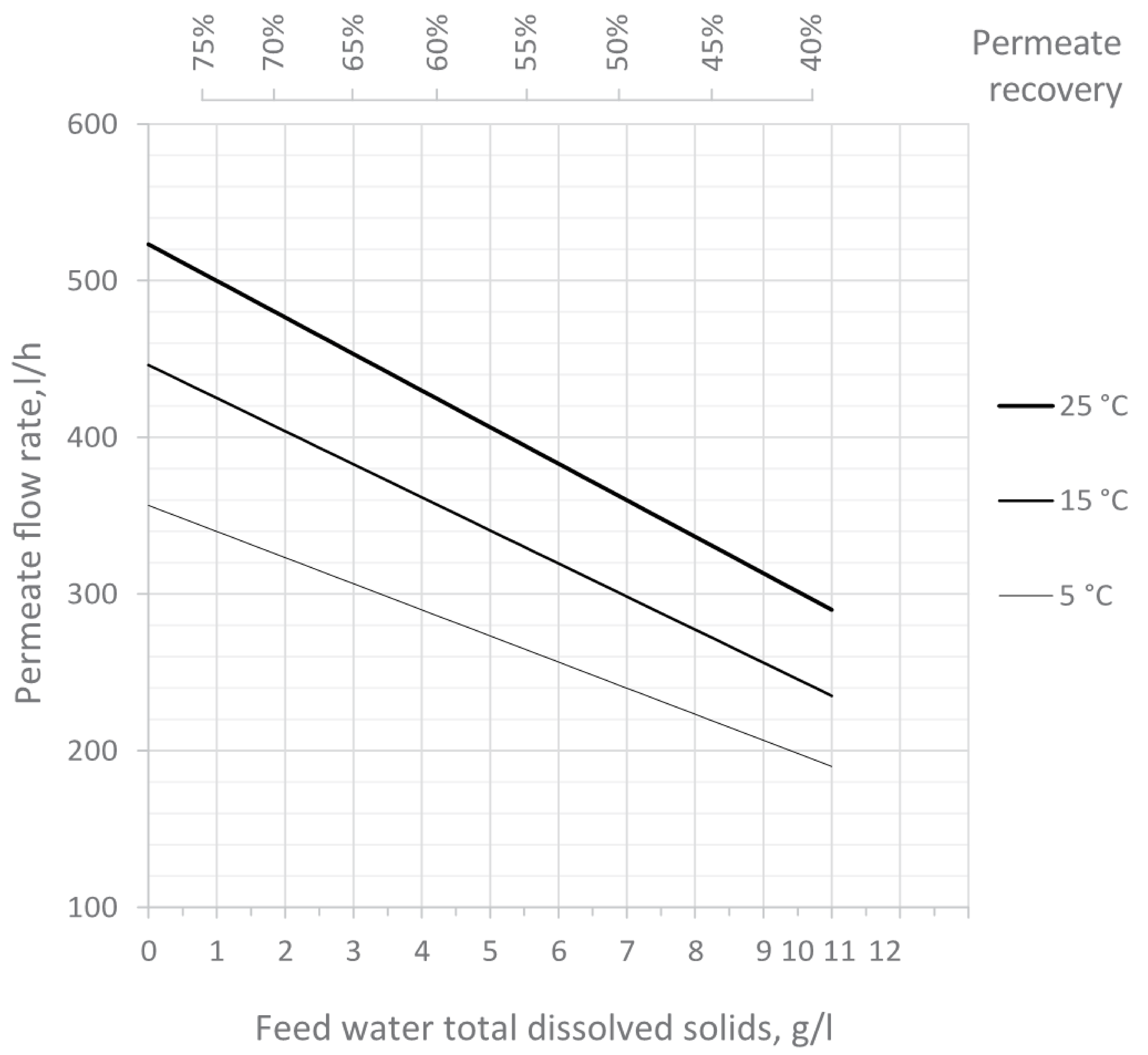
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**250 l/h**
Permeate recovery [2]	**depends on raw water TDS**
Maximum TDS	**10 000 mg/l (10 g/l)**
Influent flow demand	400…800 l/h (service)
	1500…2000 l/h (rinse)
Operating pressure	15…20 bar
Maximum pressure	25 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	2.2 kW
Prefilter rating	5 µm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

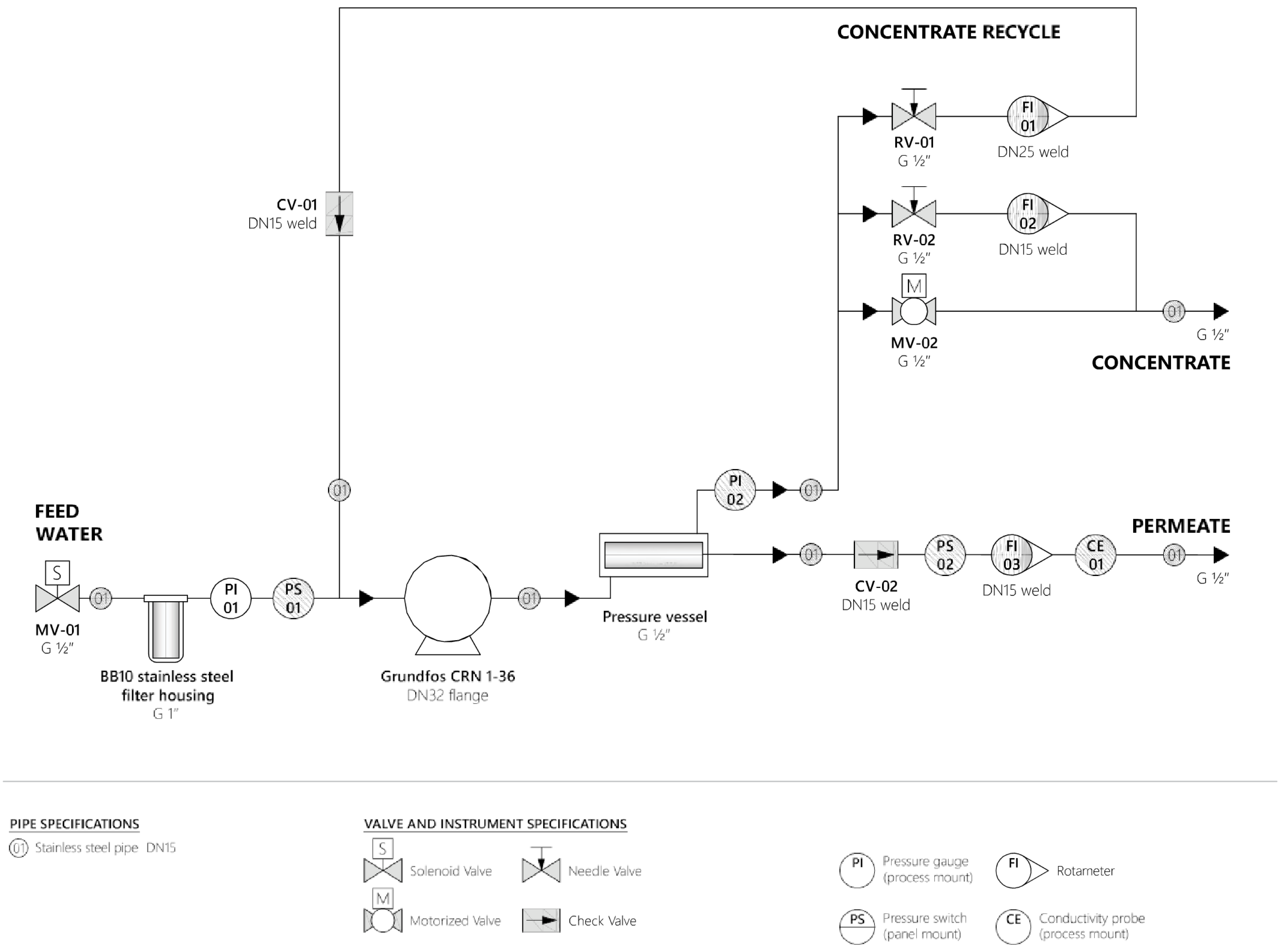
[2] for low scaling/fouling water

ECOSOFT MO-6500 BW SS RO FLOW CAPACITY GRAPH



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

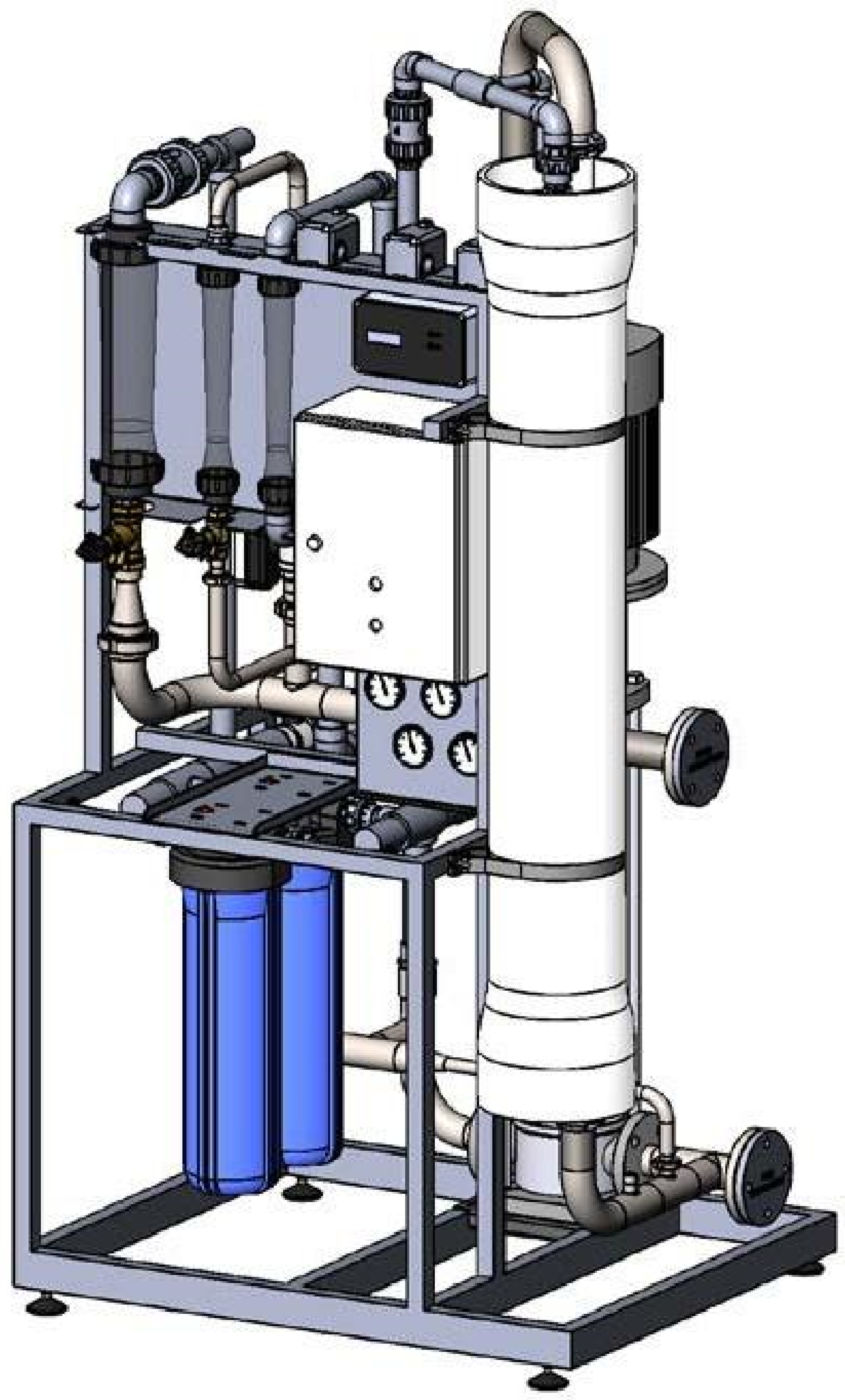
PIPES AND INSTRUMENTS DIAGRAM



ECOSOFT MO-1 BW
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.



System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

EQUIPMENT

- Grundfos® CRN 10-22 high pressure pump
- 450 psi membrane vessel
- DOW Filmtec™ ECO PRO-440 membrane
- BB20 sediment prefilters
- Electrical cabinet with Ecosoft controller
- Motorized inlet and flush valves
- Danfoss regulating valves
- Piping, valves, instrumentation, frame

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse

CONNECTION PORT SIZES

Influent water	G 1½″
Permeate	G 1″
Concentrate	G 1½″
Approximate weight	
Bare system	320 kg
Crated system	420 kg
Dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	
Bare system	1.2 × 0.9 × 1.9 m
Crated system	1.5 × 1.2 × 2.2 m

ECOSOFT MO-6500BW INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, m^3/h (GPH)	Membranes
MO11BW	Ecosoft MO-1 BW	1.0–1.5 (260–400)	1/80 x 40

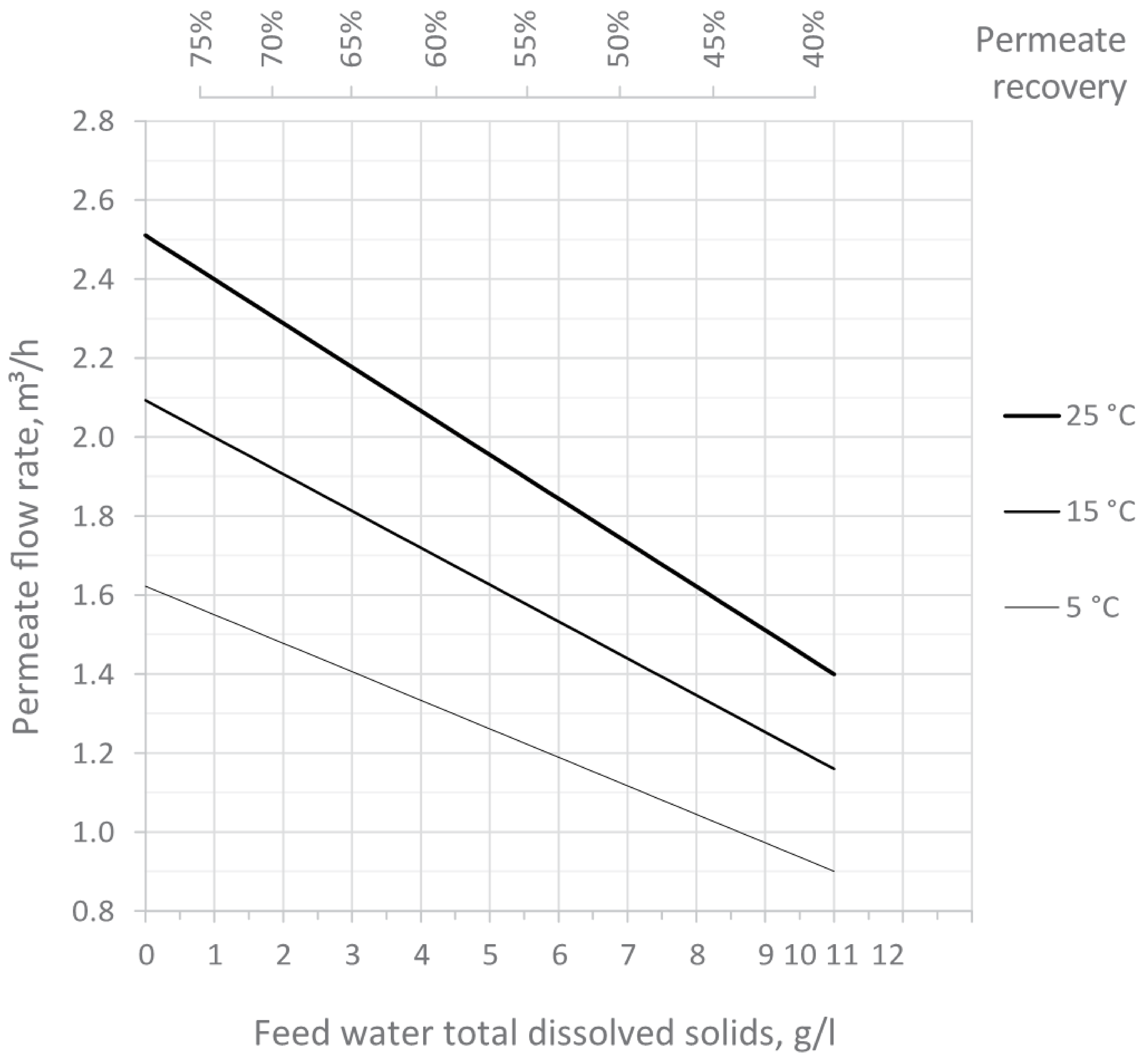
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**1.0-1.5 m³/h**
Permeate recovery [2]	**depends on raw water TDS**
Maximum TDS	**10 000 mg/l (10 g/l)**
Influent flow demand	2…3.5 m³/h (service)
	8…12 m³/h (rinse)
Operating pressure	15…20 bar
Maximum pressure	25 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	7.5 kW
Prefilter rating	5 µm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

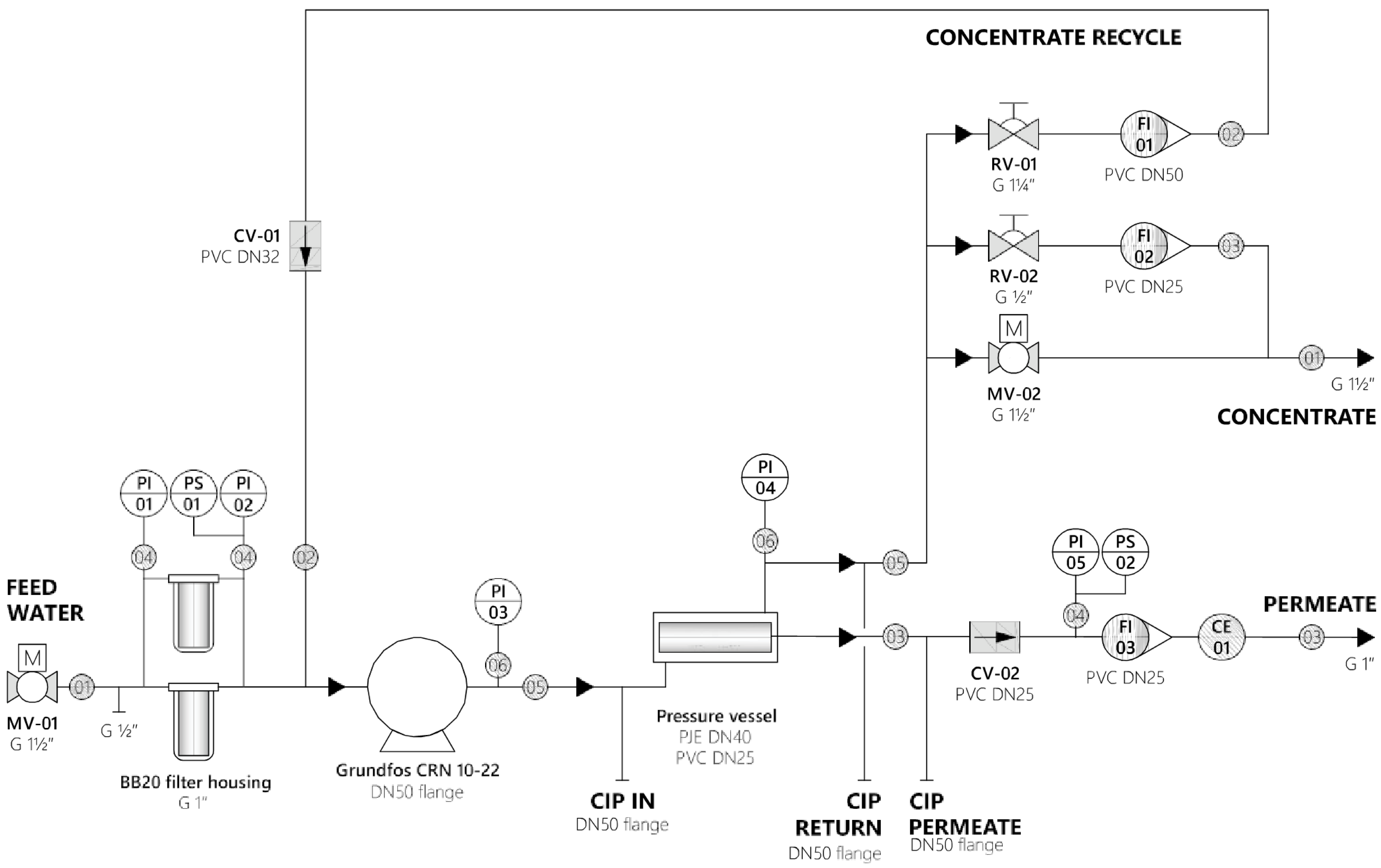
[2] for low scaling/fouling water

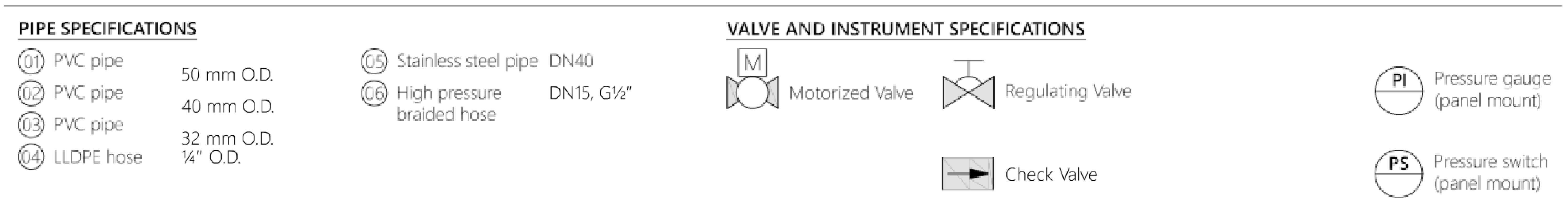
ECOSOFT MO-6500 BW SS RO FLOW CAPACITY GRAPH



Permeate flow rates are calculated under the following conditions:
- 2 bar influent water pressure
- 0 bar backpressure in the permeate line
- fresh membranes

PIPES AND INSTRUMENTS DIAGRAM





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ECOSOFT DOSING PUMP KITS

APPLICATIONS:

Dosing water treatment chemicals for reverse osmosis, ultrafiltration, heating/cooling circuits, boiler feed water, process water, CIP systems, water remineralization, and other additives

KEY FEATURES:

- Simple and reliable design (solenoid pump)
- Built-in electrical protection against power surges and overvoltage
- Broad chemical resistance against broad range of chemicals
- High accuracy with low flow rates
- Continuous chemical injection
- Suitable for high flow applications
- High wear resistance in demanding conditions
- Broad flow control range
- Fine tunable throughout the flow control range

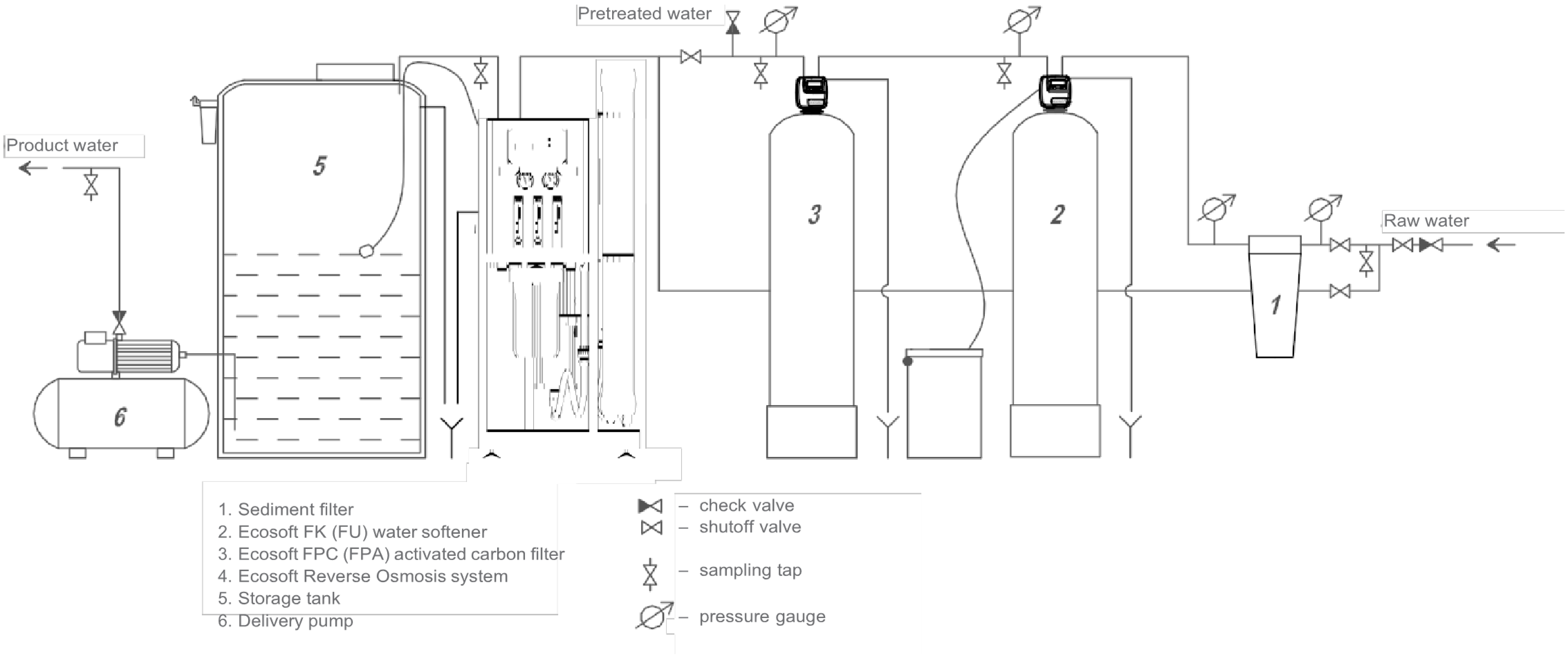
MAIN COMPONENTS:

- Dosing pump
- Suction valve with foot filter and level probe
- Injection valve
- Pack of hoses
- Chemical tank with mounting bracket
- 500 mL graduated cylinder
- Water meter with pulse output (proportional dosing pumps only)

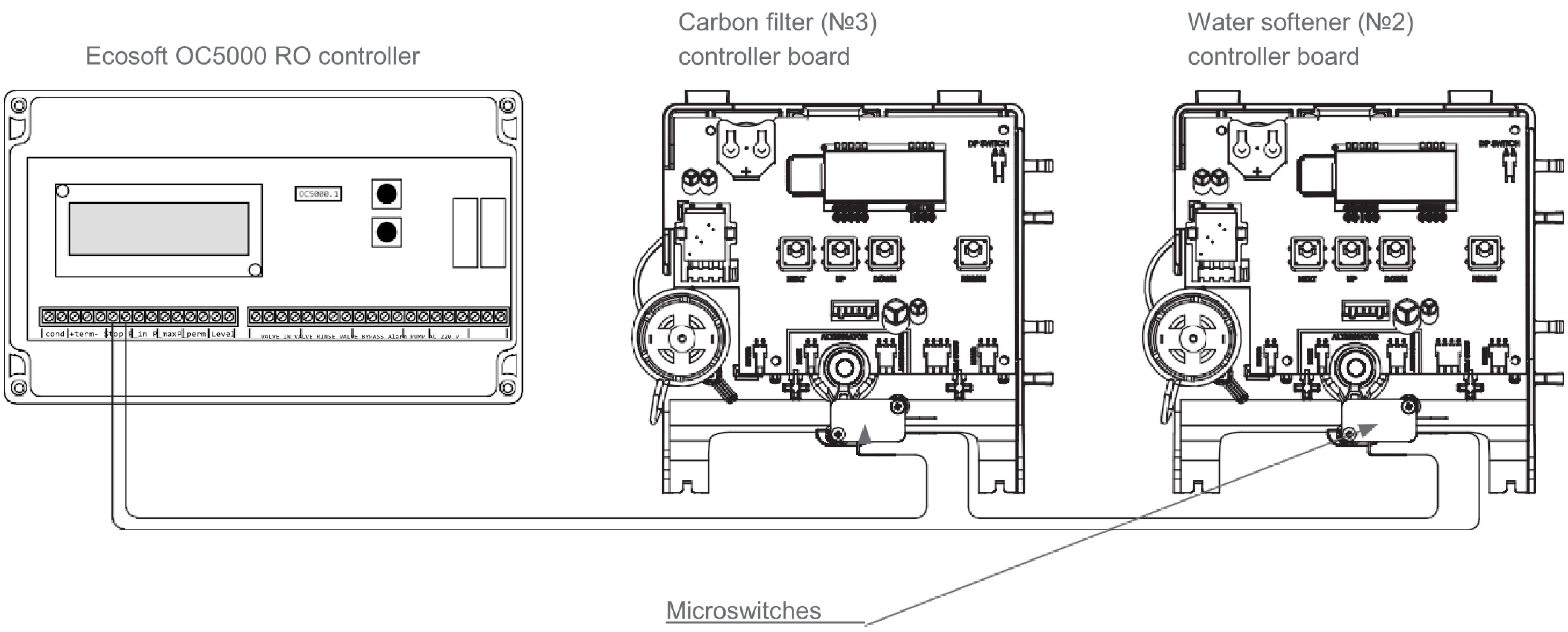
ECOSOFT DOSING PUMP KITS

Code	Product	Chemical tank / pulse meter (if included)
D100660	Constant dosing pump kit (0.1 - 1.0 L/hour)	60 L / —
D1006100		130 L / —
D03656025	Proportional dosing pump kit (0.1 - 7.0 L/hour)	60 L / DN 25
D036510025		130 L / DN 25
DDE61060	DDE 6-10 basic dosing pump kit	60 L / —
DDE610100	DDE 6-10 basic dosing pump kit with pulse meter	130 L / DN 25
DDA751660	DDA 7,5-16 advanced dosing pump kit	60 L / —
DDA7516100	DDA 7,5-16 advanced dosing pump kit w/ pulse meter	130 L / DN 25

TYPICAL SETUP OF RO SYSTEM WITH PRETREATMENT FILTERS



CONNECTING PRETREATMENT FILTER CONTROLLERS TO THE ECOSOFT RO SYSTEM CONTROLLER WITH MICROSWITCHES FOR RO SYSTEM LOCKOUT DURING PREFILTER REGENERATION



INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Ecosoft provides turnkey solutions for industrial water challenges, including pilot studies, engineering and manufacturing, commissioning and maintenance.

Ecosoft reverse osmosis systems are used in food and pharmaceutical industry, energy, chemical, semiconductor manufacturing, steam boilers and other industrial applications.

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INDUSTRIAL REVERSE OSMOSIS SYSTEMS

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.

EQUIPMENT

- Grundfos® CR high pressure pump
- 300 psi membrane vessels
- DOW Filmtec™ XLE-440 membranes
- BB20 or stainless steel multi filter housings
- Electrical cabinet with Ecosoft controller
- Danfoss or Praher motorized valves
- Honeywell or Praher regulating valves
- Piping, valves, instrumentation, frame

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, m^3/h (GPH)	Membranes
MO22CONWE	Ecosoft MO-2 Econnect	2–3 (500–800)	2/80 x 40
MO33CONWE	Ecosoft MO-3 Econnect	3–4 (800–1100)	3/80 x 40
MO44CONWE	Ecosoft MO-4 Econnect	4–5 (1100–1400)	4/80 x 40
MO11XLWE	Ecosoft MO–1	1–1.2 (260–320)	1/80 x 40
MO22XLWE	Ecosoft MO–2	2–2.5 (530–660)	2/80 x 40
MO33XLWE	Ecosoft MO–3	3–4 (800–1 060)	3/80 x 40
MO42XLWE	Ecosoft MO–4	4–5 (1 060–1 320)	4/80 x 40
MO63XLWE	Ecosoft MO–6	6–8 (1 600–2 100)	6/80 x 40
MO93XLWE	Ecosoft MO–9	9–12 (2 400–3 200)	9/80 x 40
MO124XLWE	Ecosoft MO–12	12–15 (3 200–4 000)	12/80 x 40
MO164XLWE	Ecosoft MO–16	16–20 (4 200–5 300)	16/80 x 40
MO246XLWE	Ecosoft MO–24	24–28 (6 400–7 400)	24/80 x 40
MO366XLWE	Ecosoft MO–36	36–42 (9 500–11 100)	36/80 x 40
MO488XLWE	Ecosoft MO–48	48–56 (12 500–14 800)	48/80 x 40

ECOSOFT MO-2
ECONNECT REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage manufacturing, utility water treatment.

EQUIPMENT

Grundfos® CR 10-12 pump .... 1 ea
FRP membrane housings .... 2 ea
BB20 sediment prefilter .... 3 ea
Motorized valves .... 3 ea
(feed water in, permeate flush in, flush out)
Balancing valves .... 2 ea
(concentrate reject, concentrate recycle)
Electrical panel with IoT controller .... 1 set
Piping, instrumentation, steel frame .... 1 set

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump with tank for antiscalant or other types of RO chemicals
- Raw water blending line

CONNECTION PORT SIZES

Supply water inlet .... G 1½″
Permeate outlet .... G 1″
Concentrate outlet .... G 1½″
CIP inlet .... G 1½″
CIP outlet .... G 1½″
CIP permeate .... G ½″
Antiscalant dosing port .... G ½″

System architecture may be amended on manufacturer's discretion without violating the process design

PHYSICAL PARAMETERS

System dimensions (W × D × H, ±3%) .... 1.85 × 0.85 × 1.95 m .... 74″ × 34″ × 78″
Crated dimensions (W × D × H, ±3%) .... 2.05 × 1.05 × 2.25 m .... 80″ × 42″ × 90″
System weight [1] .... 400 kg .... 900 lbs
Crated weight .... 500 kg .... 1100 lbs

[1] with membranes, without water, estimated

ECOSOFT MO-2 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity m^3/h (GPH)	Membranes
MO22CONWE	Ecosoft MO–2	2–3 (500–800)	2/80 x 40

SPECIFICATIONS

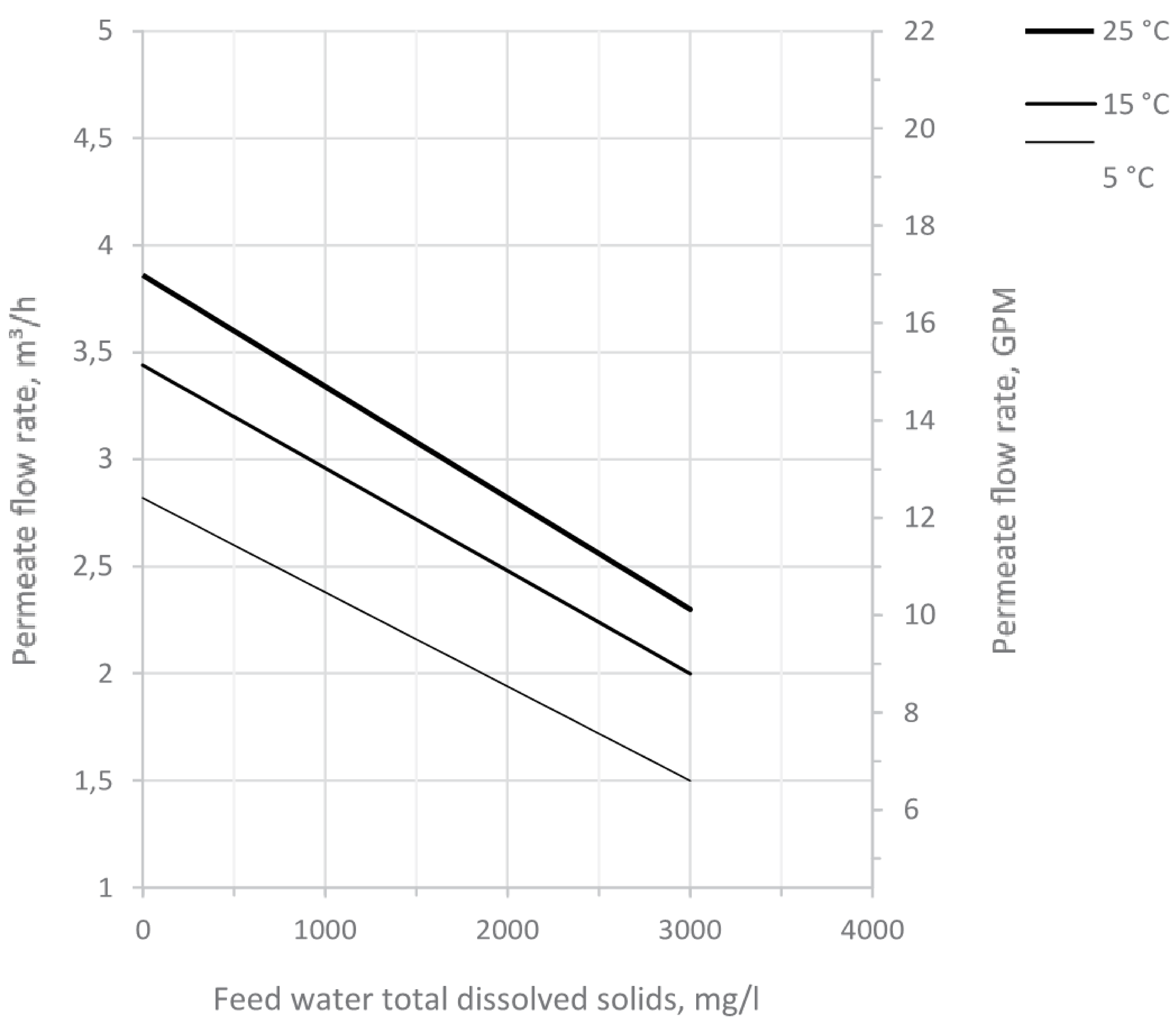
Permeate capacity [2]	**2-3 m³/h (8-14 GPM)**
Permeate recovery [3]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	3…6 m^3/h (service)
	10 m³/h (rinse)
Operating pressure	8…15 bar (120…220 psi)
Electrical requirements	3 × 380…400 V, 50 Hz
Electrical power	4 kW

[2] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

[3] under low scaling/fouling conditions

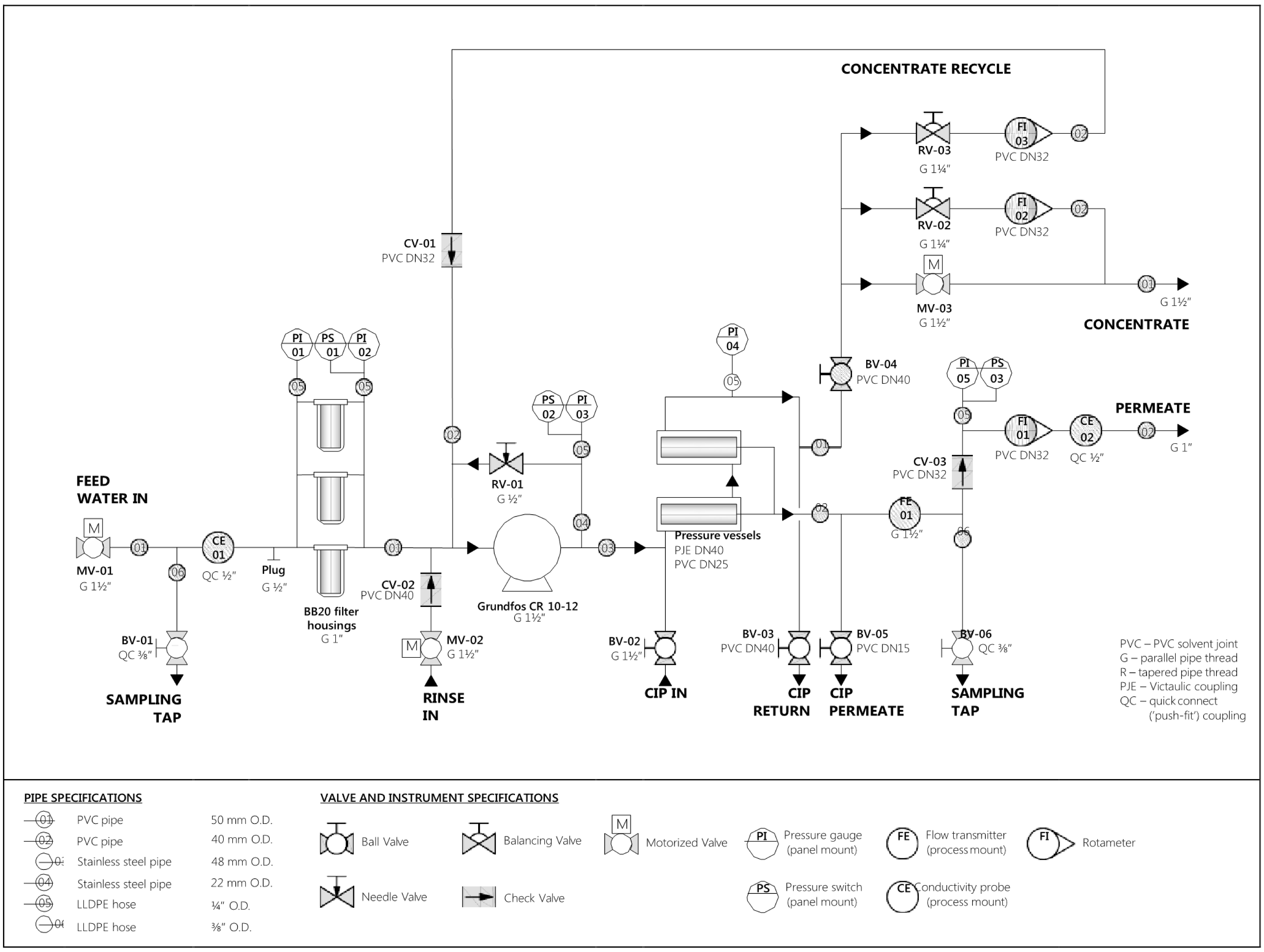
ECOSOFT MO-2 ECONNECT FLOW CAPACITY

(WITH XLE-440 MEMBRANES)



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PROCESS FLOW DIAGRAM



ECOSOFT MO-3
ECONNECT REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage manufacturing, utility water treatment.

EQUIPMENT

Grundfos® CR 10-12 pump .... 1 ea
FRP membrane housings .... 3 ea
BB20 sediment prefilter .... 3 ea
Motorized valves .... 3 ea
(feed water in, permeate flush in, flush out)
Balancing valves .... 2 ea
(concentrate reject, concentrate recycle)
Electrical panel with IoT controller .... 1 set
Piping, instrumentation, steel frame .... 1 set

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump with tank for antiscalant or other types of RO chemicals
- Raw water blending line

CONNECTION PORT SIZES

Supply water inlet .... G 1½″
Permeate outlet .... G 1″
Concentrate outlet .... G 1½″
CIP inlet .... G 1½″
CIP outlet .... G 1½″
CIP permeate .... G ½″
Antiscalant dosing port .... G ½″

System architecture may be amended on manufacturer's discretion without violating the process design

PHYSICAL PARAMETERS

System dimensions (W × D × H, ±3%)	1.85 × 0.85 × 1.95 m	74″ × 34″ × 78″
Crated dimensions (W × D × H, ±3%)	2.05 × 1.05 × 2.25 m	80″ × 42″ × 90″
System weight [1]	450 kg	1000 lbs
Crated weight	550 kg	1200 lbs

[1] with membranes, without water, estimated

ECOSOFT MO-3 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity m^3/h (GPH)	Membranes
MO33CONWE	Ecosoft MO–3	3–4 (500–1100)	3/80 x 40

SPECIFICATIONS

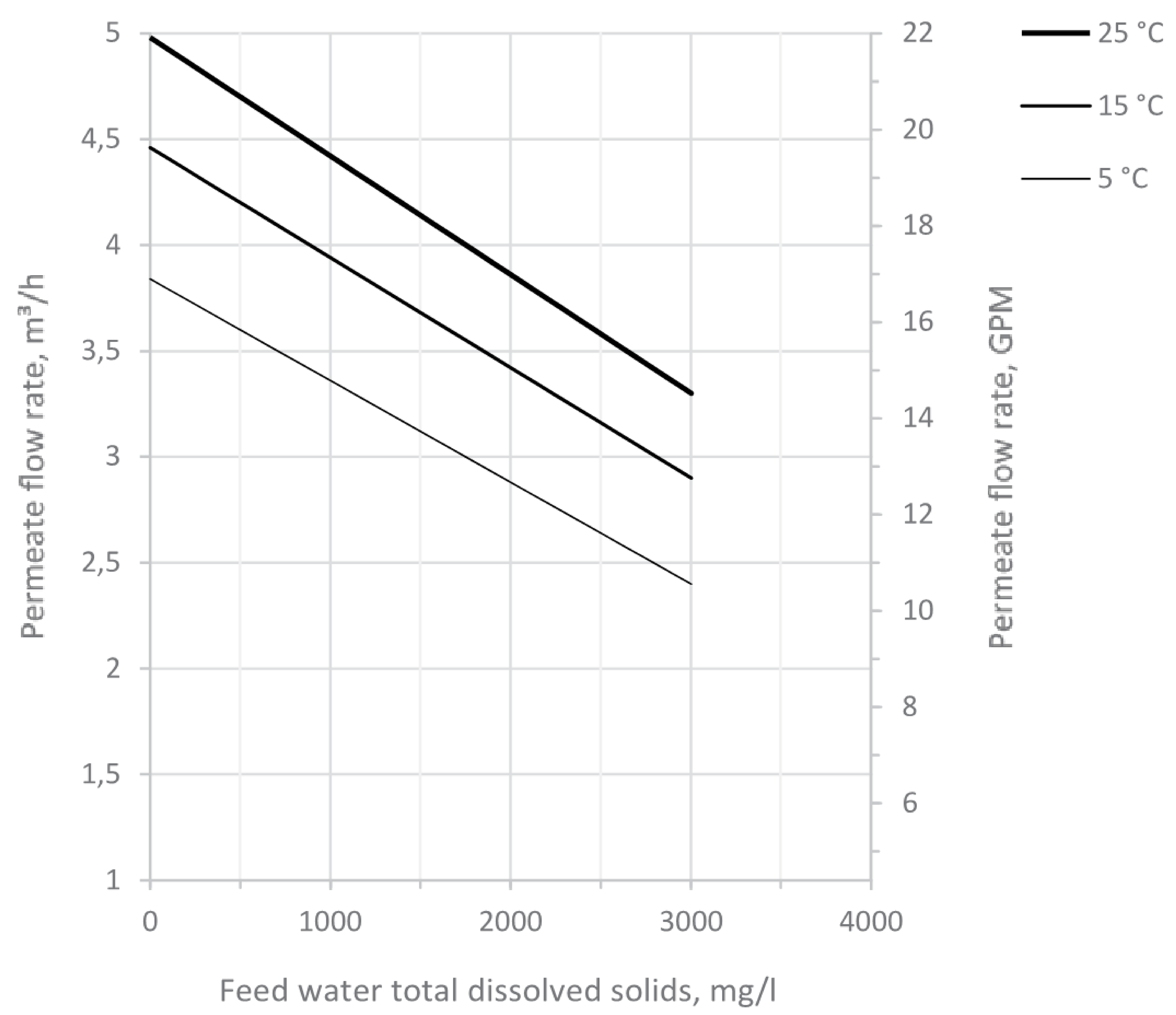
Permeate capacity [2]	**3-4 m³/h (12-20 GPM)**
Permeate recovery [3]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	4…8 m³/h (service)
	10 m³/h (rinse)
Operating pressure	8…15 bar (120…220 psi)
Electrical requirements	3 × 380…400 V, 50 Hz
Electrical power	4 kW

[2] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

[3] under low scaling/fouling conditions

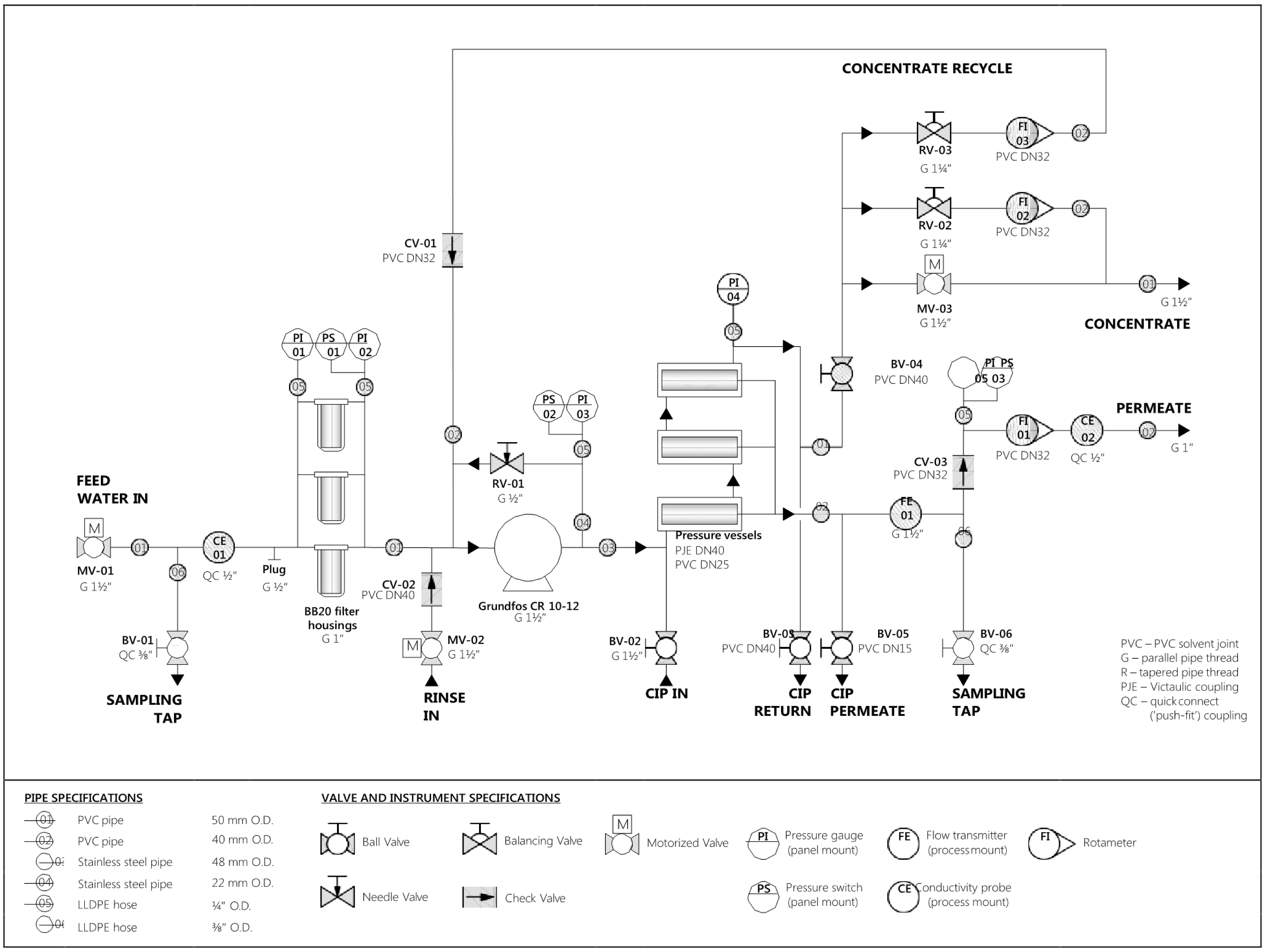
ECOSOFT MO-3 ECONNECT FLOW CAPACITY

(WITH XLE-440 MEMBRANES)



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PROCESS FLOW DIAGRAM



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ECOSOFT MO-4
ECONNECT REVERSE OSMOSIS SYSTEM

(ec)

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage manufacturing, utility water treatment.

EQUIPMENT

Grundfos® CR 10-12 pump .... 1 ea
FRP membrane housings .... 4 ea
BB20 sediment prefilter .... 3 ea
Motorized valves .... 3 ea
(feed water in, permeate flush in, flush out)
Balancing valves .... 2 ea
(concentrate reject, concentrate recycle)
Electrical panel with IoT controller .... 1 set
Piping, instrumentation, steel frame .... 1 set

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump with tank for antiscalant or other types of RO chemicals
- Raw water blending line

CONNECTION PORT SIZES

Supply water inlet .... G 1½″
Permeate outlet .... G 1″
Concentrate outlet .... G 1½″
CIP inlet .... G 1½″
CIP outlet .... G 1½″
CIP permeate .... G ½″
Antiscalant dosing port .... G ½″

System architecture may be amended on manufacturer's discretion without violating the process design

PHYSICAL PARAMETERS

System dimensions (W × D × H, ±3%) .... 1.85 × 0.85 × 1.95 m .... 74″ × 34″ × 78″
Crated dimensions (W × D × H, ±3%) .... 2.05 × 1.05 × 2.25 m .... 80″ × 42″ × 90″
System weight [1] .... 500 kg .... 1100 lbs Crated
weight .... 600 kg .... 1300 lbs

[1] with membranes, without water, estimated

ECOSOFT MO-4 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity m^3/h (GPH)	Membranes
MO44CONWE	Ecosoft MO–4	4–5 (1100–1400)	4/80 x 40

SPECIFICATIONS

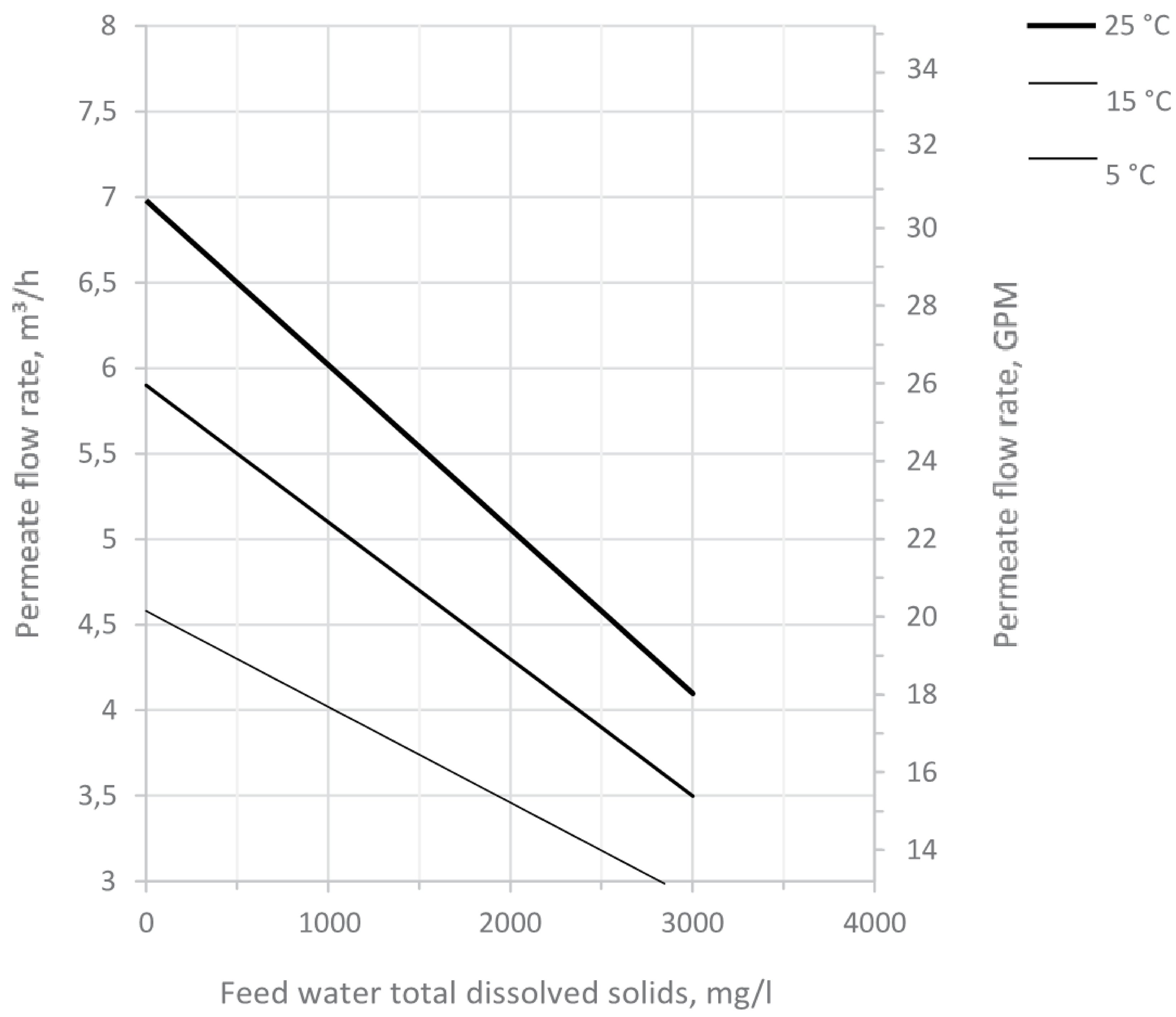
Permeate capacity [2]	**4-5 m³/h (15-25 GPM)**
Permeate recovery [3]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	5…10 m³/h (service)
	10 m³/h (rinse)
Operating pressure	8…15 bar (120…220 psi)
Electrical requirements	3 × 380…400 V, 50 Hz
Electrical power	4 kW

[2] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

[3] under low scaling/fouling conditions

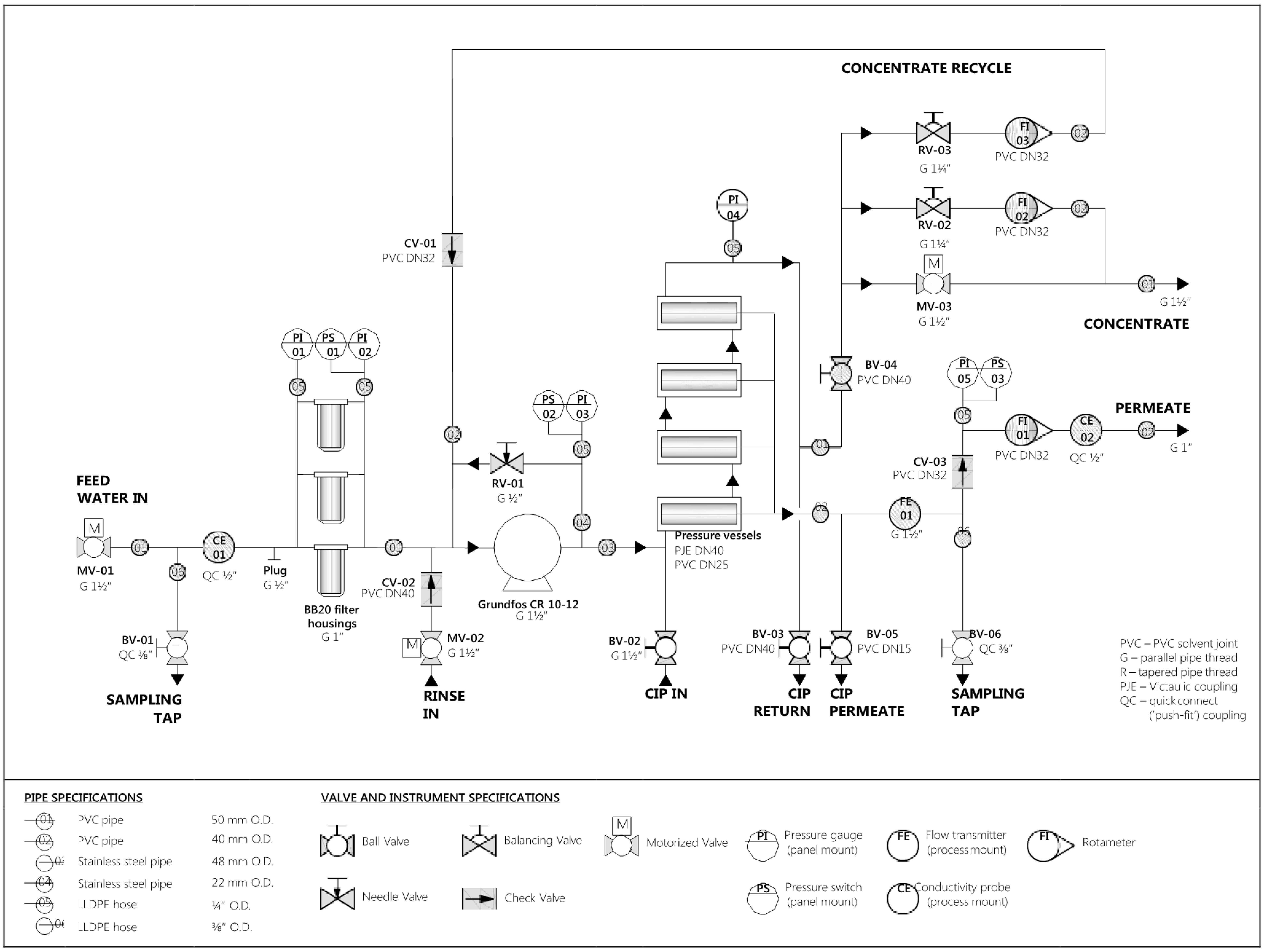
ECOSOFT MO-4 ECONNECT FLOW CAPACITY

(WITH XLE-440 MEMBRANES)



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PROCESS FLOW DIAGRAM



ECOSOFT MO-1
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.

EQUIPMENT

- Grundfos® CR 5-18 high pressure pump
- 300 psi membrane vessel
- DOW Filmtec™ XLE-440 membrane
- BB20 sediment prefilter
- Electrical cabinet with Ecosoft controller
- Danfoss motorized valves
- Honeywell regulating valves
- Piping, valves, instrumentation, frame
- Wooden crate

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

CONNECTION PORT SIZES

Influent water Permeate Concentrate	G 1¼″ G 1″ G 1¼″
CIP inlet CIP return CIP permeate	G 1¼″ G 1¼″ G ½″
Antiscalant dosing port	G ½″
Approximate weight	
Bare system	350 kg
Crated system	450 kg
Dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	
Bare system	0.8 × 0.9 × 2.05 m
Crated system	1.1 × 1.1 × 2.3 m

System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

ECOSOFT MO-1 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, m^3/h (GPH)	Membranes
MO11XLWE	Ecosoft MO–1	1–1.2 (260–320)	1/80 x 40

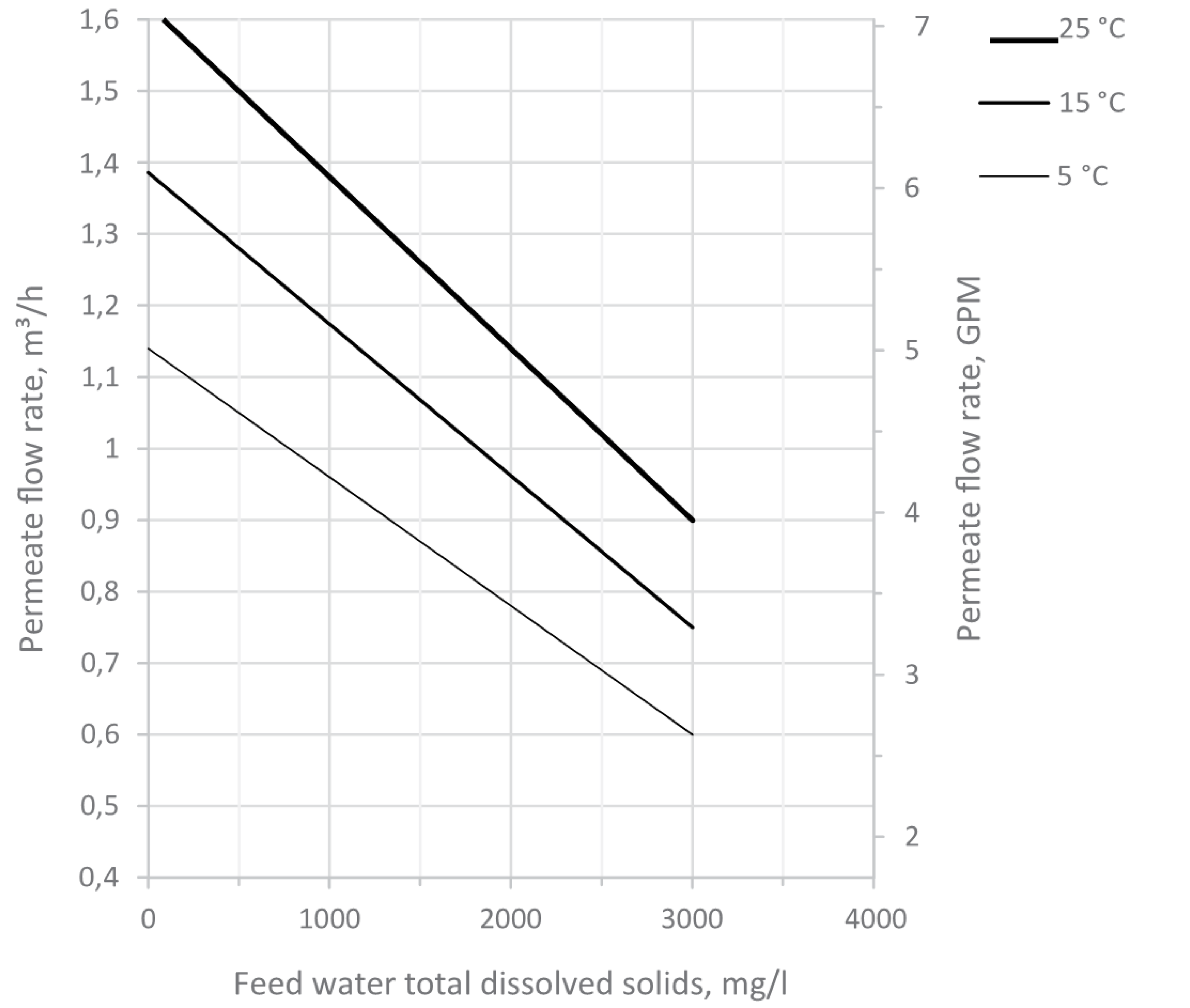
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**1 m³/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	1.3…2 m^3/h (service)
	8…10 m³/h (rinse)
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	3 kW
Prefilter rating	5 µm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

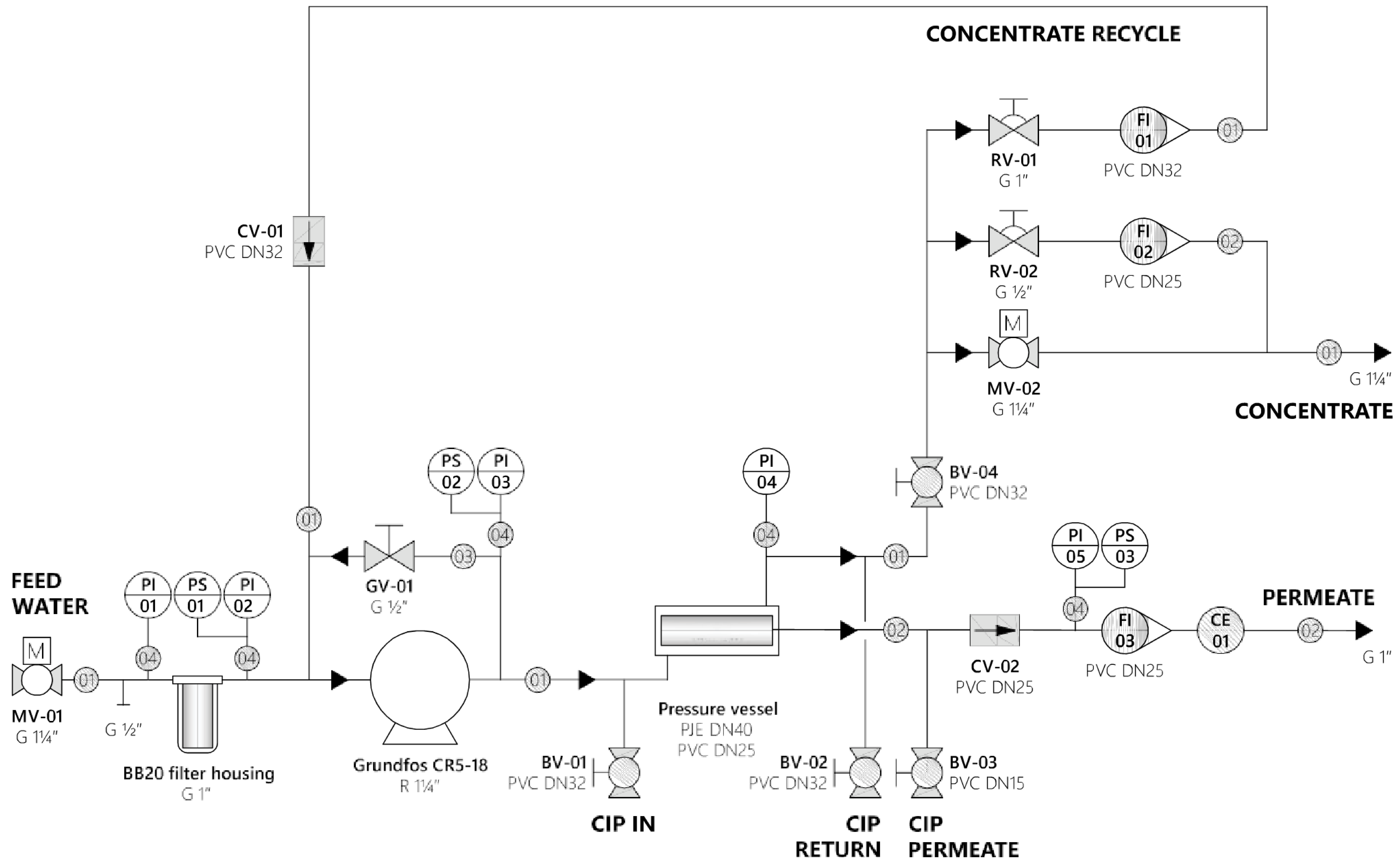
[2] for low scaling/fouling water

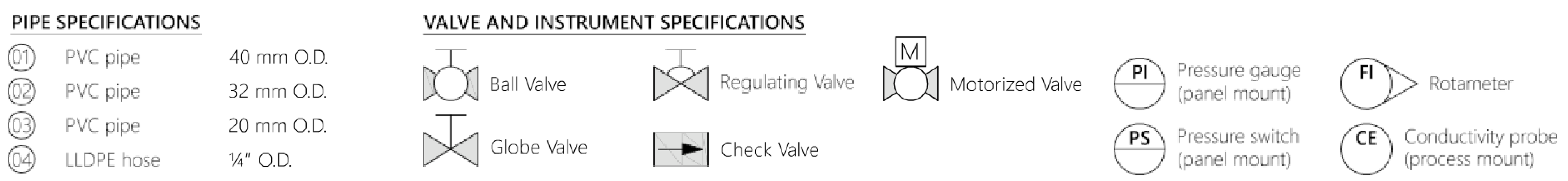
ECOSOFT MO-1 RO FLOW CAPACITY GRAPH



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PIPES AND INSTRUMENTS DIAGRAM





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ECOSOFT MO-2
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.

EQUIPMENT

- Grundfos® CR 10-12 high pressure pump
- 300 psi membrane vessels
- DOW Filmtec™ XLE-440 membranes
- BB20 sediment prefilter
- Electrical cabinet with Ecosoft controller
- Danfoss motorized valves
- Honeywell regulating valves
- Piping, valves, instrumentation, frame
- Wooden crate

System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

CONNECTION PORT SIZES

Influent water Permeate Concentrate	G 1½″ G 1″ G 1½″
CIP inlet CIP return CIP permeate	G 1½″ G 1½″ G ½″
Antiscalant dosing port	G ½″
Approximate weight	
Bare system	400 kg
Crated system	500 kg
Dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	
Bare system	1.9 × 1.1 × 1.95 m
Crated system	2.2 × 1.4 × 2.2 m

ECOSOFT MO-2 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, m^3/h (GPH)	Membranes
MO22XLWE	Ecosoft MO–2	2–2.5 (530–660)	2/80 x 40

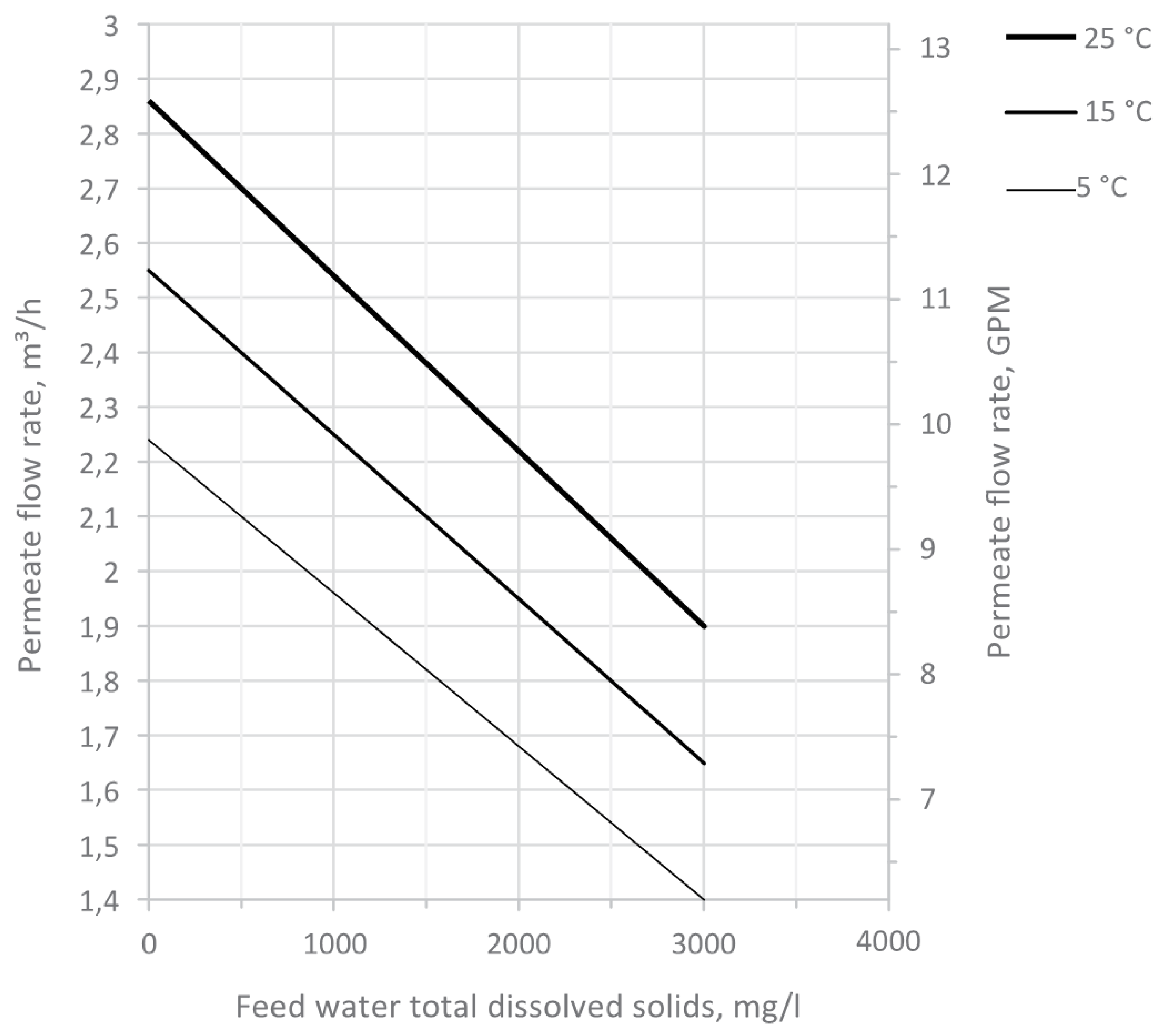
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**2 m³/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	2.7…4 m³/h (service)
	8…10 m³/h (rinse)
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	4 kW
Prefilter rating	5 µm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

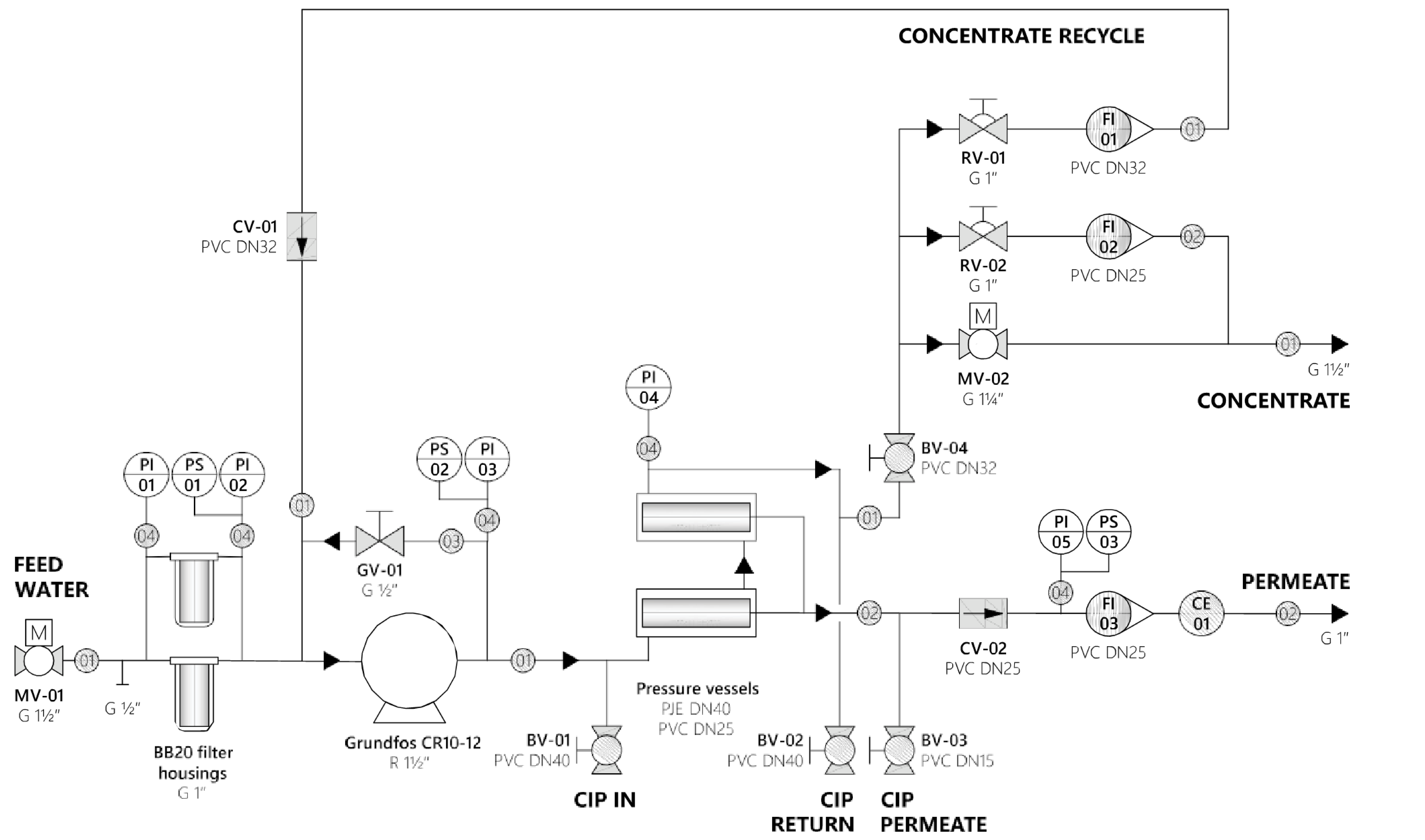
[2] for low scaling/fouling water

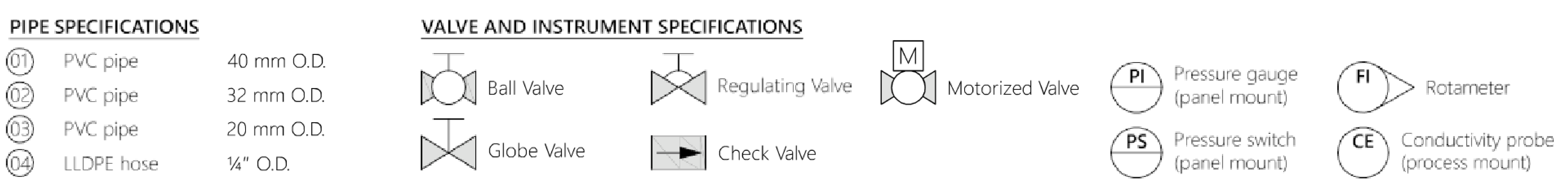
ECOSOFT MO-2 RO FLOW CAPACITY GRAPH



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PIPES AND INSTRUMENTS DIAGRAM





ECOSOFT MO-3
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.

System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

EQUIPMENT

- Grundfos® CR 10-12 high pressure pump
- 300 psi membrane vessels
- DOW Filmtec™ XLE-440 membranes
- BB20 sediment prefilter
- Electrical cabinet with Ecosoft controller
- Danfoss motorized valves
- Honeywell regulating valves
- Piping, valves, instrumentation, frame
- Wooden crate

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

CONNECTION PORT SIZES

Influent water Permeate Concentrate	G 1½″ G 1″ G 1½″
CIP inlet CIP return CIP permeate	G 1½″ G 1½″ G ½″
Antiscalant dosing port	G ½″
Approximate weight	
Bare system	450 kg
Crated system	550 kg
Dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	
Bare system	1.9 × 1.1 × 1.95 m
Crated system	2.2 × 1.4 × 2.2 m

ECOSOFT MO-3 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, m³/h (GPH)	Membranes
MO33XLWE	Ecosoft MO–3	3–4 (800–1 060)	3/80 x 40

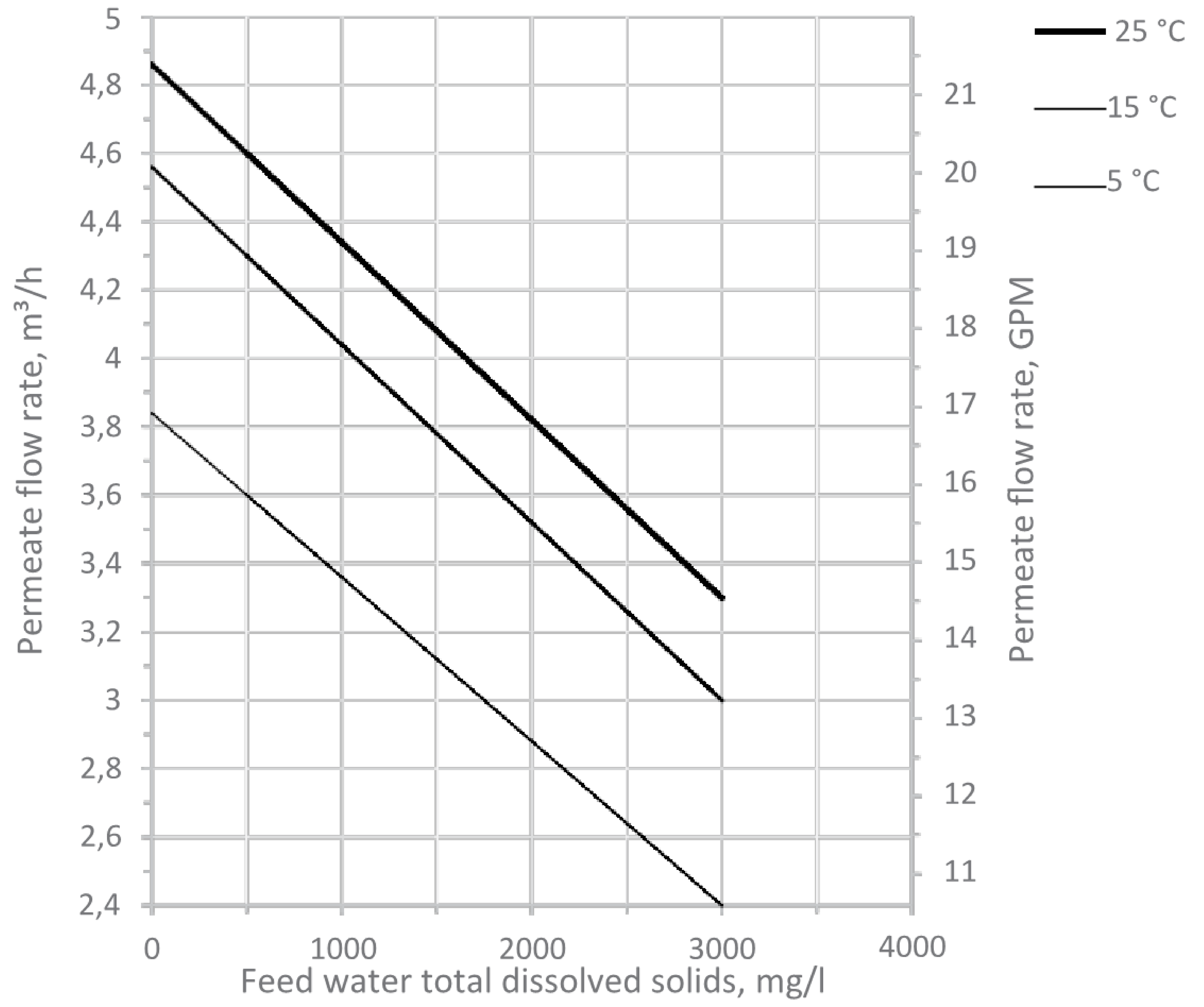
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**3 m³/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	4…6 m^3/h (service)
	8…10 m³/h (rinse)
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	4 kW
Prefilter rating	5 µm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

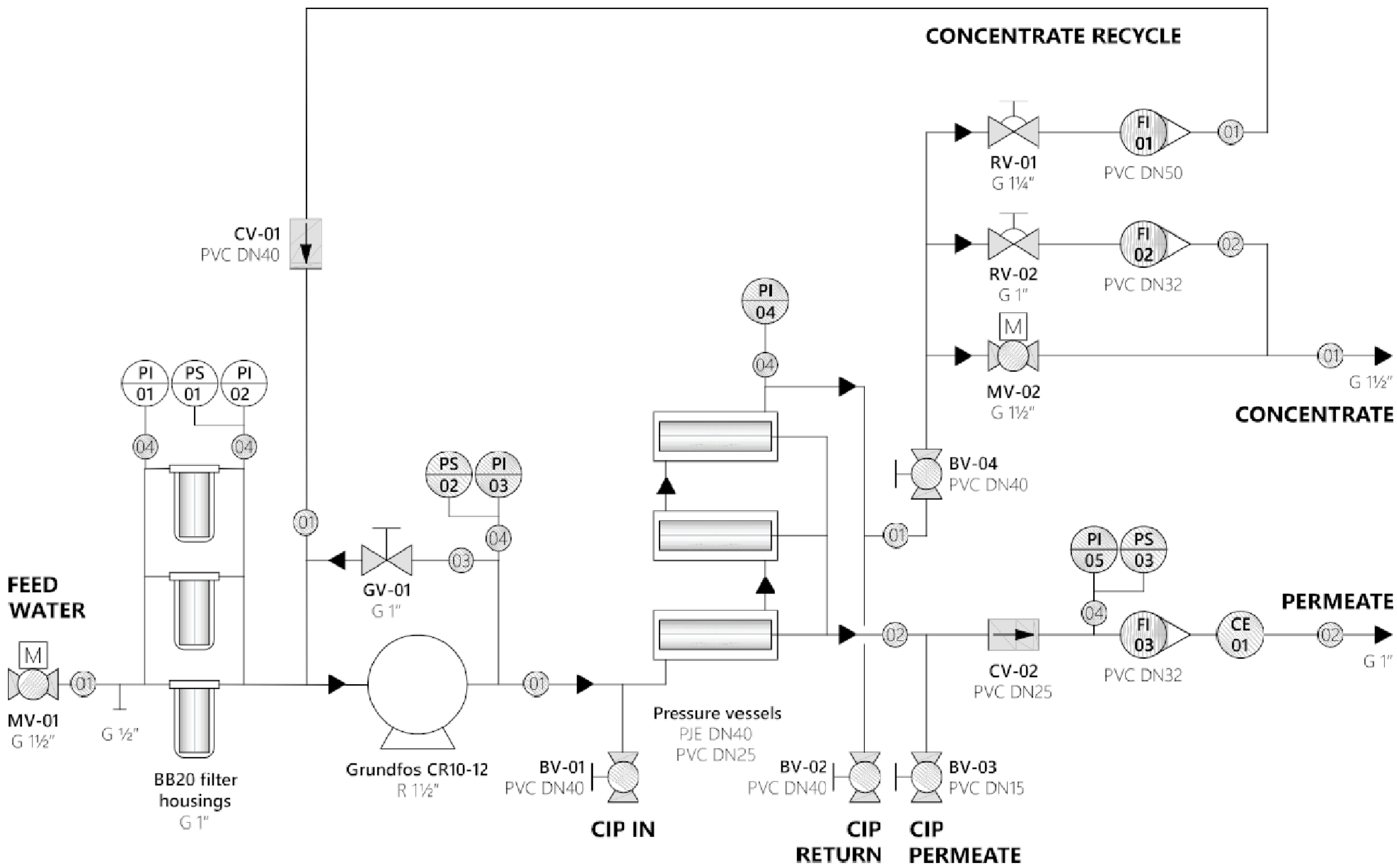
[2] for low scaling/fouling water

ECOSOFT MO-3 RO FLOW CAPACITY GRAPH



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PIPES AND INSTRUMENTS DIAGRAM



PIPE SPECIFICATIONS

01	PVC pipe	50 mm O.D.
02	PVC pipe	40 mm O.D.
03	PVC pipe	32 mm O.D.
04	LLDPE hose	¼" O.D.

VALVE AND INSTRUMENT SPECIFICATIONS

Ball Valve
Globe Valve
Regulating Valve
Check Valve
M Motorized Valve
PI Pressure gauge (panel mount)
PS Pressure switch (panel mount)
FI Rotameter
CE Conductivity probe (process mount)

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ECOSOFT MO-4
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.

EQUIPMENT

- Grundfos® CR 10-12 high pressure pump
- 300 psi membrane vessels
- DOW Filmtec™ XLE-440 membranes
- BB20 sediment prefilter
- Electrical cabinet with Ecosoft controller
- Danfoss motorized valves
- Honeywell regulating valves
- Piping, valves, instrumentation, frame
- Wooden crate

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

CONNECTION PORT SIZES

Influent water	G 1½″
Permeate	G 1″
Concentrate	G 1½″
CIP inlet	G 1½″
CIP return	G 1½″
CIP permeate	G ½″
Antiscalant dosing port	G ½″
Approximate weight	
Bare system	500 kg
Crated system	600 kg
Dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	
Bare system	2.9 × 1.2 × 1.95 m
Crated system	3.2 × 1.4 × 2.2 m

ECOSOFT MO-4 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, m^3/h (GPH)	Membranes
MO42XLWE	Ecosoft MO–4	4–5 (1 060–1 320)	4/80 x 40

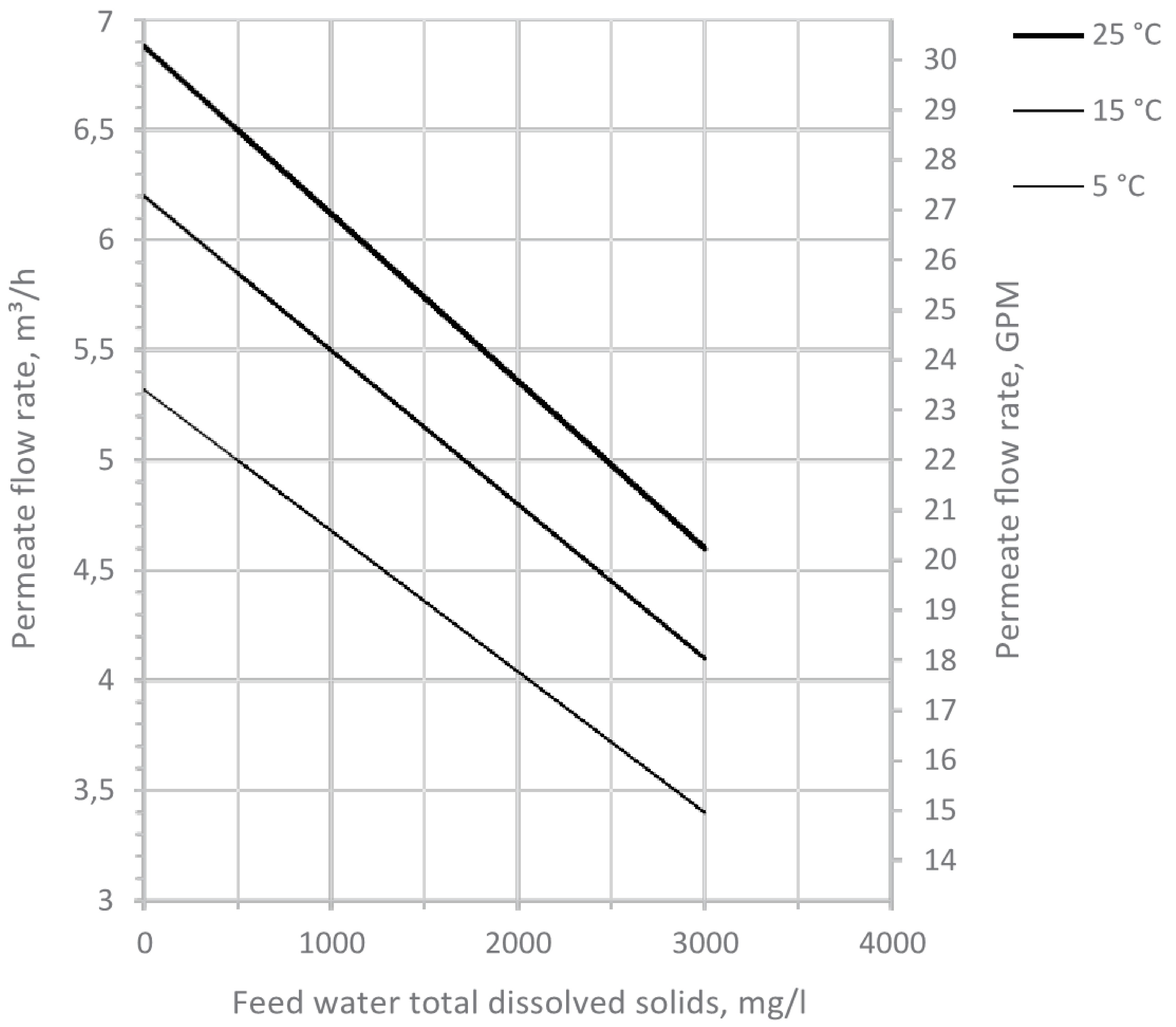
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**4 m³/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	5.5…8 m^3/h (service)
	8…10 m³/h (rinse)
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	4 kW
Prefilter rating	5 µm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

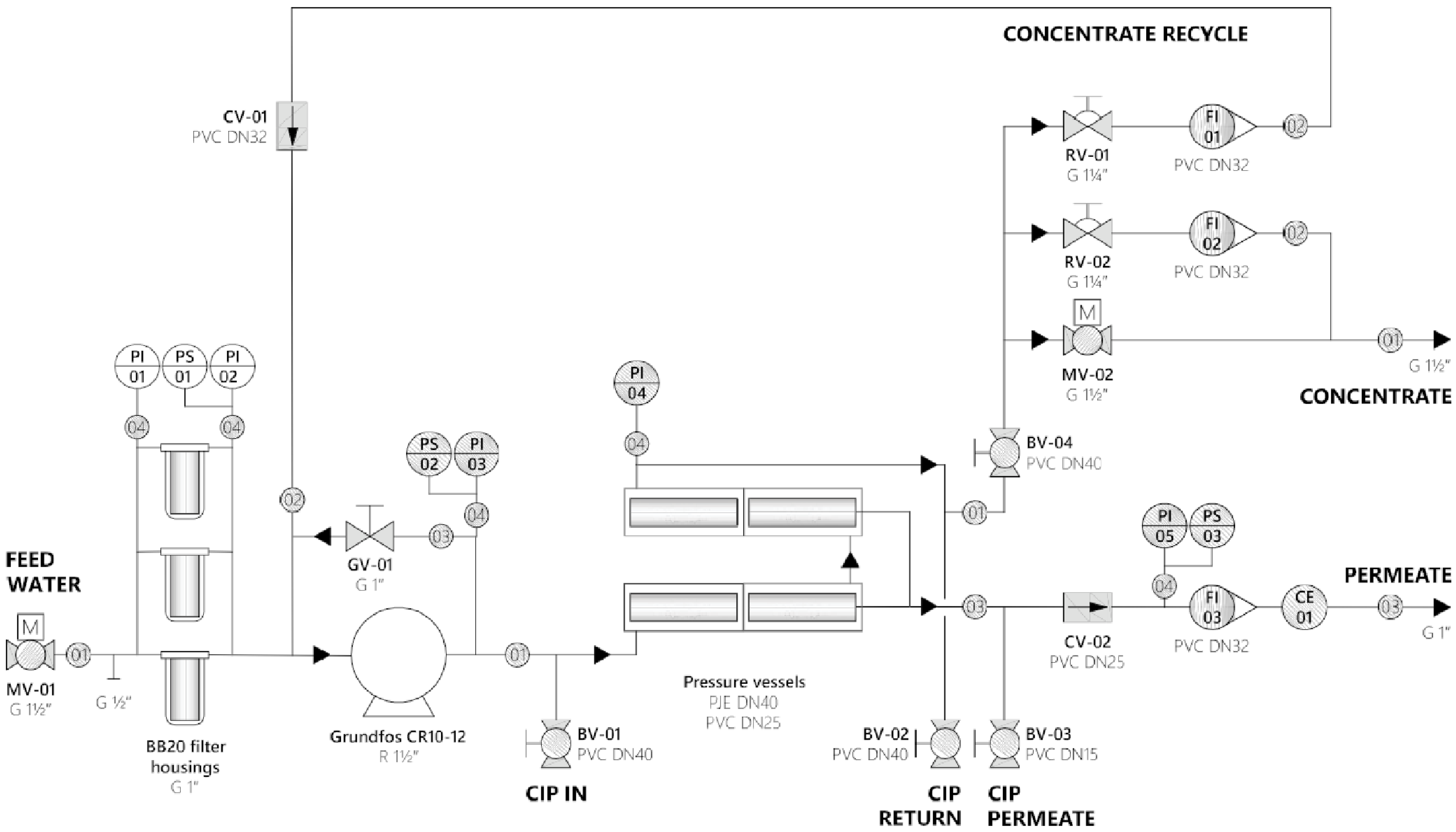
[2] for low scaling/fouling water

ECOSOFT MO-51 RO FLOW CAPACITY GRAPH



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PIPES AND INSTRUMENTS DIAGRAM



PIPE SPECIFICATIONS

01	PVC pipe	50 mm O.D.
02	PVC pipe	40 mm O.D.
03	PVC pipe	32 mm O.D.
04	LLDPE hose	¼" O.D.

VALVE AND INSTRUMENT SPECIFICATIONS

Ball Valve
Regulating Valve
Motorized Valve
PI Pressure gauge (panel mount)
FI Rotameter
Globe Valve
Check Valve
PS Pressure switch (panel mount)
CE Conductivity probe (process mount)

ECOSOFT MO-52
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.

EQUIPMENT

- Grundfos® CR 15-09 high pressure pump
- 300 psi membrane vessels
- DOW Filmtec™ XLE-440 membranes
- BB20 sediment prefilter
- Electrical cabinet with Ecosoft controller
- Danfoss motorized valves
- Honeywell regulating valves
- Piping, valves, instrumentation, frame
- Wooden crate

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

CONNECTION PORT SIZES

Influent water Permeate Concentrate	G 2″ G 1½″ G 2″
CIP inlet CIP return CIP permeate	G 1½″ G 1½″ G 1″
Antiscalant dosing port	G ½″
Approximate weight	
Bare system	700 kg
Crated system	950 kg
Dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	
Bare system	2.9 × 1.2 × 1.95 m
Crated system	3.2 × 1.6 × 2.2 m

ECOSOFT MO-6 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, m³/h (GPH)	Membranes
MO63XLWE	Ecosoft MO–6	6–8 (1 600–2 100)	6/80 x 40

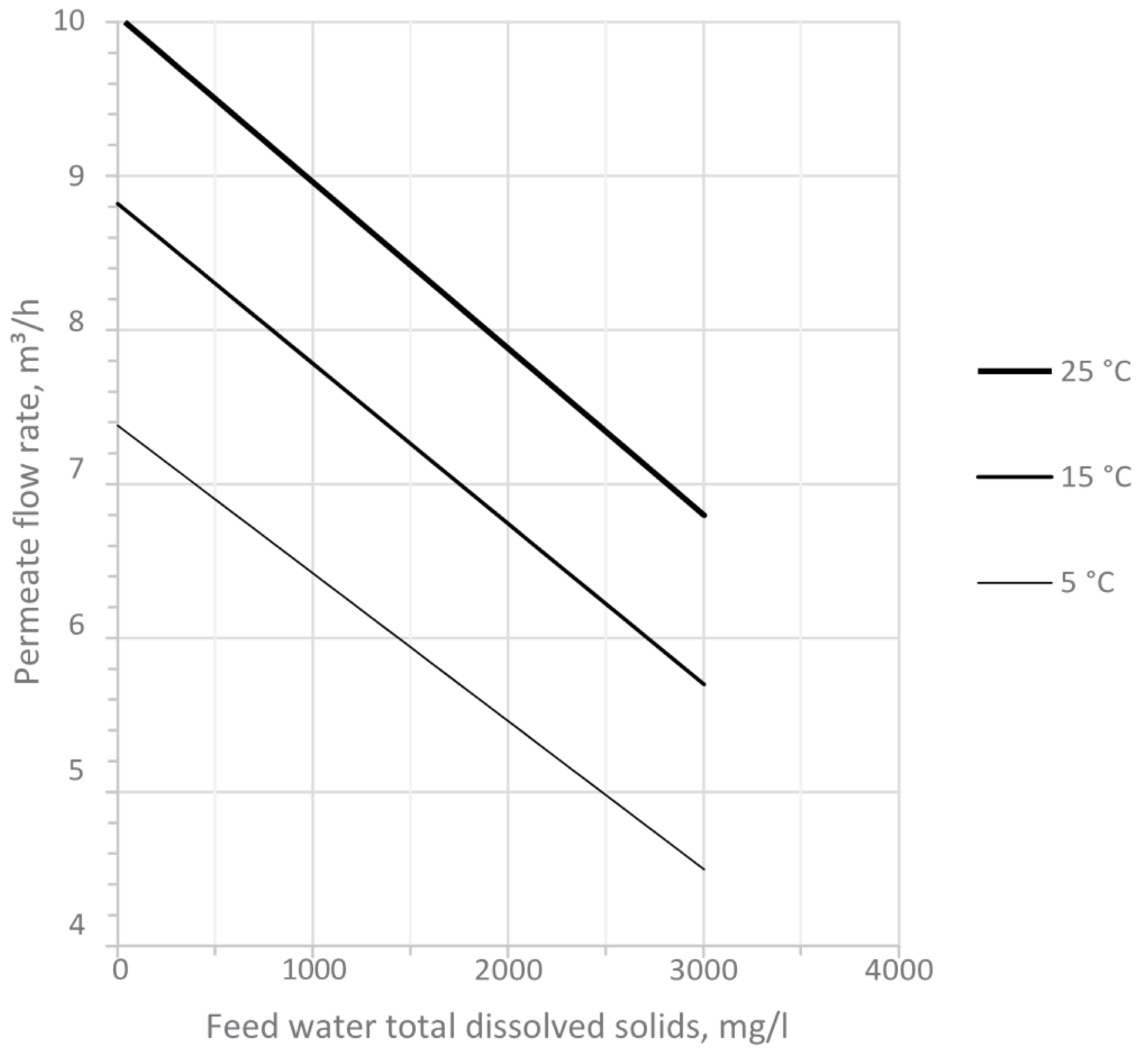
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**6 m³/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	8…12 m^3/h (service)
	16…20 m³/h (rinse)
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	7.5 kW
Prefilter rating	5 µm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

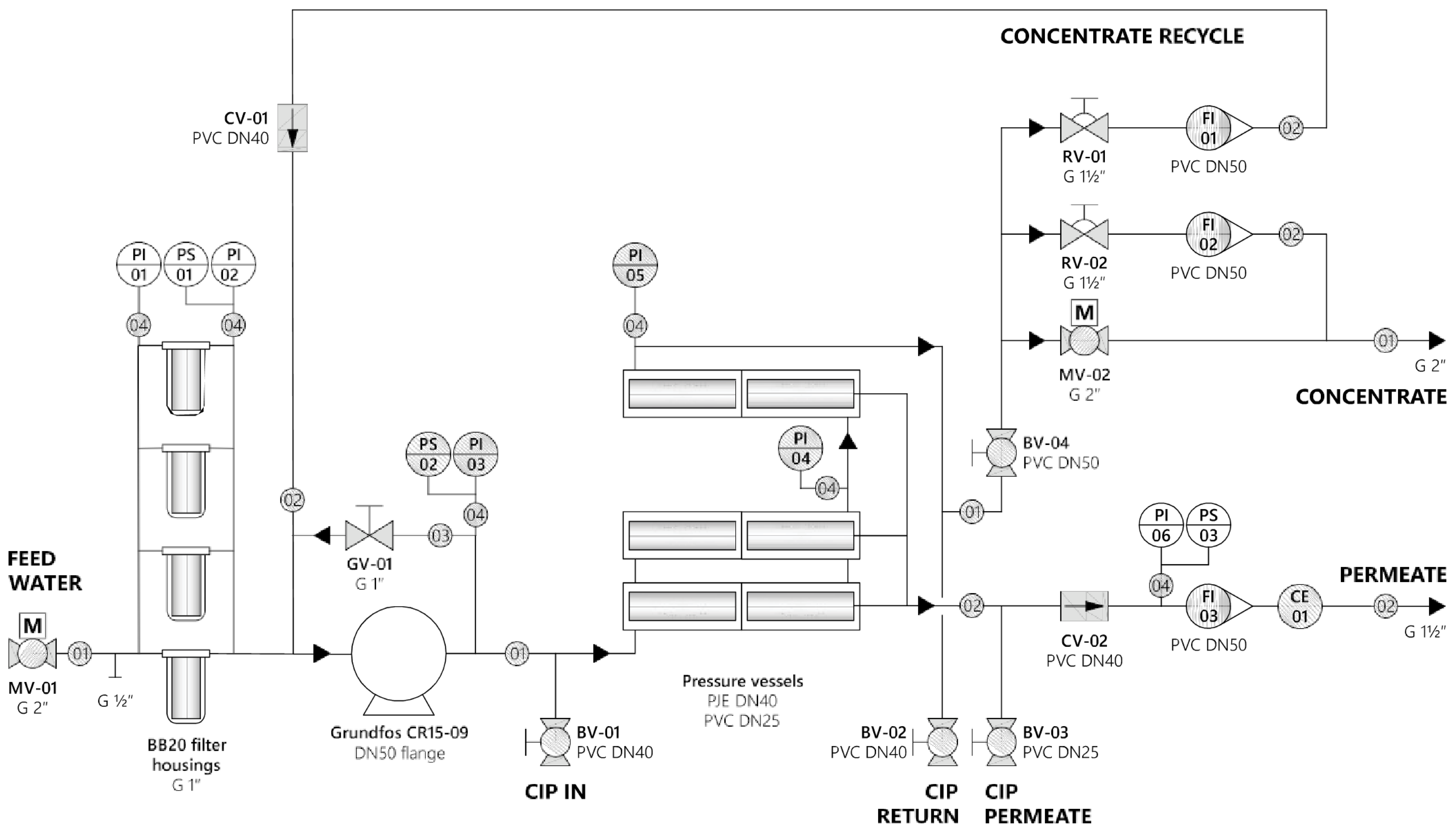
[2] for low scaling/fouling water

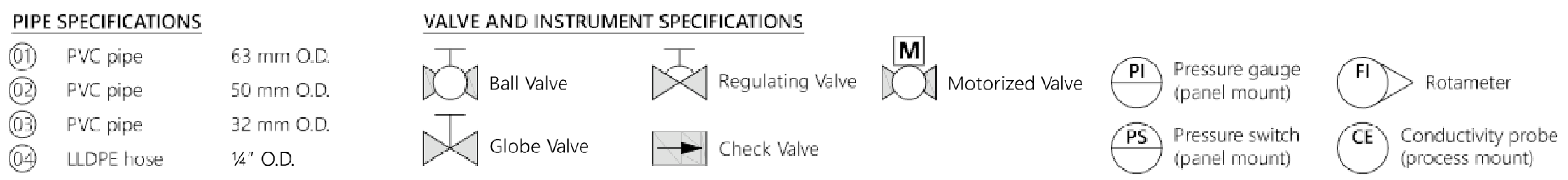
ECOSOFT MO-53 RO FLOW CAPACITY GRAPH



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PIPES AND INSTRUMENTS DIAGRAM





ECOSOFT MO-9
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.

System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

EQUIPMENT

- Grundfos® CR 15-09 high pressure pump
- 300 psi membrane vessels
- DOW Filmtec™ XLE-440 membranes
- BB20 sediment prefilter
- Electrical cabinet with Ecosoft controller
- Danfoss motorized valves
- Honeywell regulating valves
- Piping, valves, instrumentation, frame
- Wooden crate

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

CONNECTION PORT SIZES

Influent water Permeate Concentrate	G 2″ G 1½″ G 2″
CIP inlet CIP return CIP permeate	G 1½″ G 1½″ G 1″
Antiscalant dosing port	G ½″
Approximate weight	
Bare system	850 kg
Crated system	1100 kg
Dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	
Bare system	3.9 × 1.2 × 1.95 m
Crated system	4.3 × 1.6 × 2.2 m

ECOSOFT MO-9 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, m³/h (GPH)	Membranes
MO93XLWE	Ecosoft MO–9	9–12 (2 400–3 200)	9/80 x 40

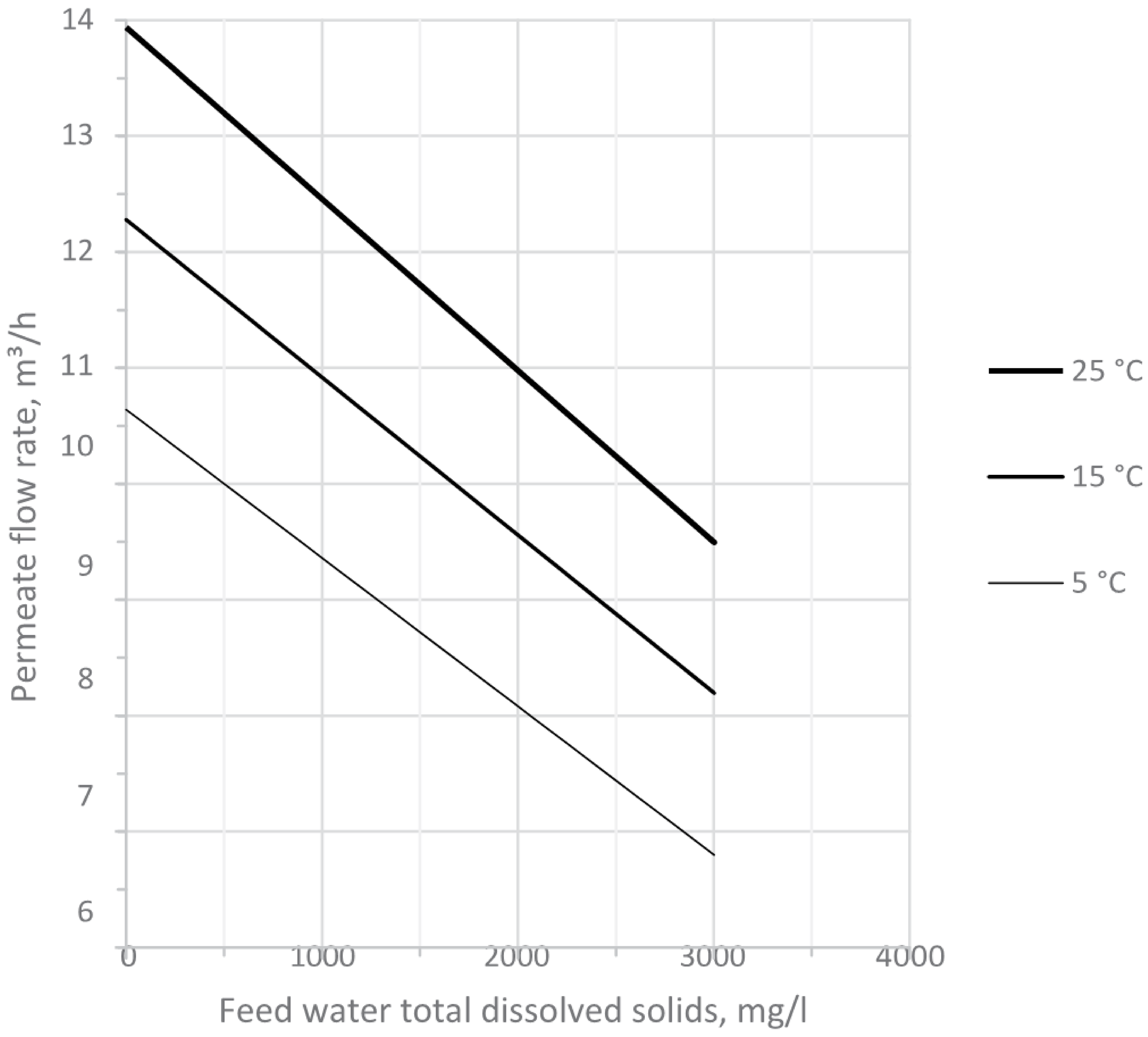
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**9 m³/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	12…16 m^3/h (service)
	16…20 m³/h (rinse)
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	7.5 kW
Prefilter rating	5 µm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

[2] for low scaling/fouling water

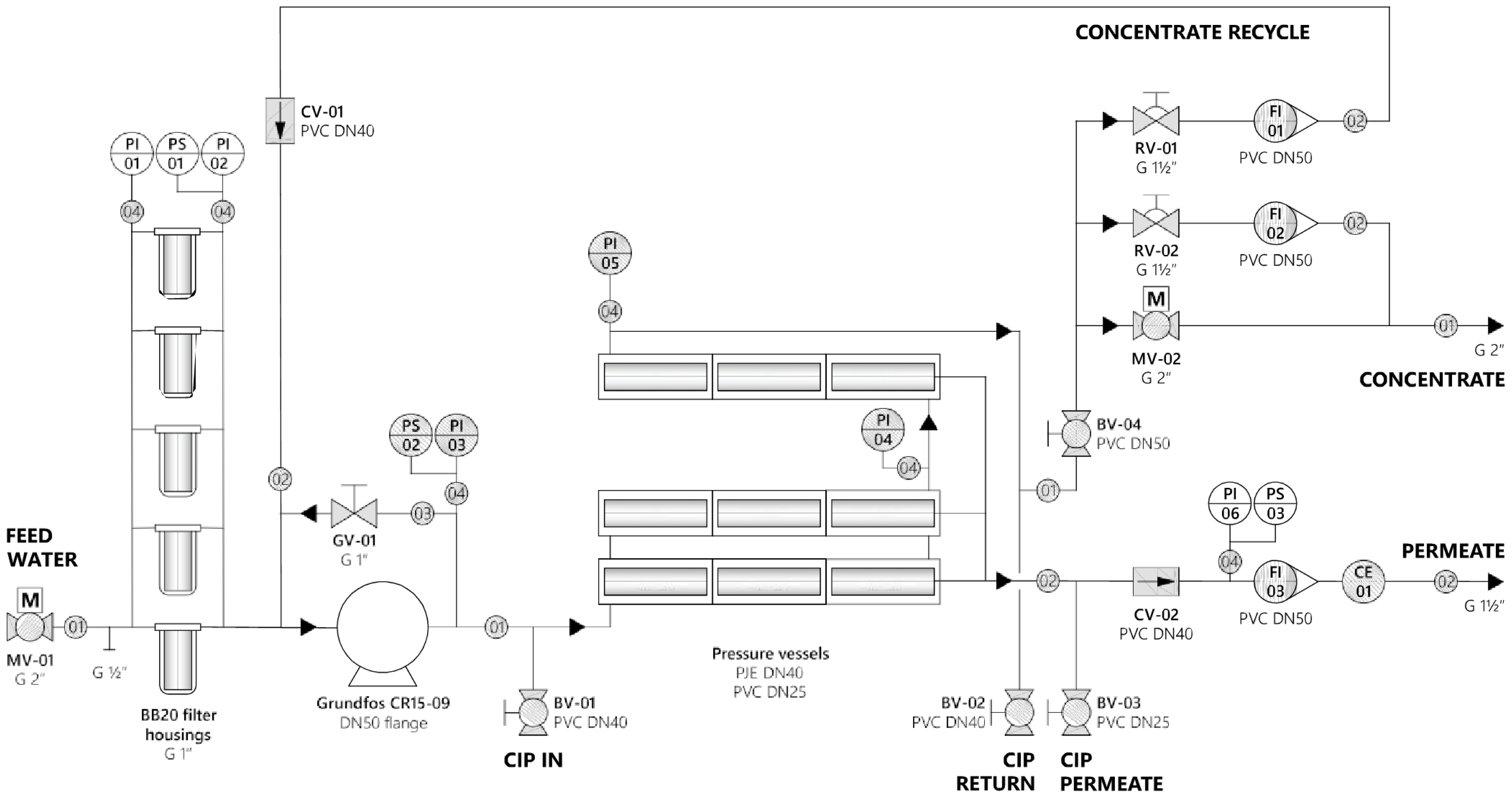
ECOSOFT MO-9 RO FLOW CAPACITY GRAPH

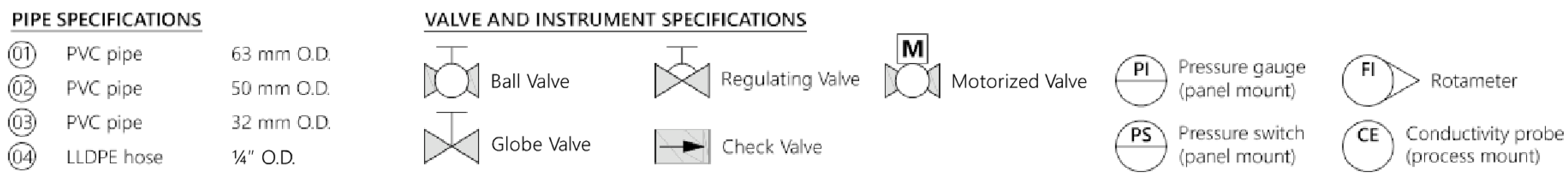


Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PIPES AND INSTRUMENTS DIAGRAM





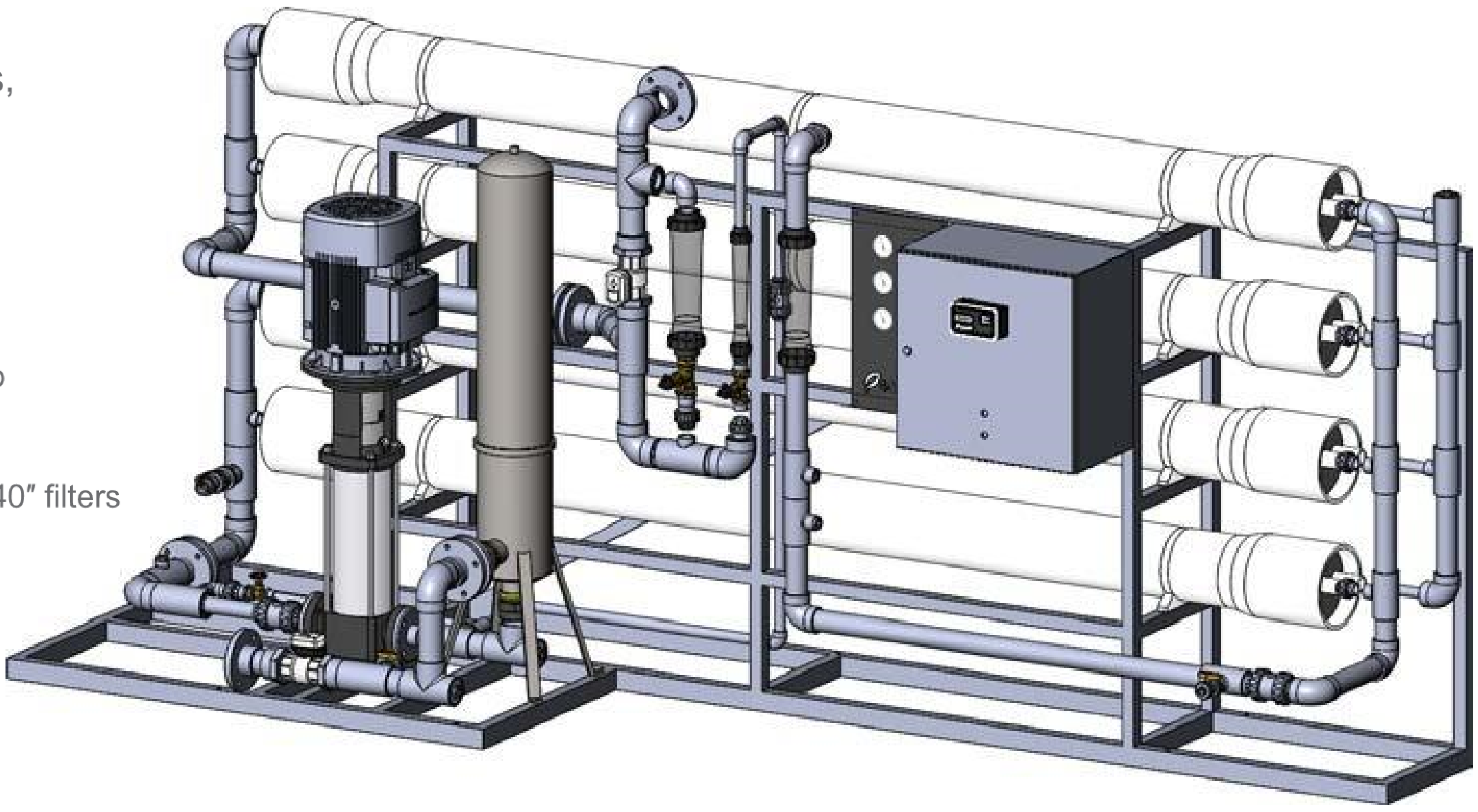
ECOSOFT MO-12
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.

EQUIPMENT

- Grundfos® CR 20-10 high pressure pump
- 300 psi membrane vessels
- DOW Filmtec™ XLE-440 membranes
- Stainless steel housing with 7 PP 2,5 × 40″ filters
- Electrical cabinet with Ecosoft controller
- Danfoss motorized valves
- Honeywell regulating valves
- Piping, valves, instrumentation, frame



System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

CONNECTION PORT SIZES

Influent water Permeate Concentrate	DN65 (flange) DN50 (G 2″) DN65 (flange)
CIP inlet CIP return CIP permeate	DN40 (G 1½″) DN40 (G 1½″) DN25 (G 1″)
Approximate weight (dry)	1000 kg
Approximate dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	4.0 × 1.4 × 2.1 m

ECOSOFT MO-12 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, m^3/h (GPH)	Membranes
MO124XLWE	Ecosoft MO–12	12–15 (3 200–4 000)	12/80 x 40

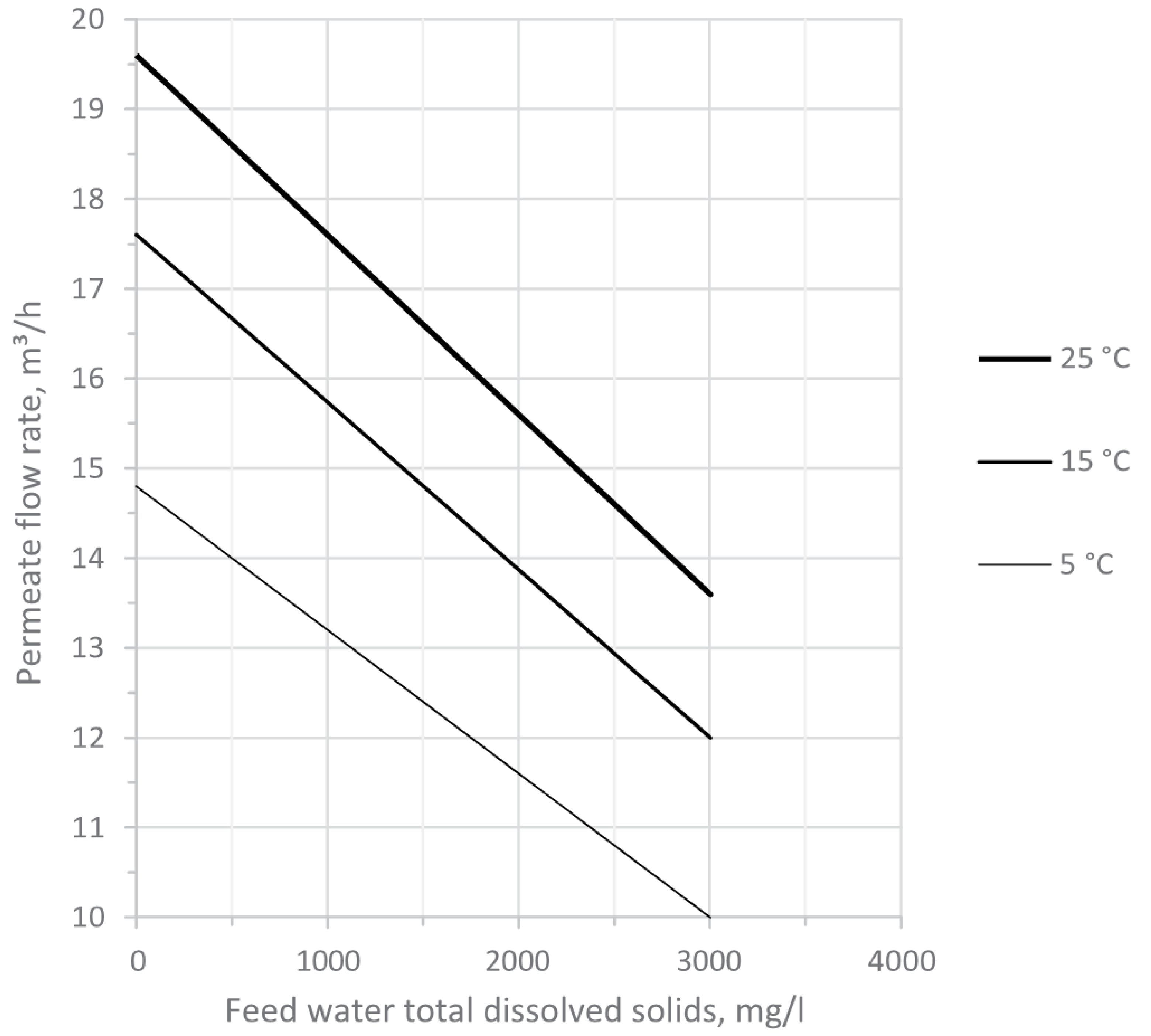
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**12 m³/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	16…20 m³/h
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	11 kW
Prefilter rating	5 μm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

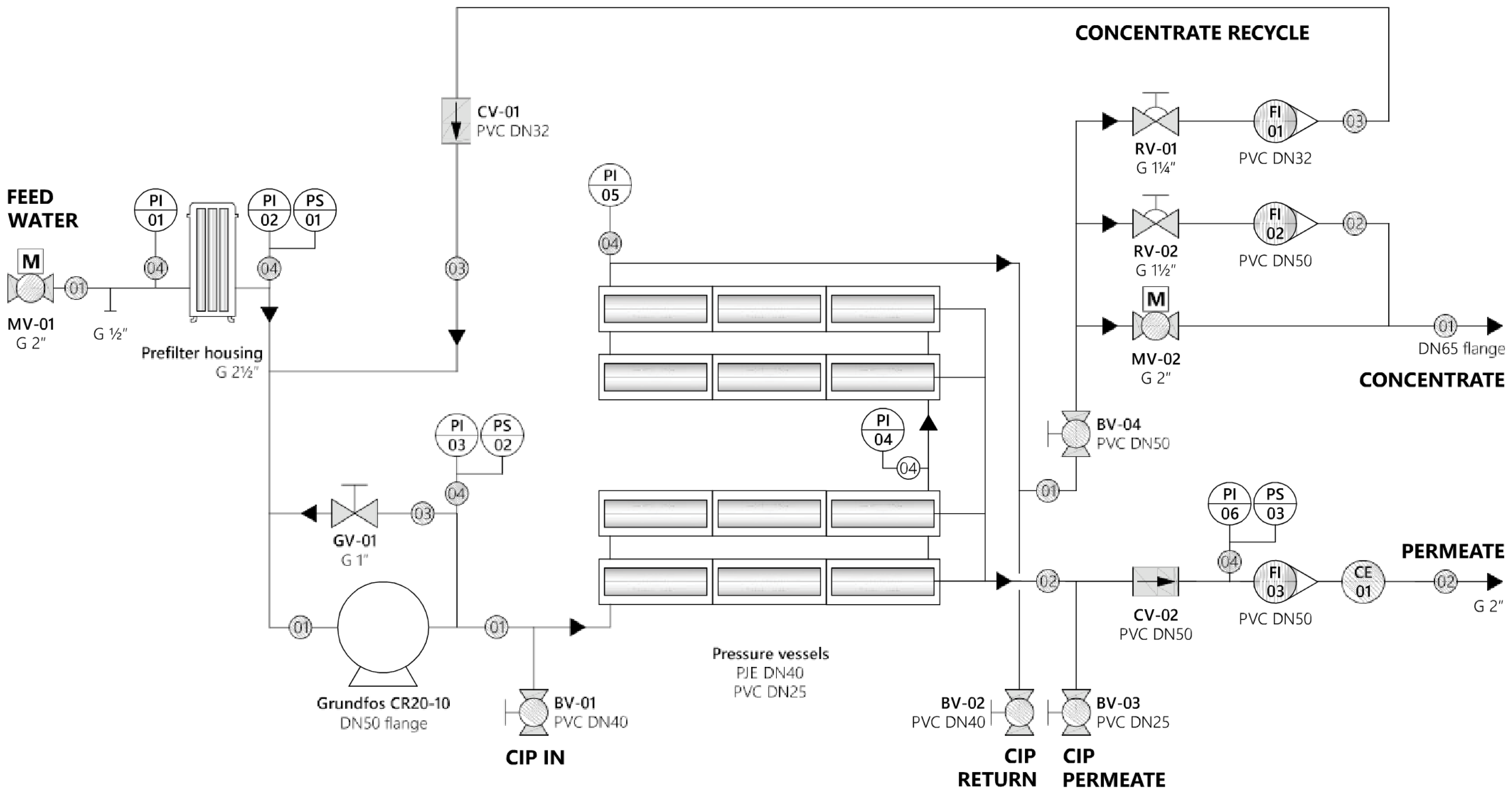
[2] for low scaling/fouling water

ECOSOFT MO-12 RO FLOW CAPACITY GRAPH



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

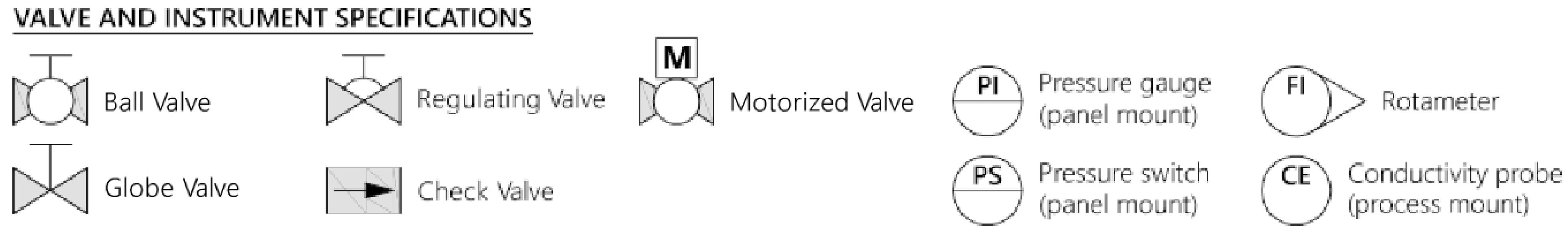
PIPES AND INSTRUMENTS DIAGRAM



PIPE SPECIFICATIONS

(01) PVC pipe		75 mm O.D.
(02) PVC pipe		63 mm O.D.
(03) PVC pipe		32 mm O.D.
(04) LLDPE hose		¼" O.D.

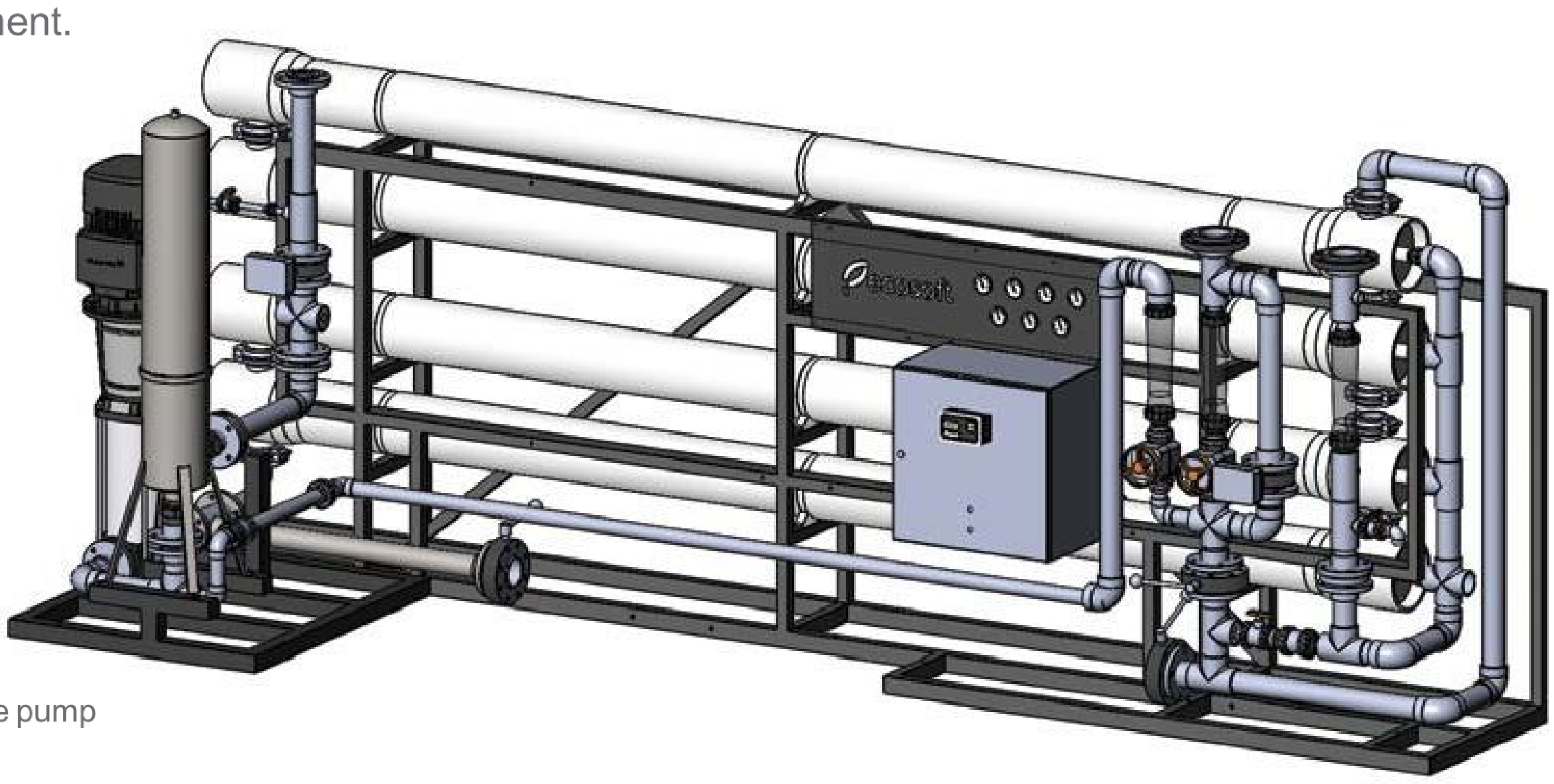
VALVE AND INSTRUMENT SPECIFICATIONS



ECOSOFT MO-16
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.



System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

EQUIPMENT

- Grundfos® CR 32-6 high pressure pump
- 300 psi membrane vessels
- DOW Filmtec™ XLE-440 membranes
- Stainless steel housing with 7 PP 2,5 × 40″ filters
- Electrical cabinet with Ecosoft controller
- Motorized butterfly valves
- Diaphragm regulating valves
- Piping, valves, instrumentation, frame

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

CONNECTION PORT SIZES

Influent water Permeate Concentrate	DN80 (flange) DN65 (flange) DN80 (flange)
CIP inlet CIP return CIP permeate	DN65 (flange) DN65 (flange) DN40 (G 1½″)
Approximate weight (dry)	1100 kg
Approximate dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	5.5 × 1.6 × 2.4 m

ECOSOFT MO-16 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, m³/h (GPH)	Membranes
MO164XLWE	Ecosoft MO–16	16–20 (4 200–5 300)	16/80 x 40

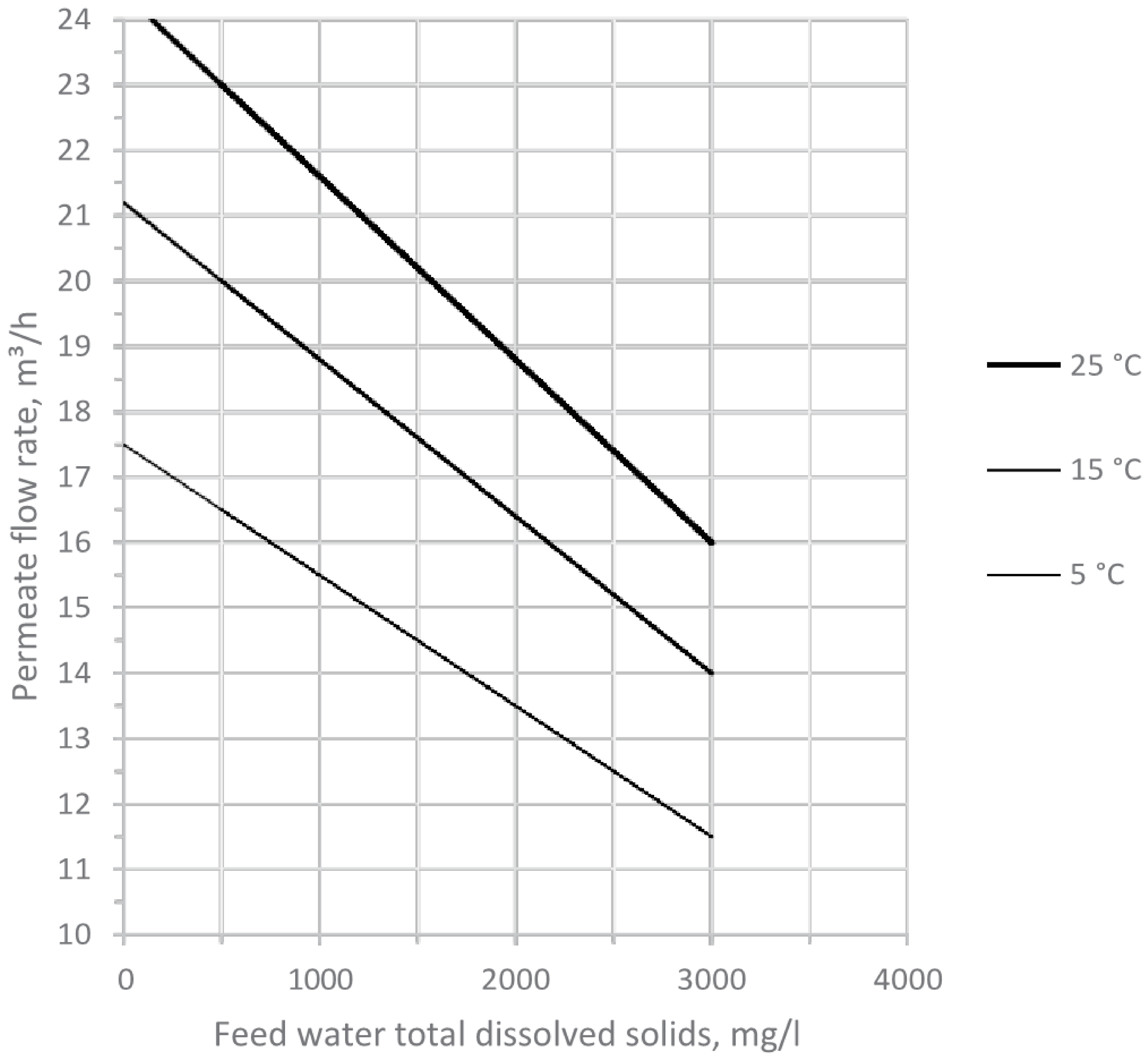
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**16 m³/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	20…25 m³/h
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	11 kW
Prefilter rating	5 µm

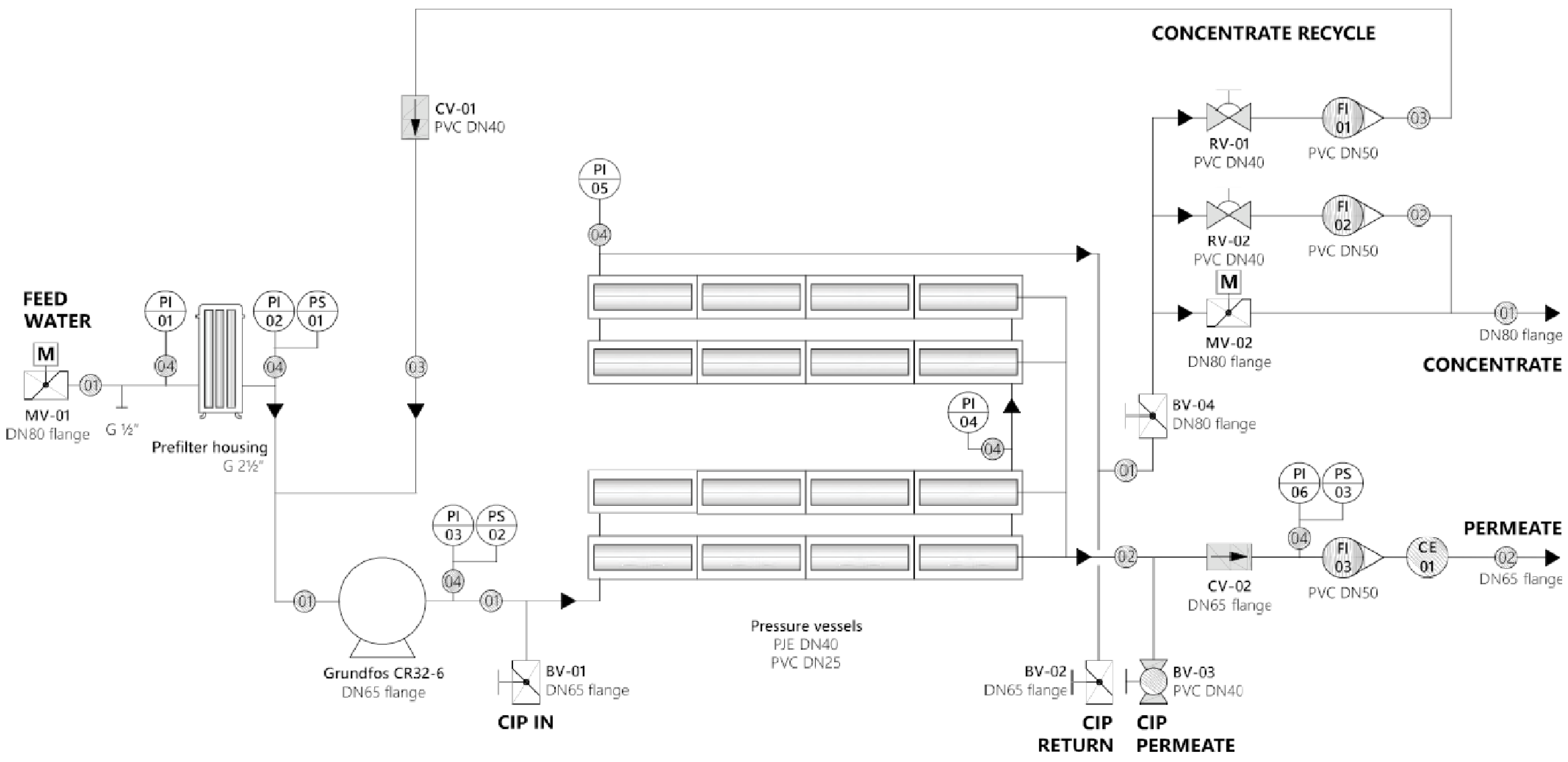
[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

[2] for low scaling/fouling water

ECOSOFT MO-16 RO FLOW CAPACITY GRAPH



PIPES AND INSTRUMENTS DIAGRAM



PIPE SPECIFICATIONS

01	PVC pipe	75 mm O.D.
02	PVC pipe	63 mm O.D.
03	PVC pipe	50 mm O.D.
04	LLDPE hose	¼" O.D.

VALVE AND INSTRUMENT SPECIFICATIONS

M Motorized butterfly valve

Butterfly valve

Diaphragm valve

Check valve

Ball valve

PI Pressure gauge (panel mount)

PS Pressure switch (panel mount)

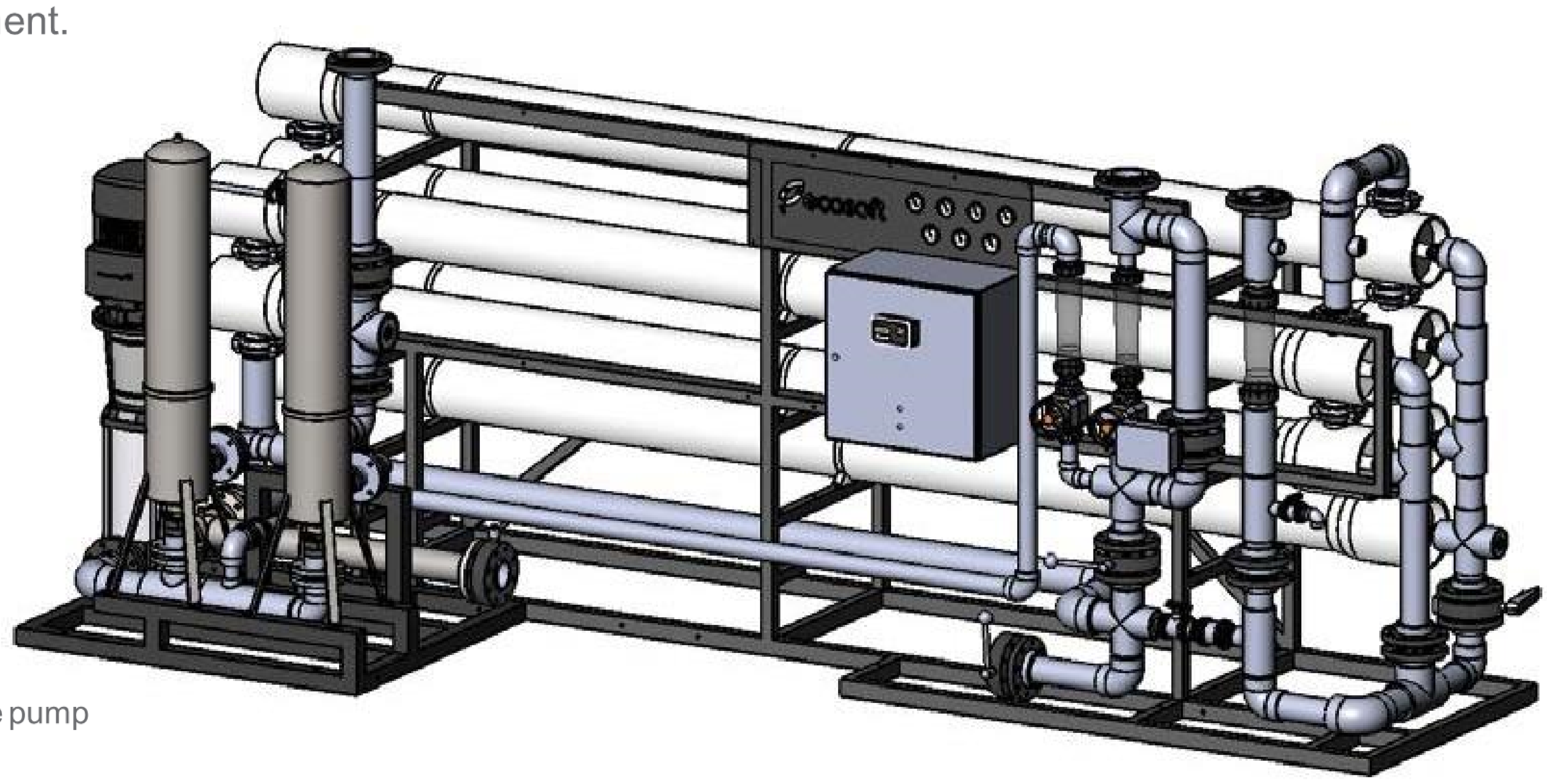
FI Rotameter

CE Conductivity probe (process mount)

ECOSOFT MO-24
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.



System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

EQUIPMENT

- Grundfos® CR 45-5 high pressure pump
- 300 psi membrane vessels
- DOW Filmtec™ XLE-440 membranes
- Stainless steel housing with 7 PP 2,5 × 40″
- Electrical cabinet with Ecosoft controller
- Motorized butterfly valves
- Diaphragm regulating valves
- Piping, valves, instrumentation, frame

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

CONNECTION PORT SIZES

Influent water Permeate Concentrate	DN80 (flange) DN65 (flange) DN80 (flange)
CIP inlet CIP return CIP permeate	DN65 (flange) DN65 (flange) DN40 (G 1½″)
Approximate weight (dry)	1450 kg
Approximate dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	5.5 × 1.6 × 2.4 m

ECOSOFT MO-24 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, m³/h (GPH)	Membranes
MO246XLWE	Ecosoft MO–24	24–28 (6 400–7 400)	24/80 x 40

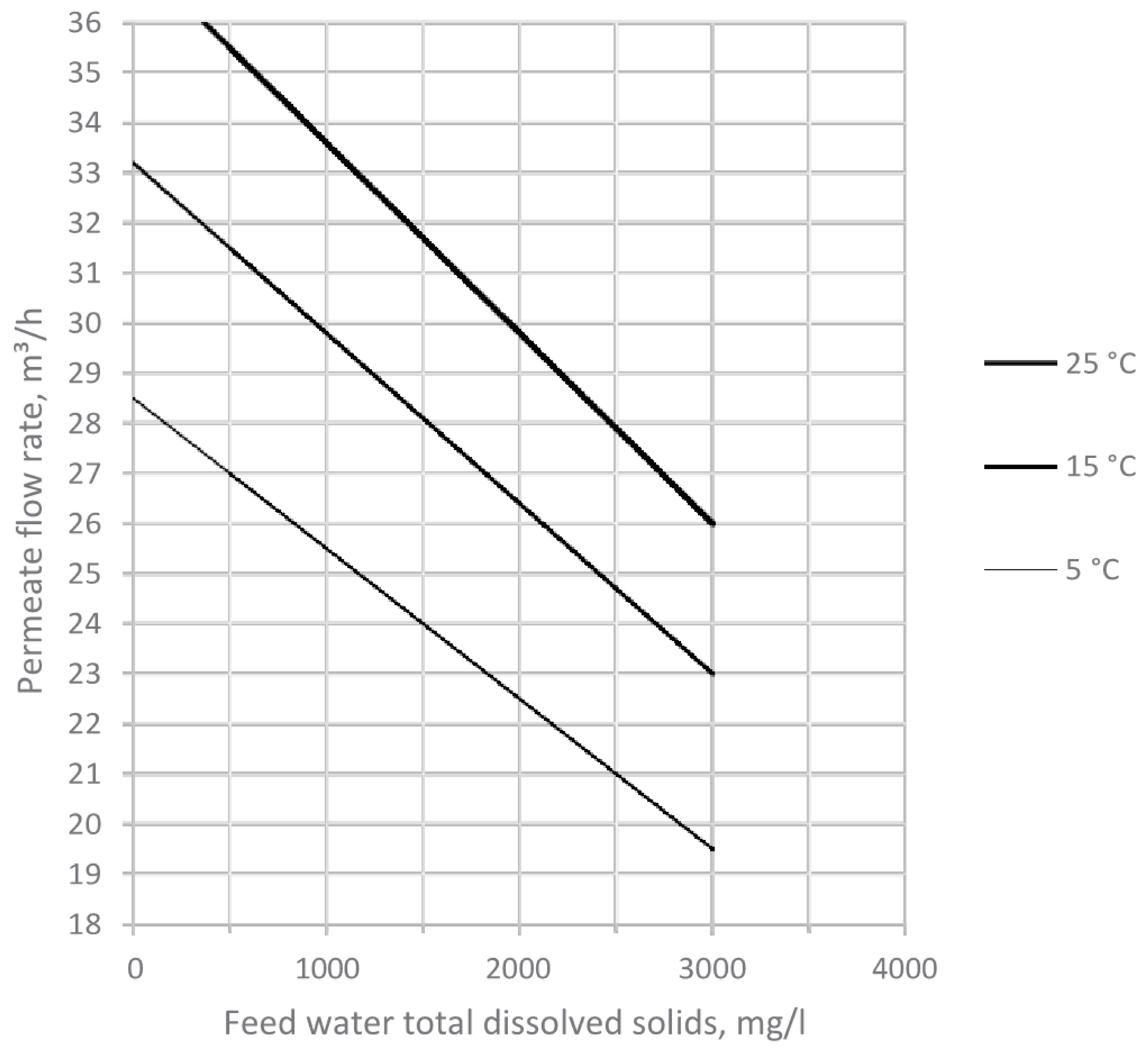
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**24 m³/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	30…40 m³/h
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	18.5 kW
Prefilter rating	5 µm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

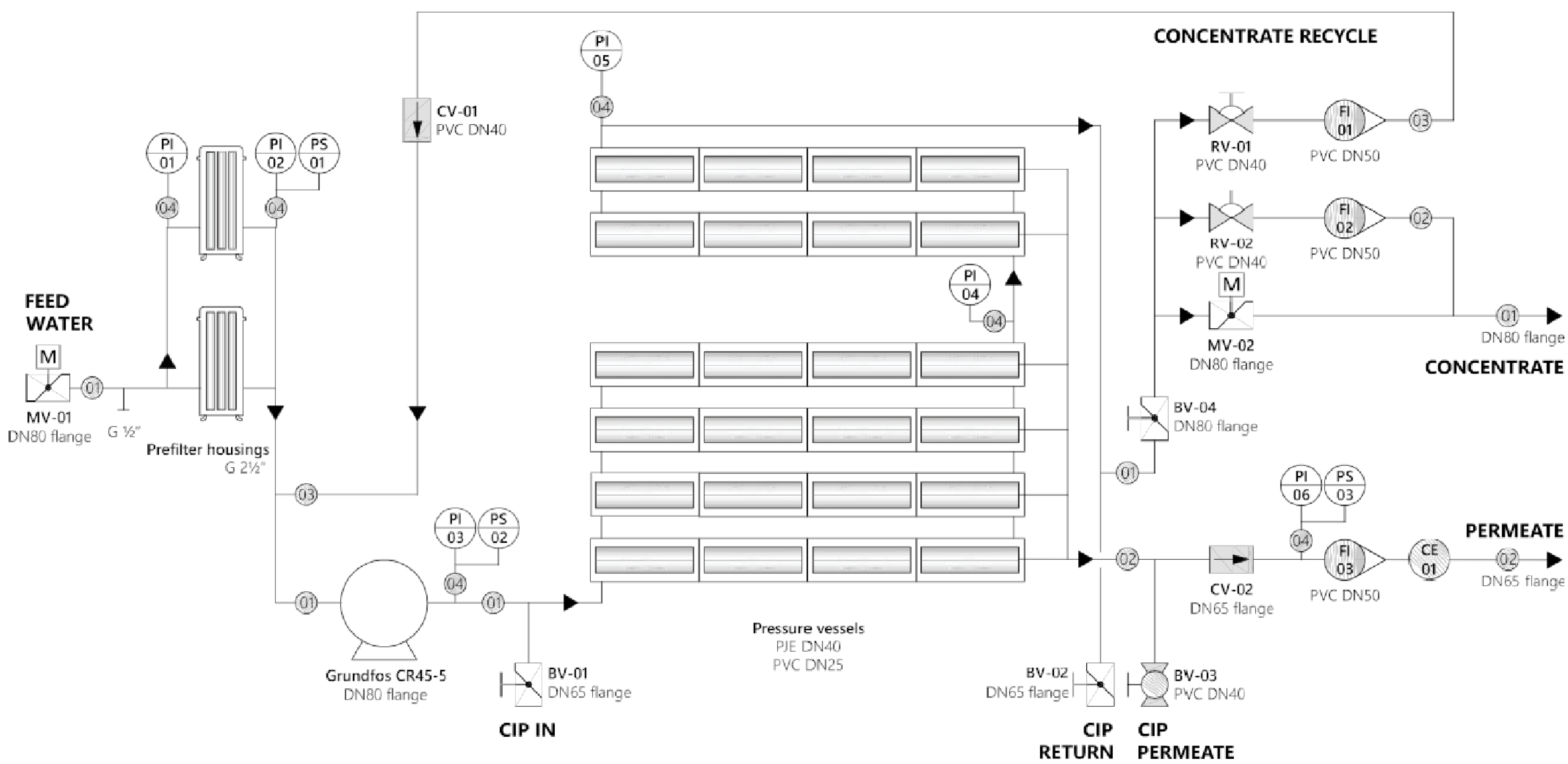
[2] for low scaling/fouling water

ECOSOFT MO-24 RO FLOW CAPACITY GRAPH



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

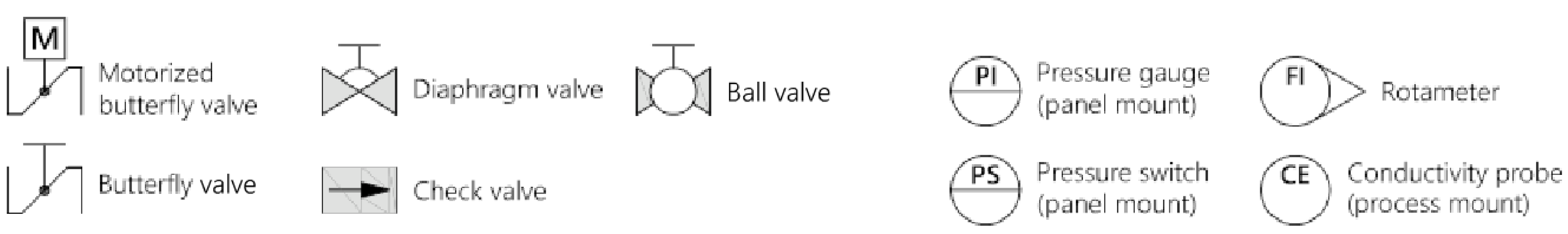
PIPES AND INSTRUMENTS DIAGRAM



PIPE SPECIFICATIONS

01	PVC pipe	90 mm O.D.
02	PVC pipe	75 mm O.D.
03	PVC pipe	50 mm O.D.
04	LLDPE hose	¼" O.D.

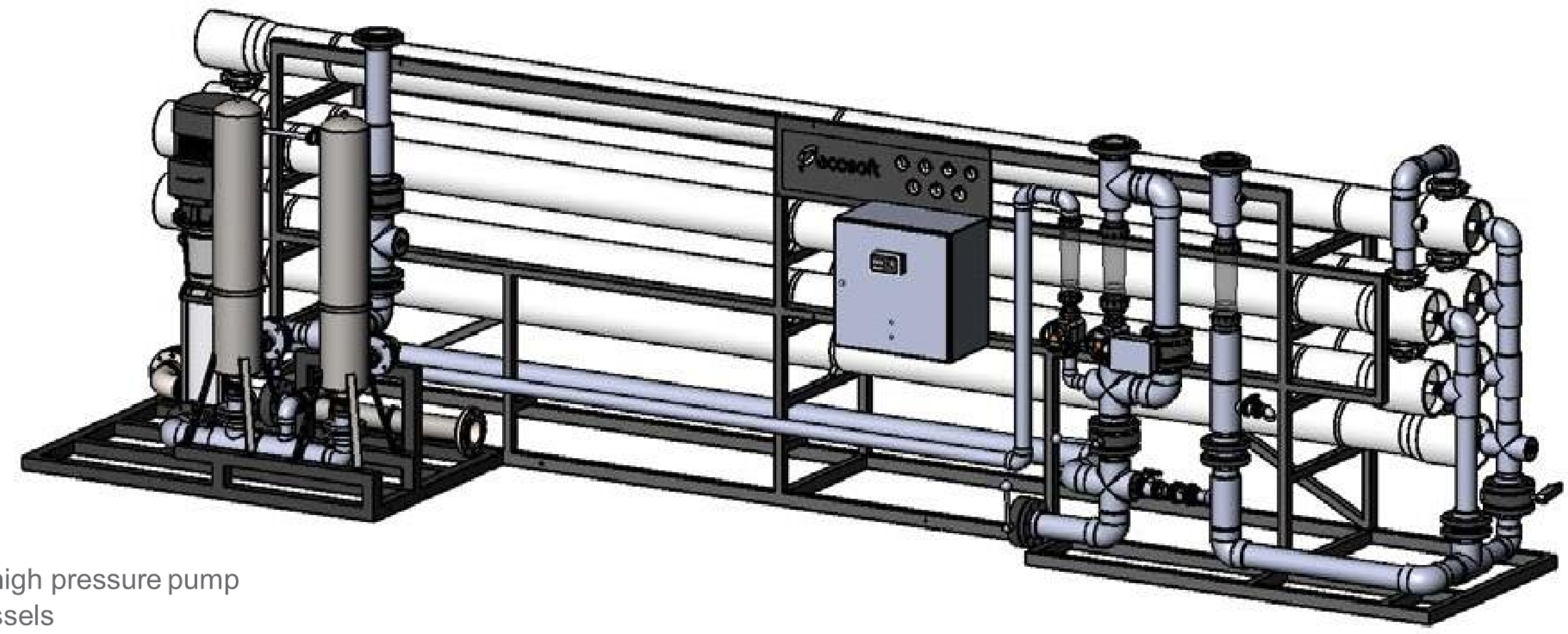
VALVE AND INSTRUMENT SPECIFICATIONS



ECOSOFT MO-36
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.



Shown with optional chemical dosing pumps and stage shutoff valves. System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

EQUIPMENT

- Grundfos® CR 45-6-2 high pressure pump
- 300 psi membrane vessels
- DOW Filmtec™ XLE-440 membrane
- Stainless steel housing with 7 PP 2,5 × 40″ filters
- Electrical cabinet with Ecosoft controller
- Motorized butterfly valves
- Diaphragm regulating valves
- Piping, valves, instrumentation, frame

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

CONNECTION PORT SIZES

Influent water Permeate Concentrate	DN100 (flange) DN80 (flange) DN100 (flange)
CIP inlet CIP return	DN80 (flange) DN80 (flange)
Approximate weight (dry)	2200 kg
Approximate dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	7.0 × 2.4 × 2.5 m

ECOSOFT MO-24 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, m^3/h (GPH)	Membranes
MO366XLWE	Ecosoft MO–36	36–42 (9 500–11 100)	36/80 x 40

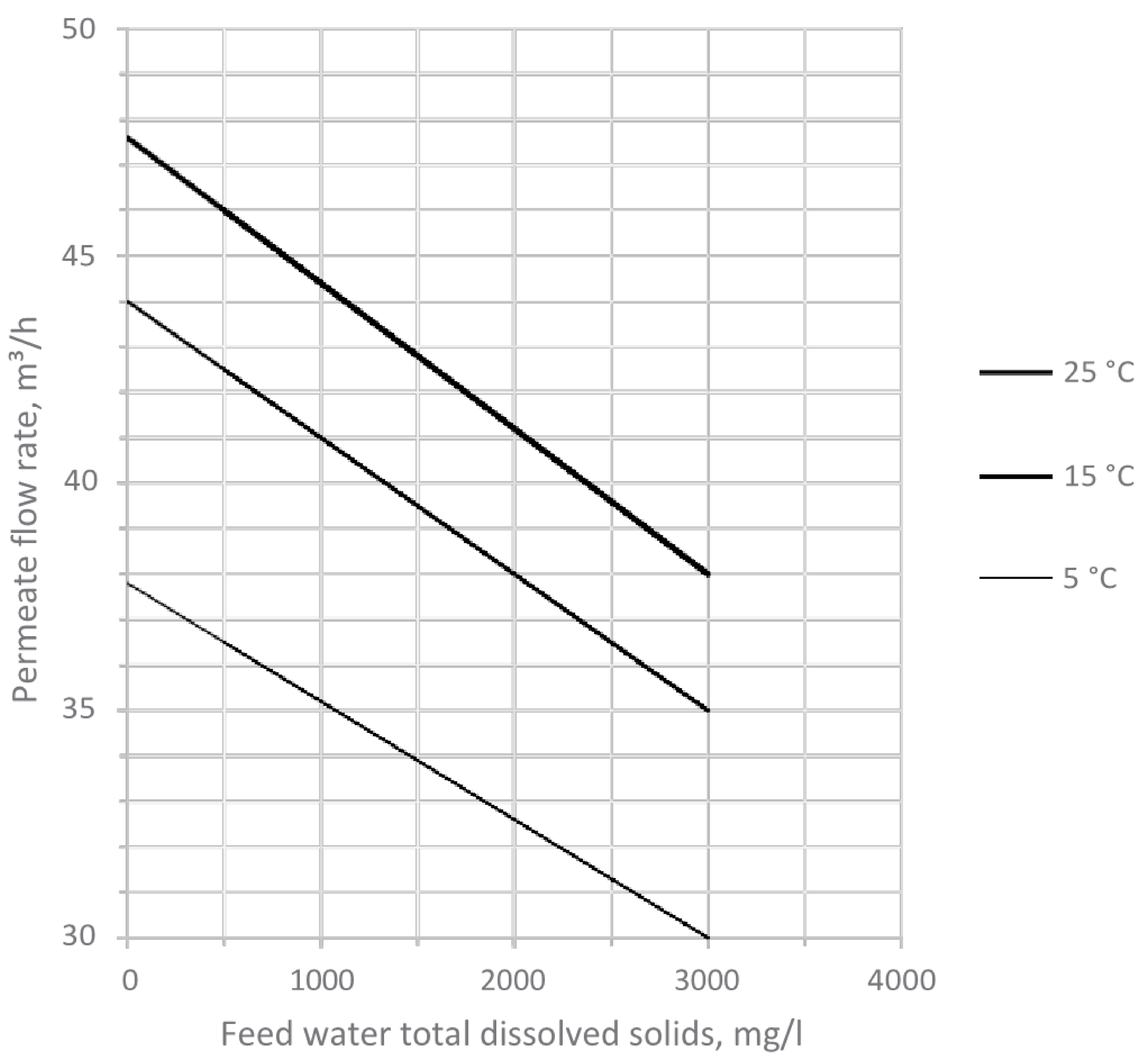
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**36 m³/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	50…60 m³/h
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	22 kW
Prefilter rating	5 µm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

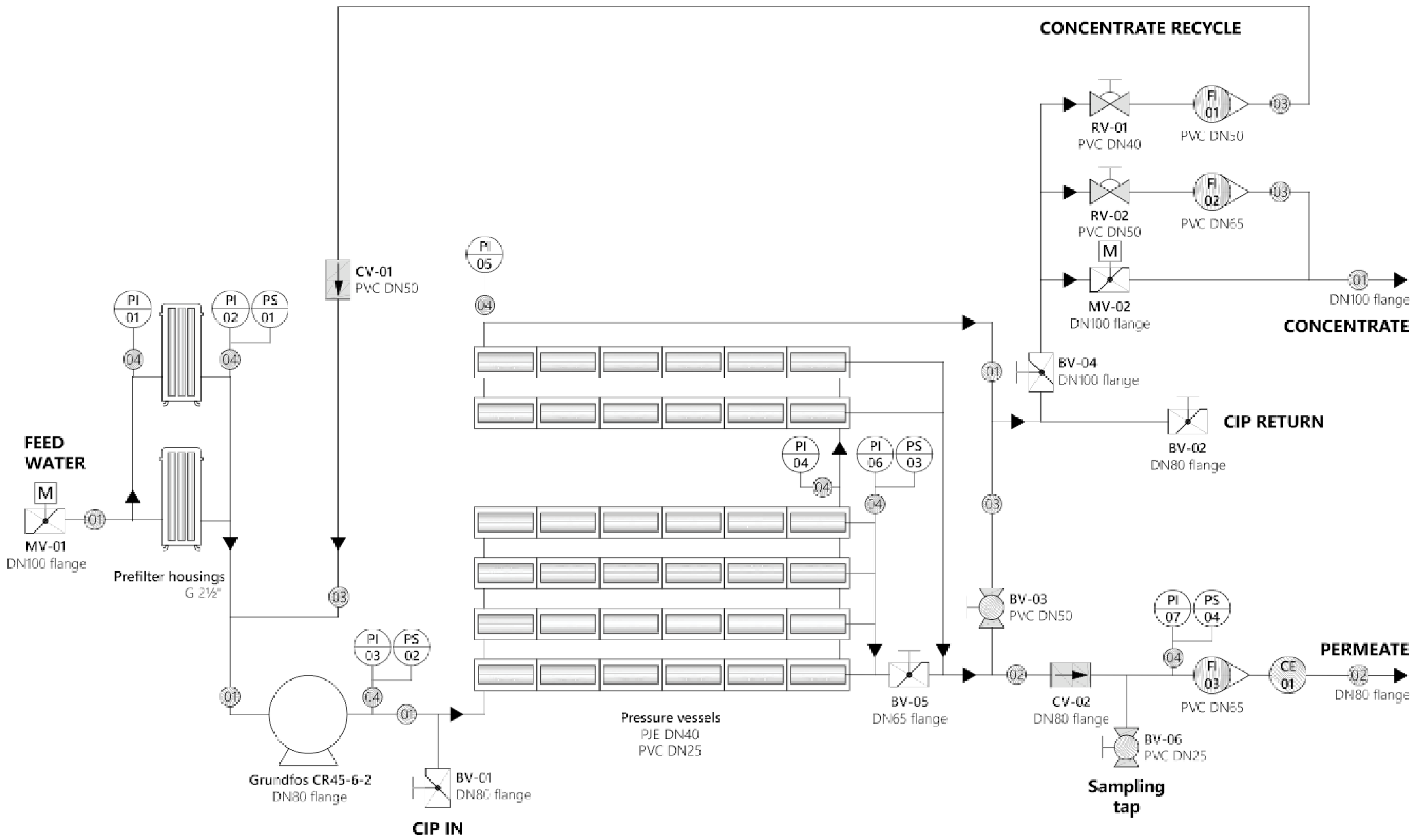
[2] for low scaling/fouling water

ECOSOFT MO-36 RO FLOW CAPACITY GRAPH



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PIPES AND INSTRUMENTS DIAGRAM



PIPE SPECIFICATIONS

01	PVC pipe	110 mm O.D.
02	PVC pipe	90 mm O.D.
03	PVC pipe	63 mm O.D.
04	LLDPE hose	¼" O.D.

VALVE AND INSTRUMENT SPECIFICATIONS

Motorized butterfly valve
Butterfly valve
Diaphragm valve
Check valve
Ball valve
PI Pressure gauge (panel mount)
PS Pressure switch (panel mount)
FI Rotameter
CE Conductivity probe (process mount)

ECOSOFT MO-48
INDUSTRIAL REVERSE OSMOSIS SYSTEM

APPLICATIONS

Process water, rinse water, steam boilers, heating and cooling circuits, agriculture, desalination, food and beverage, utility water treatment.

EQUIPMENT

- Grundfos® CR 64-4 high pressure pump
- 300 psi membrane vessels
- DOW Filmtec™ XLE-440 membranes
- Stainless steel housing with 15 PP 2,5 × 40″ filters
- Electrical cabinet with Ecosoft controller
- Motorized butterfly valves
- Diaphragm regulating valves
- Piping, valves, instrumentation, frame

OPTIONS

- High rejection Filmtec™ membranes
- Dosing pump for antiscalant or other RO chemicals
- Permeate inlet for permeate membrane rinse
- Raw water mixing line

Shown with optional CIP unit.
System design may be amended on manufacturer's discretion without violating compliance with the process flow diagram

CONNECTION PORT SIZES

Influent water Permeate Concentrate	DN100 (flange) DN100 (flange) DN100 (flange)
CIP inlet CIP return	DN80 (flange) DN80 (flange)
Approximate weight (dry)	2600 kg
Approximate dimensions (Width × Depth × Height) *Dimensions may vary ± 5%*	7.0 × 2.4 × 2.5 m

ECOSOFT MO-24 INDUSTRIAL REVERSE OSMOSIS SYSTEMS

Code	Product	Flow capacity, m^3/h (GPH)	Membranes
MO488XLWE	Ecosoft MO–48	48–56 (12 700–14 800)	48/80 x 40

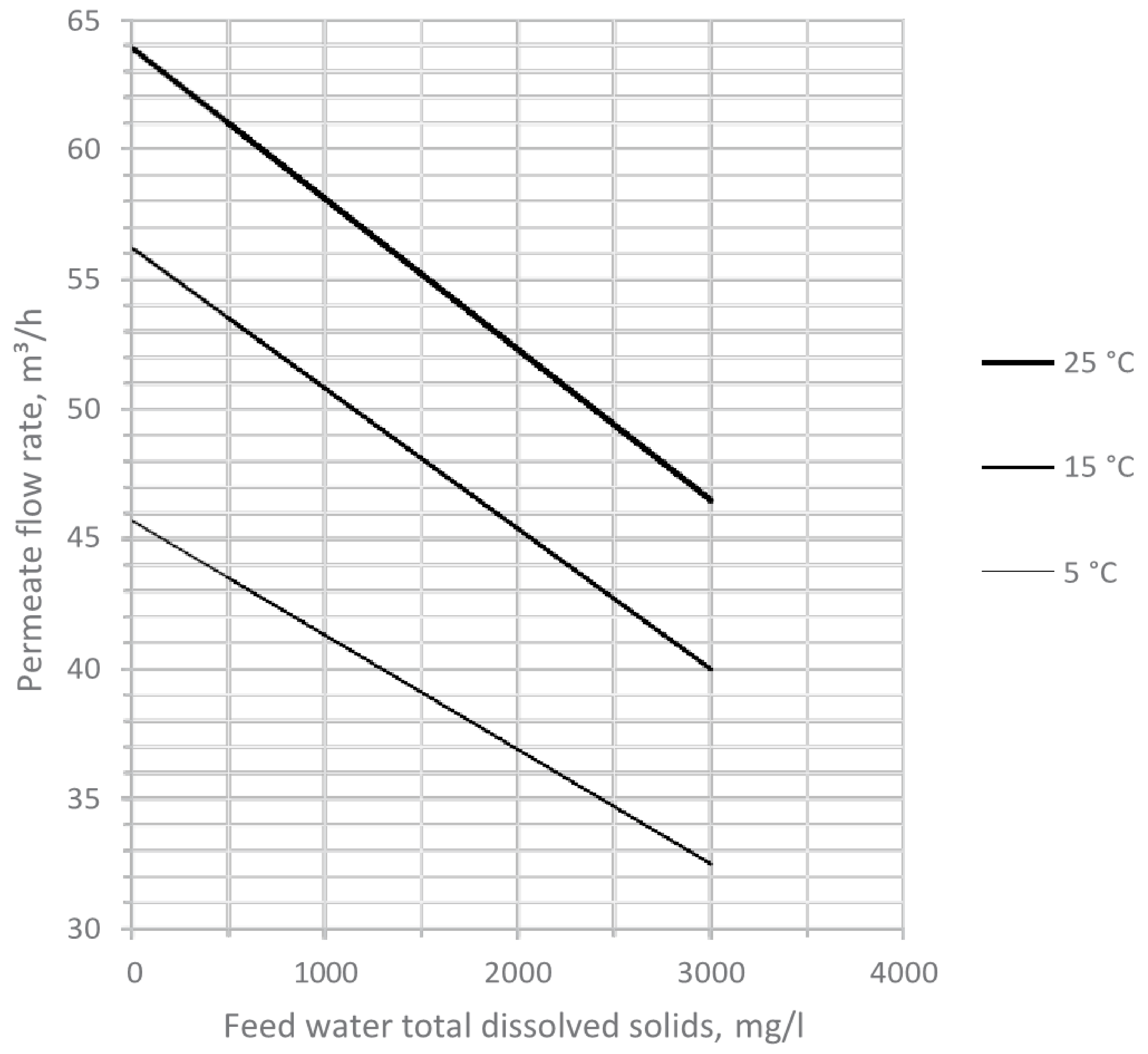
TECHNICAL SPECIFICATIONS

Permeate capacity [1]	**48 m³/h**
Permeate recovery [2]	**75%**
Maximum TDS	**3000 mg/l**
Influent flow demand	65…80 m³/h
Operating pressure	8…12 bar
Maximum pressure	14 bar
Electrical requirements	400 V, 50 Hz (3 ph)
Electrical power	22 kW
Prefilter rating	5 µm

[1] depends on feed water TDS, temperature, and permeate recovery — see graph on the right

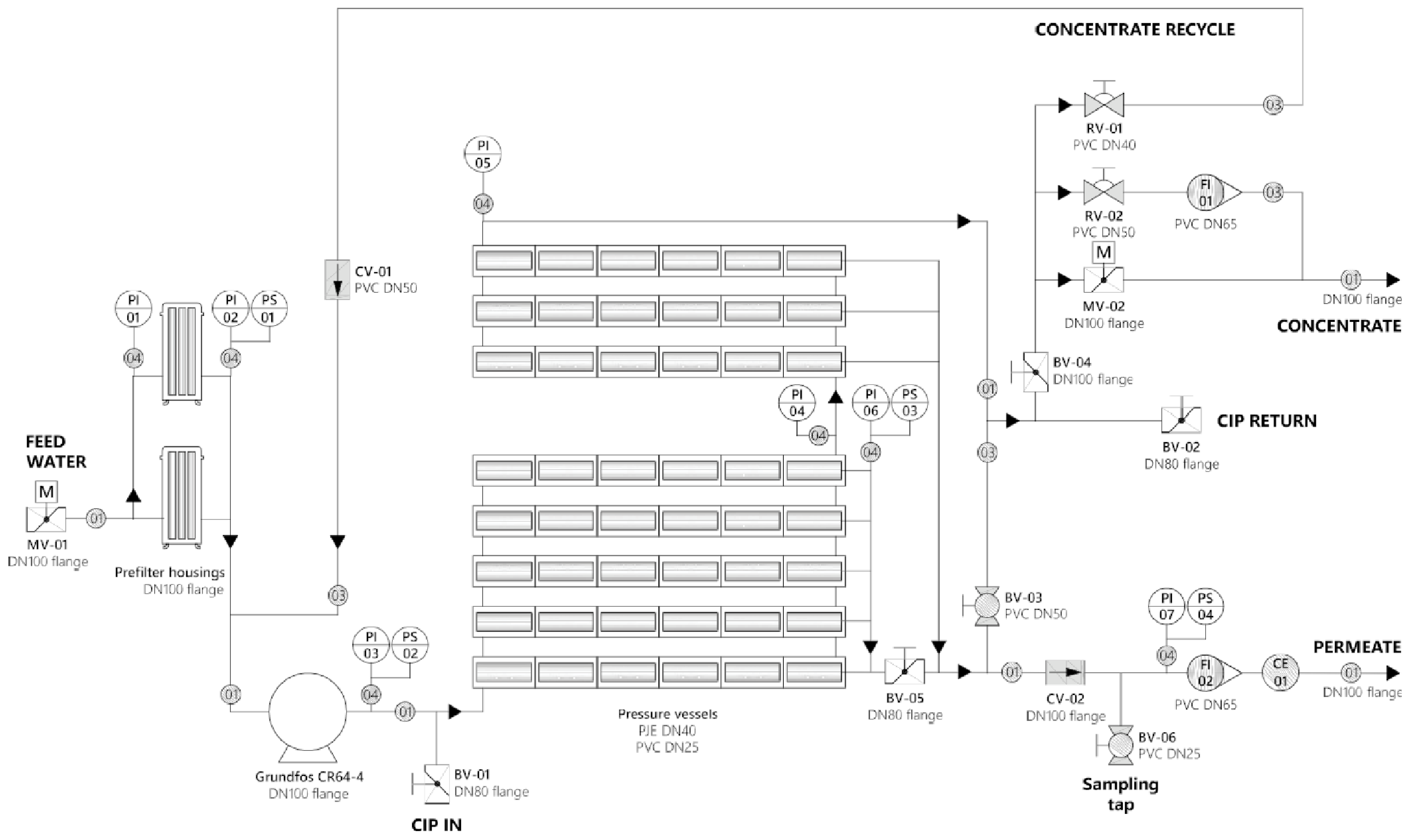
[2] for low scaling/fouling water

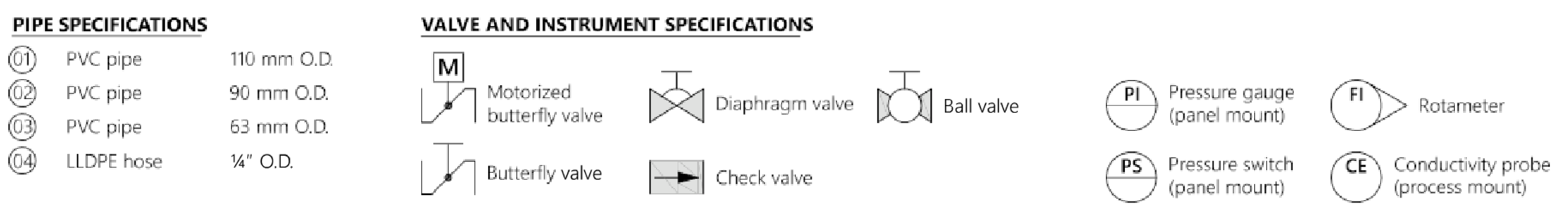
ECOSOFT MO-48 RO FLOW CAPACITY GRAPH



Permeate flow rates are calculated under the following conditions:
• 2 bar influent water pressure
• 0 bar backpressure in the permeate line
• fresh membranes

PIPES AND INSTRUMENTS DIAGRAM





RO MEMBRANES

Code	Product
ULP4040	Ecosoft 4″ ULP-4040
XLE4040	DOW Filmtec™ 4″ XLE-4040
LCLE4040	DOW Filmtec™ 4″ LCLE-4040
XLE440	DOW Filmtec™ 8″ XLE-440
BW30400[1]	DOW Filmtec™ 8" BW30-400
BW30HRLE440[1]	DOW Filmtec™ 8" BW30HRLE-440
BW30XFRLE40034[1]	DOW Filmtec™ 8" BW30XFRLE-400/34
ECOPRO440[1]	DOW Filmtec™ 8" ECO PRO-440

[1] Upon request. Delivery term up to 3 months

CIP STATIONS FOR ECOSOFT MO SYSTEMS

Code/product	Description
CIPSEP4	Ecosoft CIP station for 2.5″, 4″ membranes systems
CIPSEP	Ecosoft CIP station for 8″ membranes systems (for MO-1 to MO-4)
CIPSEP616	Ecosoft CIP station for 8″ membranes systems (for MO-6 to MO-16)

ECOSOFT RO CHEMICALS

Code/product	Product	Description
ECOT100010	Ecotec RO 1000 (10kg)	Antiscalant
ECOT200010	Ecotec RO 2000 (10 kg)	
ECOT301010	Ecotec RO 3010 (10kg)	Antiscalant/dispersant (effective against low concentration of iron)
ECDB510	Ecocide DB5 (10 kg)	Biocide
ECDB2010	Ecocide DB20 (10 kg)	
ECOCL20310	Ecoclean 203 acid membrane cleaner (10 kg)	Membrane cleaning chemicals
ECOCL21110	Ecoclean 211 caustic membrane cleaner (10 kg)	

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