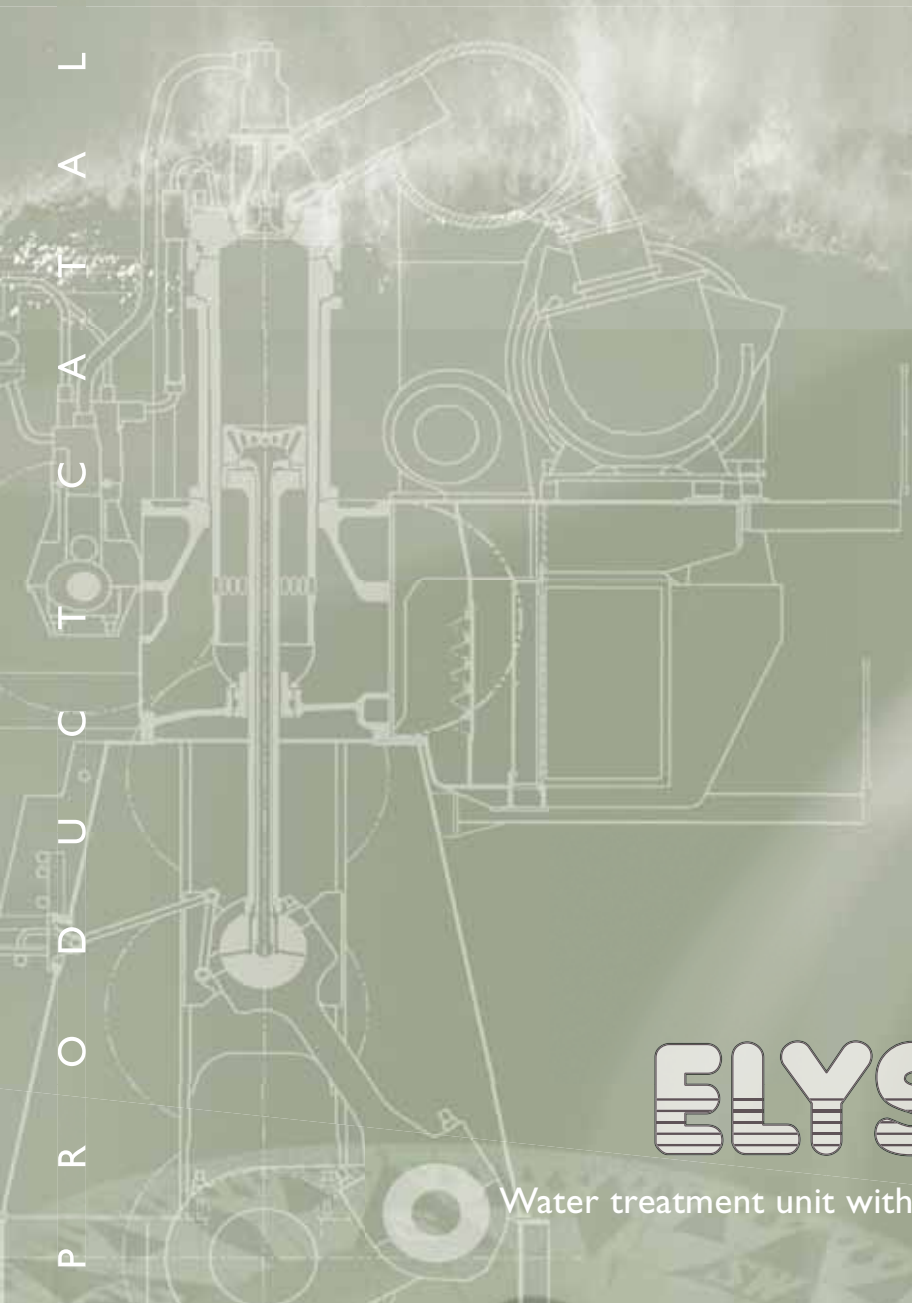


IWTM



International Water Treatment Maritime AS



ELYSATOR®

Water treatment unit without use of chemicals



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Adventure of the seas

Reference list

With 30 years of experience, research and development our track record is impeccable: Bergesen, Royal Caribbean Cruise Line, Odfjell, Wilhelmsen-Wallenius and many more! We have delivered several hundred installations running successfully onboard. We are happy to supply our reference list upon request!

DNV has verified the Elysator, based upon analysis taken from various plants. Wartsila NSD has approved the Elysator after 15 months test trial. Wartsila NSD Winterthur Sulzer has approved the Elysator after 36 months running onboard the LPG/C Helios. DNV has issued its first No1 letter of compliance: Clean Maritime Machinery and Components (June 2003)



The company

International Water Treatment Maritime AS was founded in 1992. Our main activity is non-chemical water treatment of any fresh water system to prevent corrosion. This is achieved by installing "ELYSATOR" in the different heating, cooling and steam generating systems in the industrial, housing and marine applications.

History

ELYSATOR is a Swiss product (reg. trademark) with more than 30 years of experience and with thousands of installations in all kinds of systems. (Industry, hospitals, private housing, food processing etc.) The first maritime installations were made in 1994. And now, thousands of Elysators has been successfully installed on vessels worldwide.

Usage

The Elysator can be used in any kind of closed or partially closed Systems with circulation (Marine and Industrial) where corrosion might occur.

Marine: Elysators are installed into new buildings & existing vessels for all kind of fresh water systems where corrosion might occur. Cruise ships are an excellent example of the diversity of the Elysator. On these types of vessel they are used for protection of FW cooling systems, boilers, main engine cooling, air-conditioning units, azipod propulsion and also potable hotwater.

Industrial: Elysators are installed in many industrial systems including airports, dairies, food processing, power plants (also nuclear). They are also used in the central heating systems of many large housing and apartment complexes, hotels and hospitals.



Oslo Airport Gardermoen, 43 installations, all systems.

References

Some of our customersr:

Marine customers:

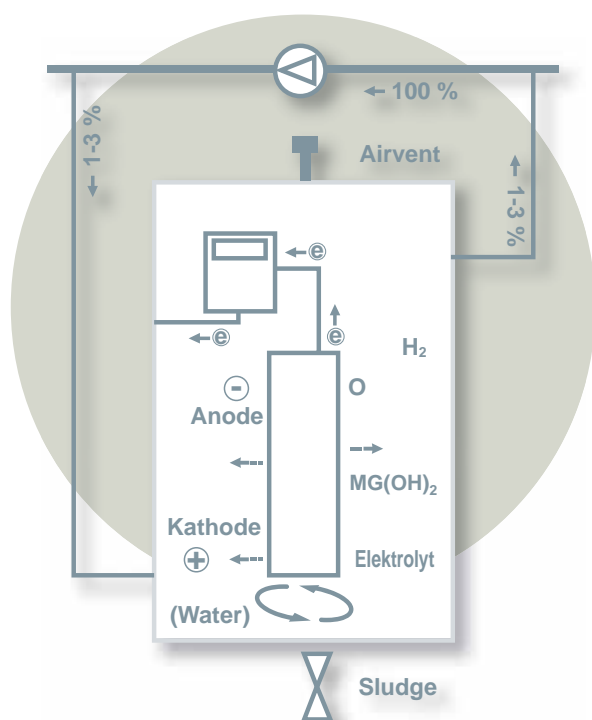
- Royal Caribbean Cruises
- Carnival Cruises
- Norwegian Cruise Line
- Bergesen DY ASA
- Odjell ASA
- National Iranian Tankers
- Wallenius Marine
- V-Ship
- Star Cruises
- The Torvald Klaveness Group
- Wilh. Wilhelmsen
- IMC Singapore
- Tanker Pacific Management
- Crystal Cruise Line
- Holland-America Cruise Line
- Princess Cruises

Land based customers:

- Forsmark Nuclear powerplant
- Wartsila powerplants Azores
- Oslo airport Gardermoen
- Hotels, hospitals and schools (all over Scandinavia)
- Svalbard Island
- Andøya rocketbase
- Telenor AS (Norway largest officebuilding, 26 systems.)
- Office Buildings (all over Scandinavia)
- Royal Norwegian Defense Ministry (Airports, navy bases, officebuildings etc.....)
- Among 800/900 installations in Scandinavia

Functioning

The function of the Elysator is based on the anodic/cathodic principle i.e. letting a less noble metal (magnesium) be sacrificed (corroded) instead of the system itself, related to galvanic series / elements. During the process the oxygen in the water will be absorbed creating H_2O and magnesium hydroxide. When installed the Elysator, the entire system will be protected from corrosion. Even aluminium and aluminium alloys are protected.

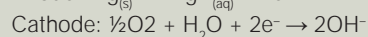
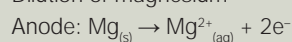


Advantages:

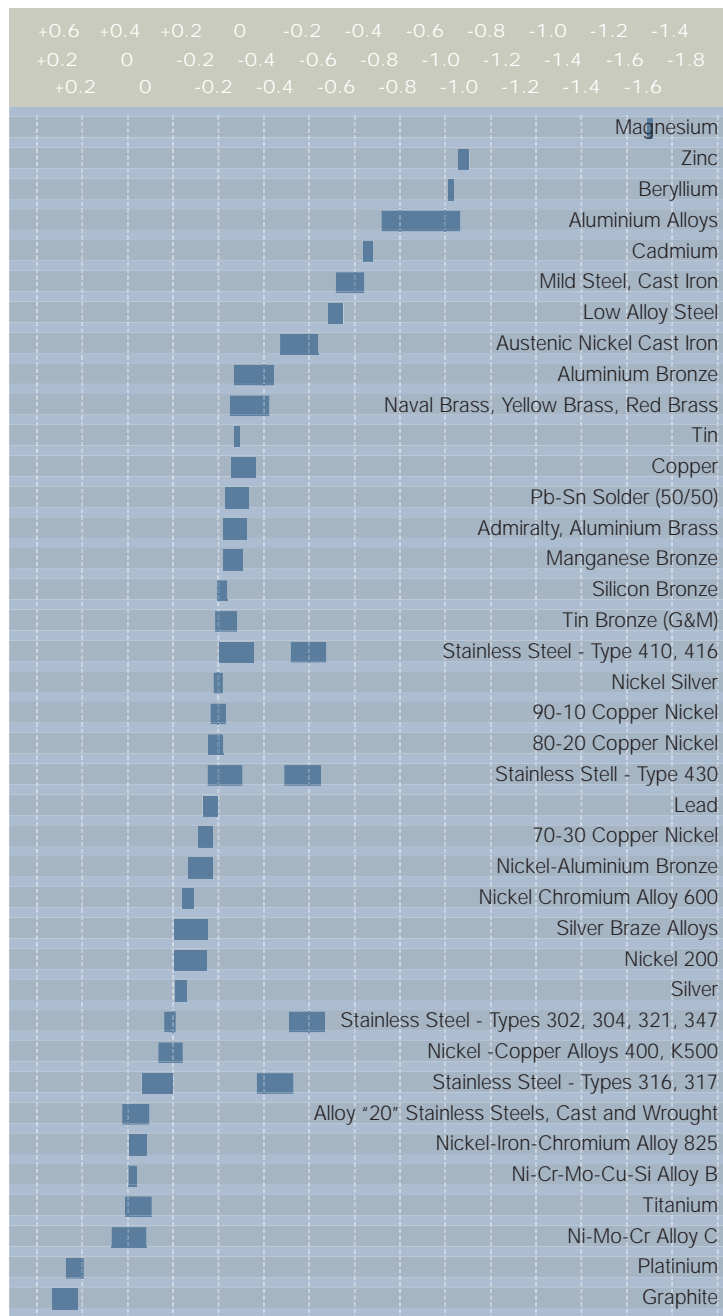
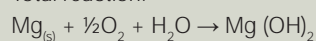
- No chemicals
- Minimum maintenance
- Self regulating
- Kills and prevents growth of bacteria
- Savings in cost of chemicals and prevention of corrosion related failures
- Fast "Pay back"
- Improved water quality due to sludge and deposits removal
- Environmentally safe and meets ISO 1400 requirements

What happens??

Dilution of magnesium



Total reaction:



Clean water is a result of proper treatment

1. pH - Value

Corrosion is also due to acidic water. (low pH value, evaporated water normally holds a pH at aprox.5,5) The ELYSATOR system automatically regulates the pH value to approx. 9.5 (This is caused by splitting of magnesium hydroxide from the anodes).

2. Electrical Conductivity

100% pure water is non-conducting. It is important that electrical conductivity is kept as low as possible in order to avoid galvanic corrosion as well as to reduce the stress on pumps, gaskets, heat exchangers etc. The efficiency of the ELYSATOR is proportional to the conductivity, which means that the ELYSATOR is regulating itself in accordance to the condition in the water.

3. Deposits

Major parts of the deposits are oxides of Fe (iron) and Cu (copper). They are both a result of corrosion due to an oxygen surplus, low pH or a galvanic current. The amount of dissolved copper is a measure for the ongoing corrosion process in your system. Through the ELYSATOR the water will be neutralised and metallic surfaces stabilised. Corrosion is therefore eliminated and the water stays clear, clean and without sediments. The deposit sludge is simply removed by daily draining of the Elysator.

ELYATOR®



Typical values measured during the first month after installing the Elysator. On the engine cooling system of a 17 year old ship.



Installation

Elysator is a 100 percent replacement for traditional pH & oxygen treatment systems. Installation is easy and can be done with a minimum of cost and time. We advise that the systems are drained down (retrofit) prior to starting up the Elysator system. However if and when required the Elysator can be retrofitted with existing water body and then water replaced gradually by draining and filling.

We must strongly underline that the Elysator does not replace any traditional conservation liquid, antifreeze or and flushing liquid during the building period and start up of the machinery prior to delivery.

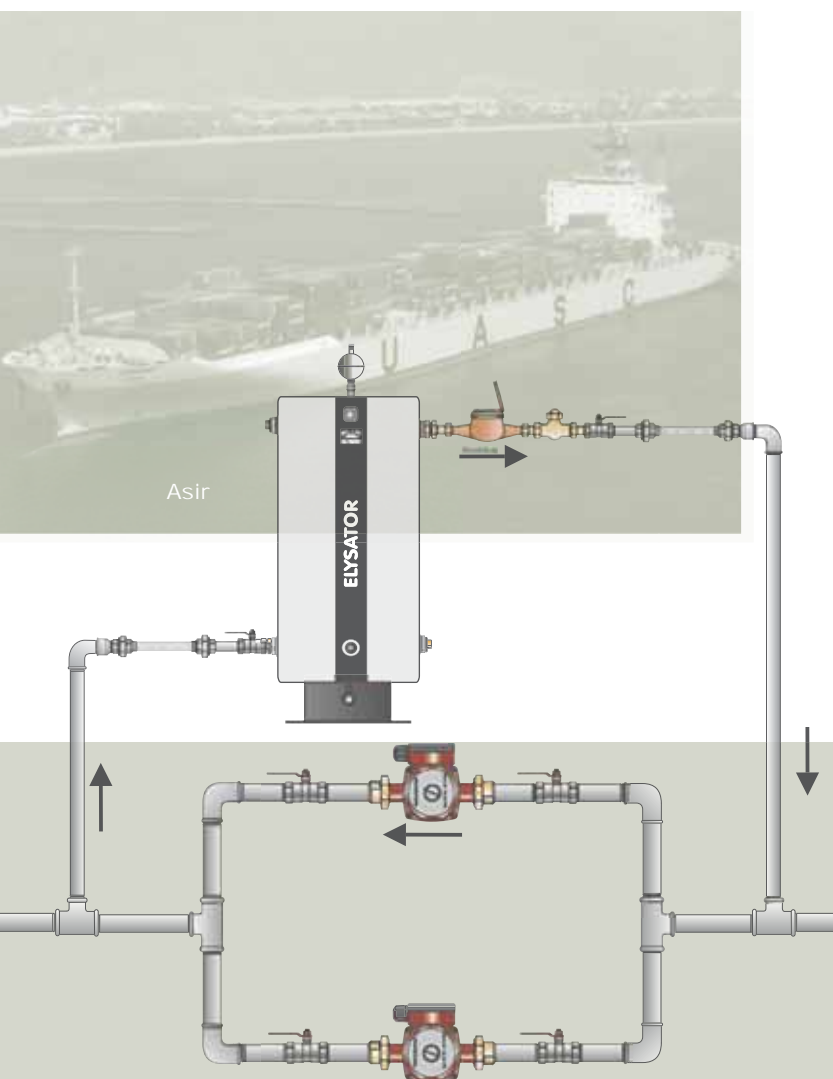
When all machinery is prepared to be taken over, the Elysator can then be taken into use with “none” chemical water, and the maintenance to be followed.

The anodes are designed to last a number of years, and are therefore dependent of the conductivity and volume of the water, which is to be treated. It will be to the benefit of the user/owner that the water should be drained down, and renewed with new fresh water without chemicals at the start up of Elysator. If this is done, the producer then guaranties the living time (functioning) of the anodes to minimum 3 years. If the anodes are consummated before in spite of renewal of the water, new anodes will be delivered free of charge.

Closed systems (Fw. cooling, heating etc)

The Elysator to be mounted as shown on the illustration in a by-pass position preferably over the main pumps, discharge line to be connected to the lower half (inlet) and suction line to upper half outlet. One Elysator to be used in each loop. The inlet/outlet not in use is to be plugged (only on type15 - 100). The water flow to be adjusted with the regulating valve after the flowmeter, while the ball valve on the inlet remains full open.

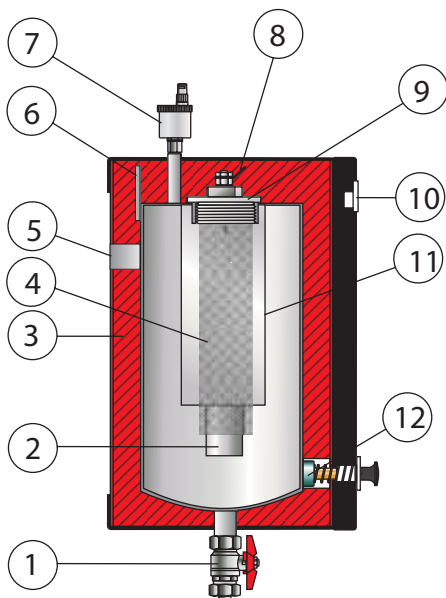
Mild steel pipes (galvanized pipes is not permitted) and with diameter not less than 1" Elysator to be installed as close as possible to the connection point, and as low as possible in the system.



Easy to install by the Crew on board.

Type TRIO

	Dim	Qt..	Art.no
Elysator	T15	1	100164
Flowmeter	1" Vertical	1	100077
Tacosetter		1	100220
Airvent	LK 3/8" w/ ballvalve	1	100000
Reg.valve	1"	1	100177
Ballvalve	1"	2	100189
Drainvalve	3/4"		
Indicator	0 – 100mA, analog	1	100078
Anodes	1 set (3 pcs.)	1	100202

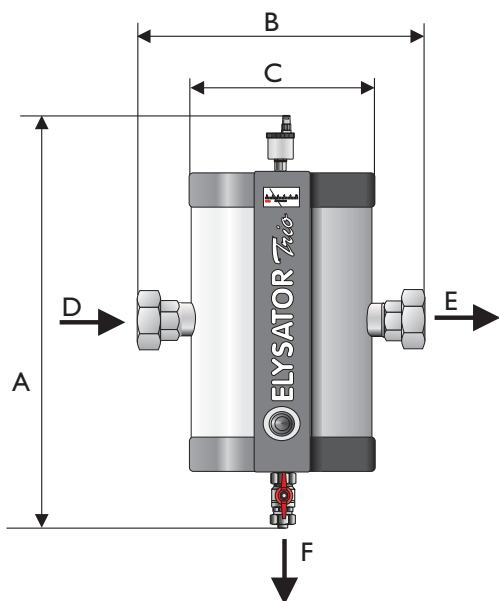


Description of parts

- 1 Drainvalve
- 2 Magnesium-Anode
- 3 Insulation
- 4 Micro air bubble separator
- 5 Wall mounting
- 6 Cathode connection
- 7 Automatic air vent
- 8 Anode connection
- 9 Maintenance opening
- 10 Analog indicator
- 11 Deviator
- 12 Magnet

Dimension in mm

A	Total height	580 mm
B	Mounting spread	390 mm
C	Diameter	220 mm
D	Inlet	1 1/2"
E	Outlet	1 1/2"
F	Drain	3/4"
	Weight	9 kg



Maximum capacity

Water content (treated system):	1'500 l
Max flow through ELYSATOR trio	5 m³/h
Max mounting dimensions:	1 1/2"
Max working pressure:	10 bar
Max Temperature:	90°C

Norwegian sky

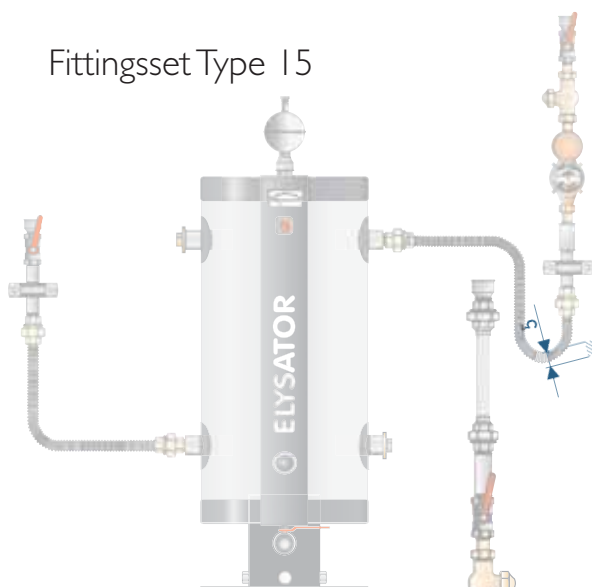
Type 15, 25, and 50

	Dim	Qt..	Art.no
Elysator	T15	1	100164
Flowmeter	1" Vertical	1	100077
Airvent	LK 3/8" w/ ballvalve	1	100000
Reg.valve	1"	1	100177
Ballvalve	1"	2	100189
Drainvalve	5/4"	1	100103
Indicator	0 – 100mA, analog	1	100078
Anodes	1 set (3 pcs.)	1	100202

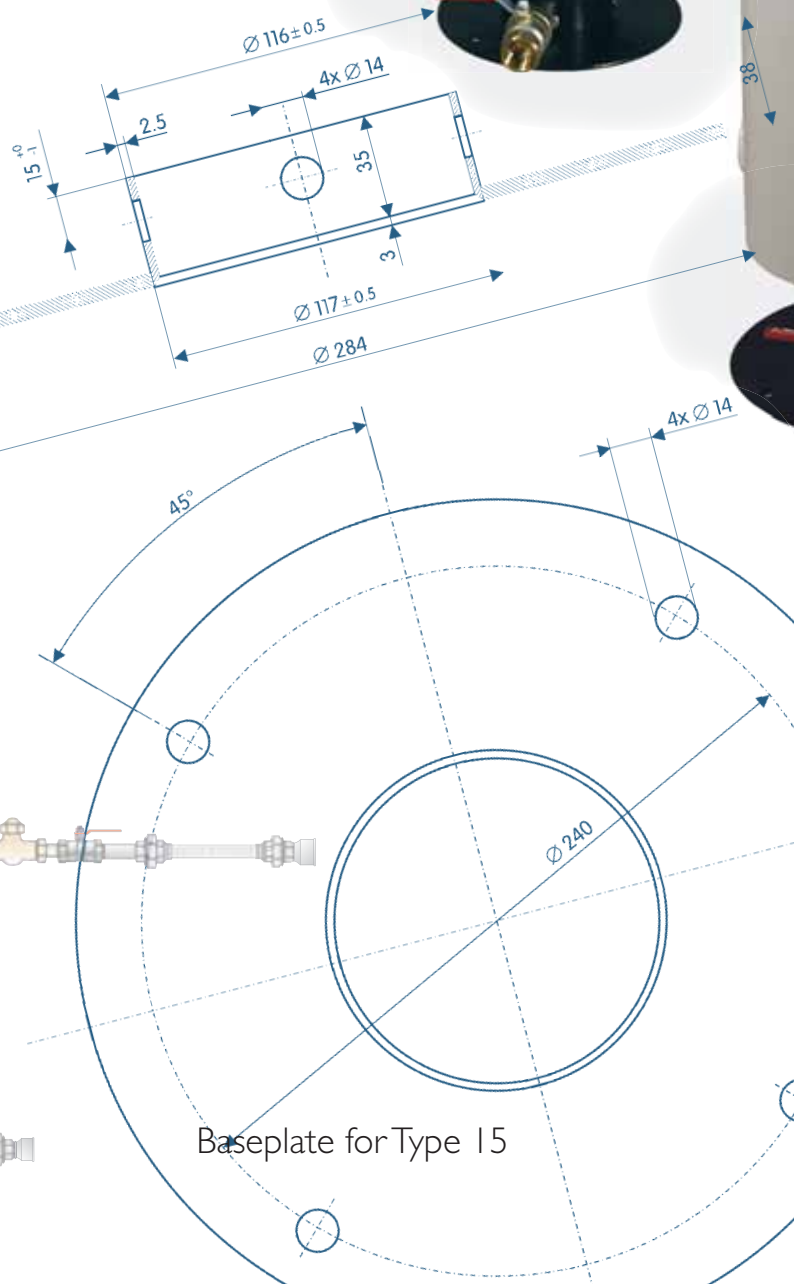
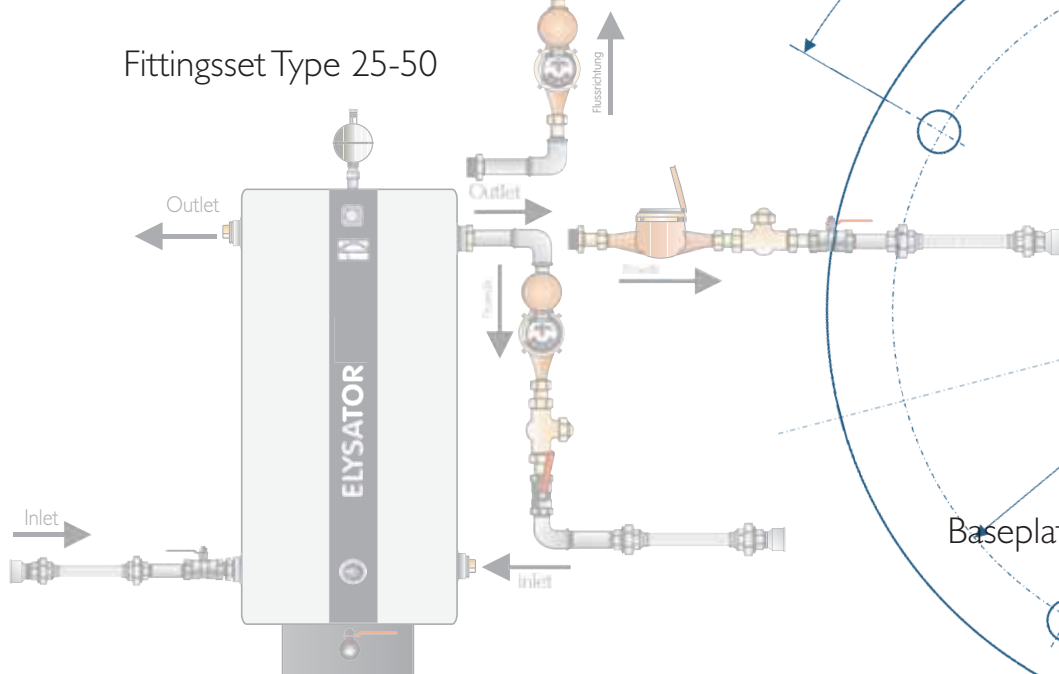
	dim	Quo.	Art.no
Elysator	T25	1	100001
Flowmeter	1" Vertical	1	100077
Airvent	LK 3/8" w/ ballvalve	1	100000
Reg.valve	1"	1	100177
Ballvalve	1"	2	100189
Drainvalve	1 1/4"	1	100103
Indicator	0 – 100mA, analog	1	100078
Anodes	1 set (3 pcs)	1	100202



Fittingsset Type 15



Fittingsset Type 25-50

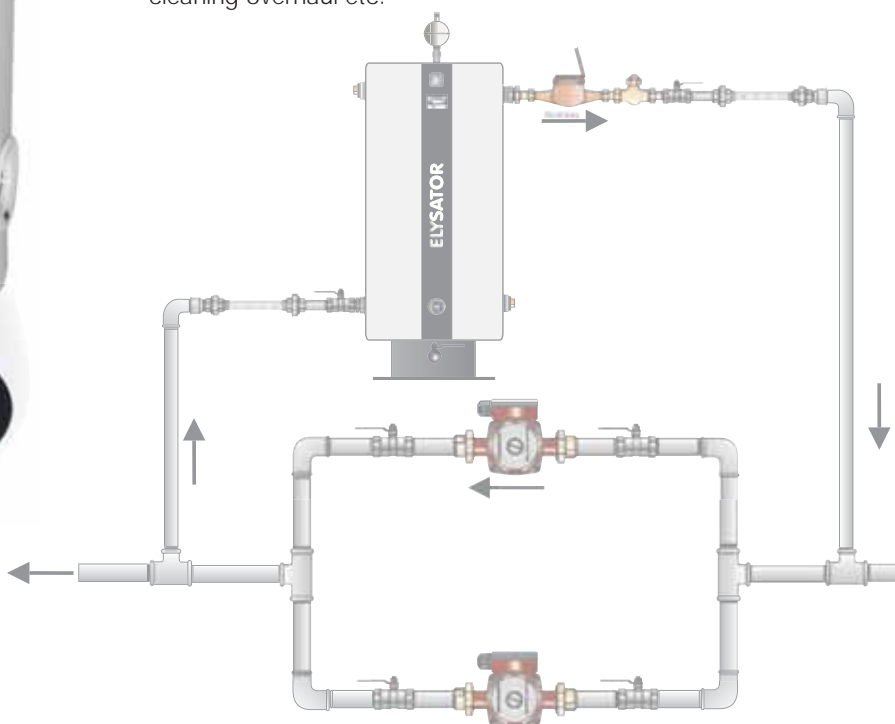


Baseplate for Type 15



	dim	Quo.	Art.no		T15	T25	T50
Elysator	T50	1	100002	Start up L/min	3	6	10
Flowmeter	1" Vertical	1	100077	Norm L/min	2	3	5
Airvent	LK 3/8" w/ ballvalve	1	100000	Volume m ³	3	5 m ³	10 m ³
Reg.valve	1"	1	100177	Joining	1"	1"	1"
Ballvalve	1"	2	100189	Total Height	750	825mm	880
Drainvalve	1 1/4"	1	100103	Diameter	285	355mm	422
Indicator	0 – 100mA, analog	1	100078	Weight	30	34	42,5
Anodes	1 set (3pcs)	1	100160	Freight weight	43	45,6	55,2

The Elysator to be mounted as shown on the illustration, in a by-pass position preferably over the main pumps, discharge line to be connected to the lower half (inlet) and suction line to upper half outlet. The inlet/outlet not in use is to be plugged (only on type 15-100). The water flow to be adjusted with the regulating valve after the flowmeter, while the ball valve on the inlet remains full open. Pipes to be of mild steel (galvanized pipes is not permitted) and with diameter not less than 1" Elysator to be installed as close as possible to the connection point, and as low as possible in the system. Remember drain. Be sure that the when mounting the Elysator to the deck, there is sufficient height above the Elysator. (only for type 15-260) So there is space to lift up the flange with the anode for cleaning overhaul etc.



Type 75 and 100

	dim	Quo.	Art.no
Elysator	T75	1	100003
Flowmeter	1" Vertical	1	100077
Tacosetter	1"		
Airvent	LK 3/8" w/ ballvalve	1	100000
Reg.valve	1"	1	100177
Ballvalve	1"	2	100189
Drainvalve	1 1/4"	1	100103
Indicator	0 – 100mA, analog	1	100078
Anodes	1 set (3 pcs)	1	100176

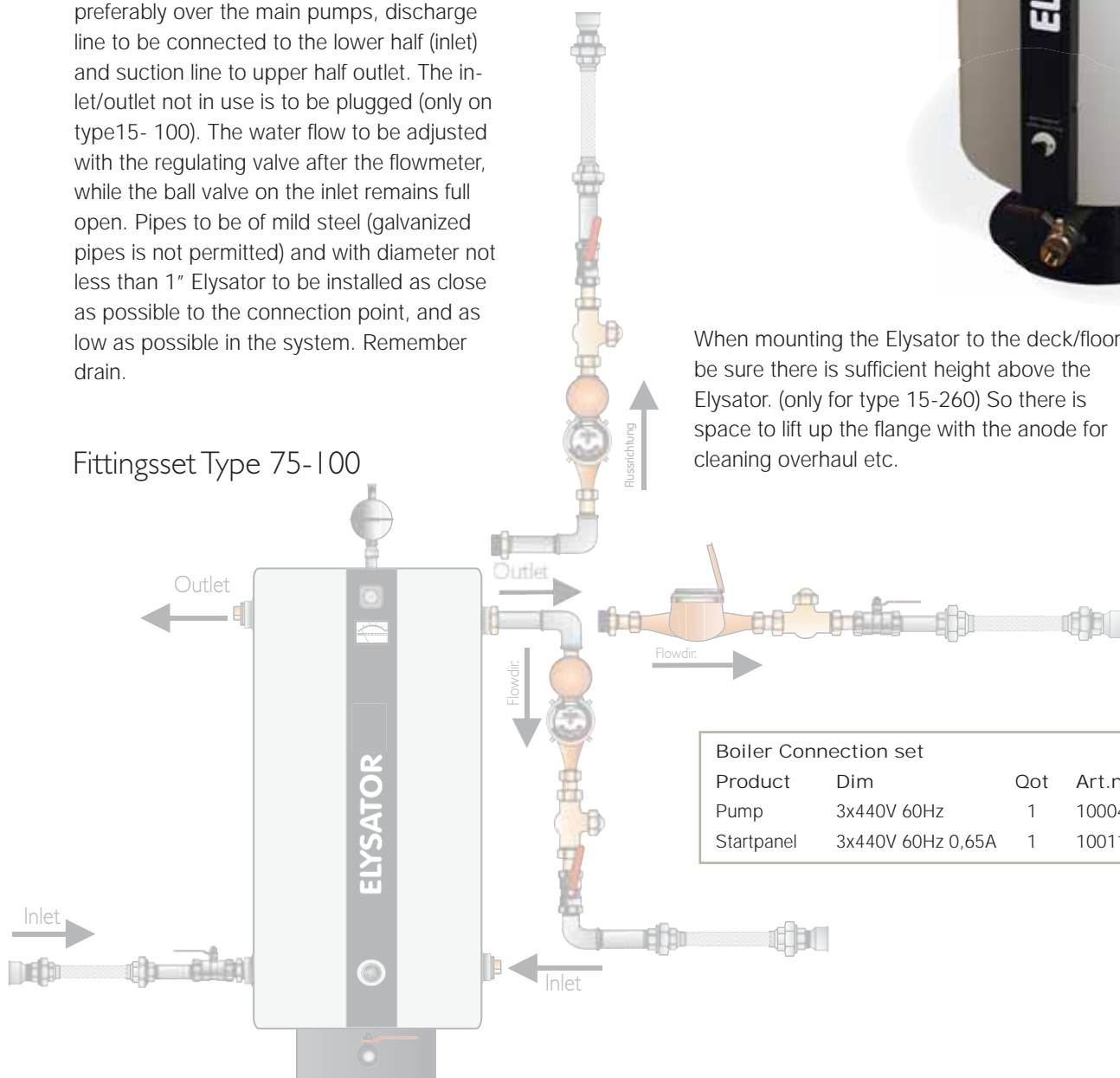
	dim	Quo.	Art.no
Elysator	T100	1	100005
Flowmeter	1" Vertical	1	100077
Tacosetter	1"		
Airvent	LK 3/8" w/ ballvalve	1	100000
Reg.valve	1"	1	100177
Ballvalve	1"	2	100189
Drainvalve	1 1/4"	1	100103
Indicator	0 – 100mA, analog	1	100078
Anodes	1 set (3pcs)	1	100157



The Elysator to be mounted as shown on the illustration fig 11-1, in a by-pass position preferably over the main pumps, discharge line to be connected to the lower half (inlet) and suction line to upper half outlet. The inlet/outlet not in use is to be plugged (only on type 15- 100). The water flow to be adjusted with the regulating valve after the flowmeter, while the ball valve on the inlet remains full open. Pipes to be of mild steel (galvanized pipes is not permitted) and with diameter not less than 1" Elysator to be installed as close as possible to the connection point, and as low as possible in the system. Remember drain.

When mounting the Elysator to the deck/floor be sure there is sufficient height above the Elysator. (only for type 15-260) So there is space to lift up the flange with the anode for cleaning overhaul etc.

Fittingsset Type 75-100



Boiler Connection set

Product	Dim	Qot	Art.no
Pump	3x440V 60Hz	1	100049
Startpanel	3x440V 60Hz 0,65A	1	100115



	T75	T100
Start up L/min	15	20
Norm L/min	8	10
Volume m ³	20 m ³	30 m ³
Joining	1"	1"
Total Height	1141mm	1141mm
Diameter	495mm	495mm
Weight	58	60
Freight weight	72	74



Birka Princess

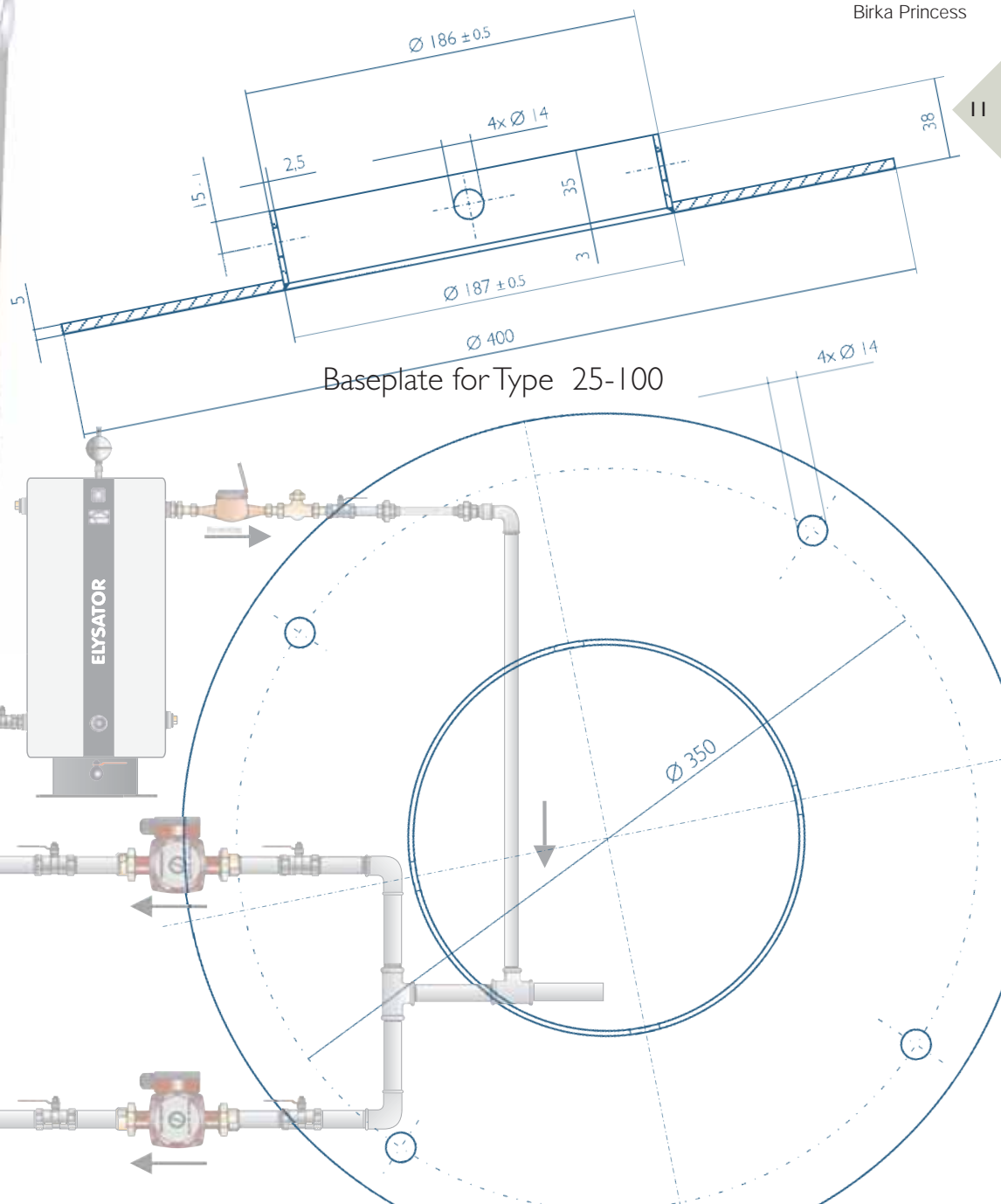
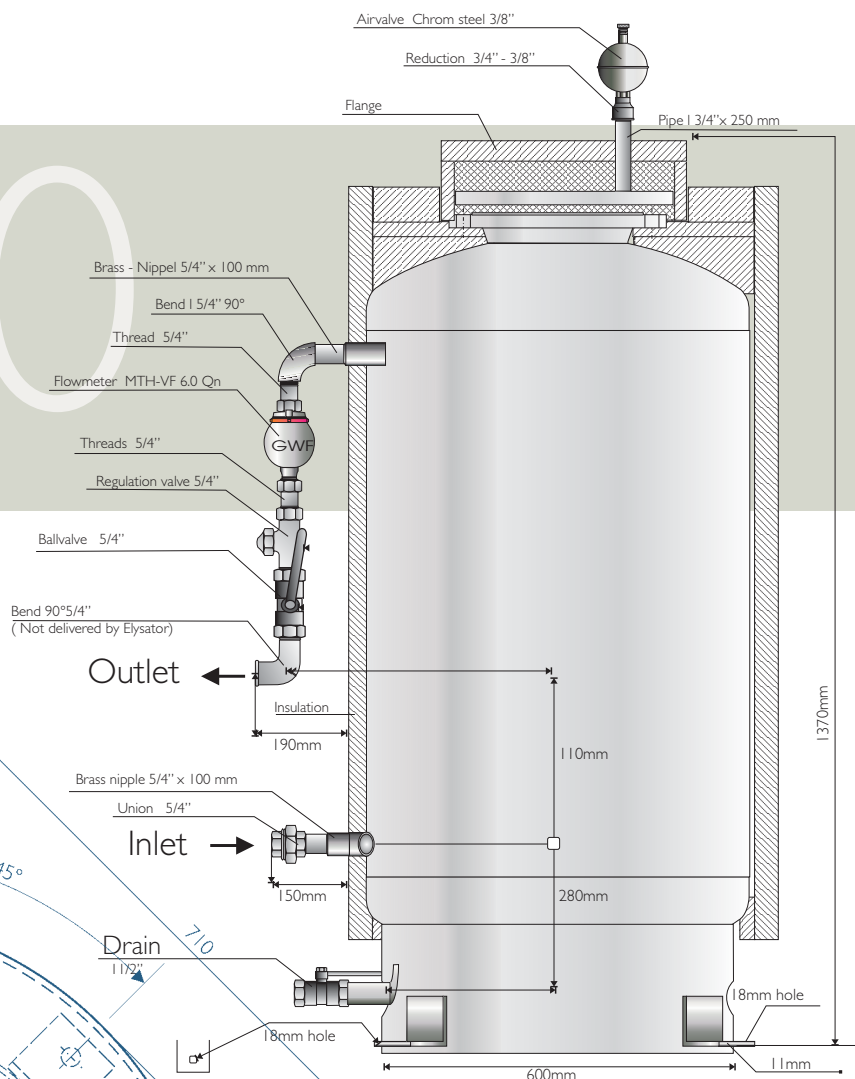


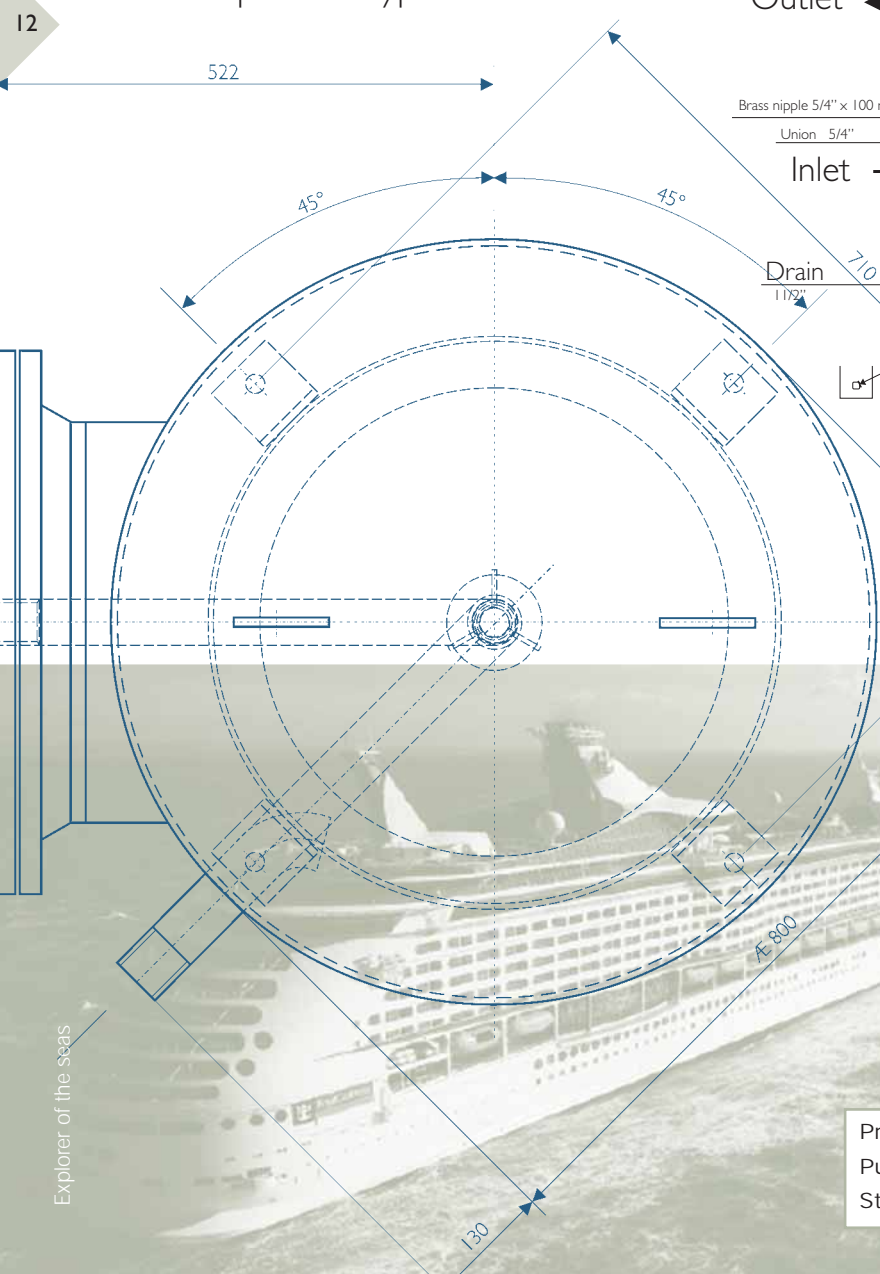
fig. 11-1

Type 260

Products	dim	Quo.	Art.no
Elysator	T260	1	100014
Flowmeter	11/4" Vertical	1	100092
Airvent	LK 3/8"		
w/ ballvalve		1	100000
Reg.valve	11/4"	1	100118
Ballvalve	11/4"	2	100103
Drainvalve	11/2"	1	100123
Indicator 0 – 100mA, analog		1	100078
Anodes	1 set (6pcs)	1	100172



Baseplate for Type 800



Fittingsset 500, 800 and 1000

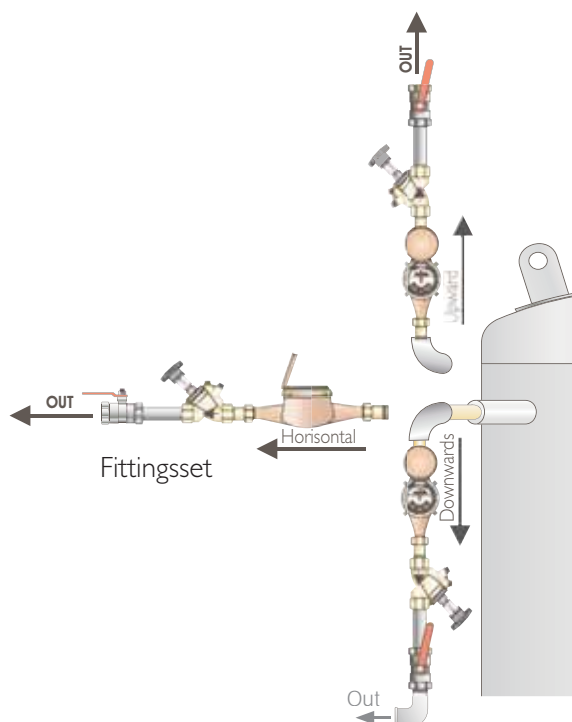
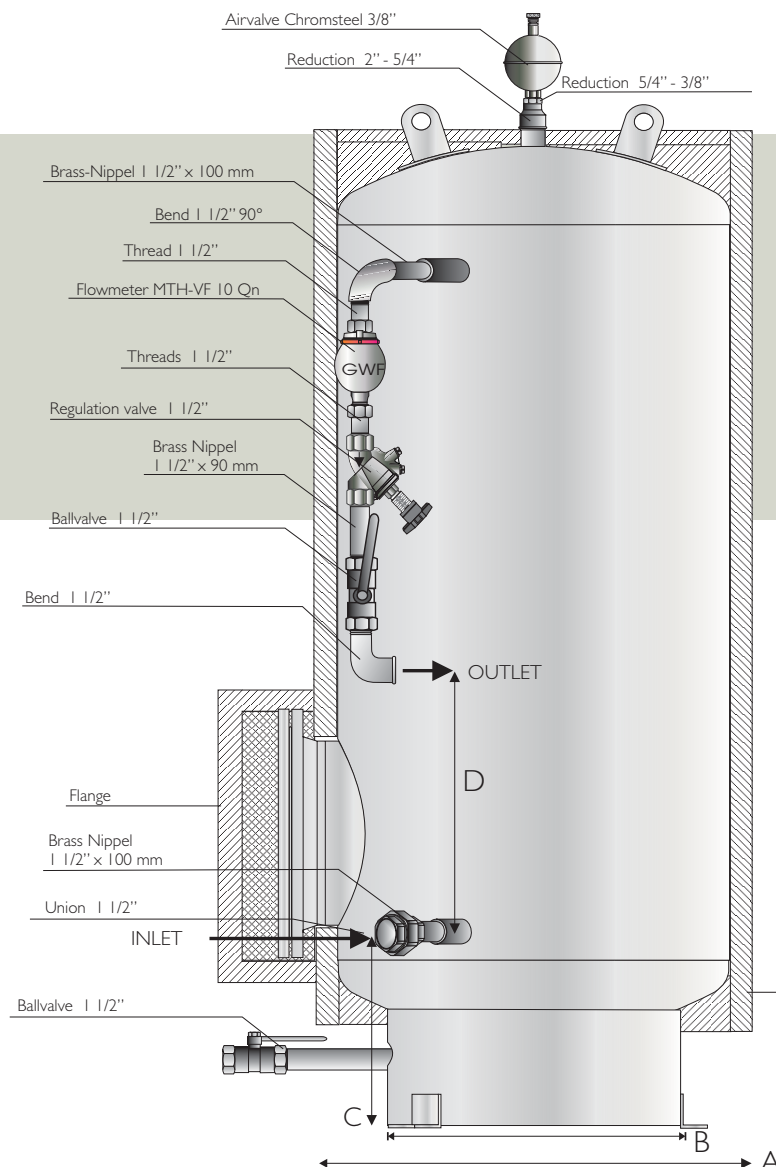
	T260
Start up L/min	50
Norm L/min	20
Volume m ³	70 m ³
Joining	1 1/2"
Total Height	1500mm
Diameter	800mm
Weight	
Freight weight	

Product	Dim	Qot	Art.no
Pump	3x440V 60Hz	1	100137
Startpanel	3x440V 60Hz0,65A	1	100115

Type 500/800/1000

Products	Art.no
Elysator T 500 (complete) Hot water (rockwool insulation)	10 01 54
Elysator T 500 (complete) Chilled water (armaflex insulation)	10 01 53
Flowmeter 1 1/2" Vertical	10 00 93
Flowmeter 1 1/2" Downwards	10 00 69
Airvent	10 00 00
Indicator /analog) "builtin" model	10 00 78
Indicator (analog)"attached"	10 00 79
Anodes (1 set)	10 01 59
Ballvalves (inlet / outlet) 1 1/2"	10 01 24
Regulating valve 1 1/2"	10 01 18
Pump 3x440V - 60Hz	10 02 36
Start panel 3x440V - 60Hz - 1,6A	10 00 16

	T500	T800
Start up L/min	100	150
Norm L/min	40	60
Volume m ³	120 m ³	220 m ³
Joining	1 1/2"	1 1/2"
Total Height	2270mm	2150mm
Diameter	600mm	800mm
Weight	300	400
Freight weight	350	450



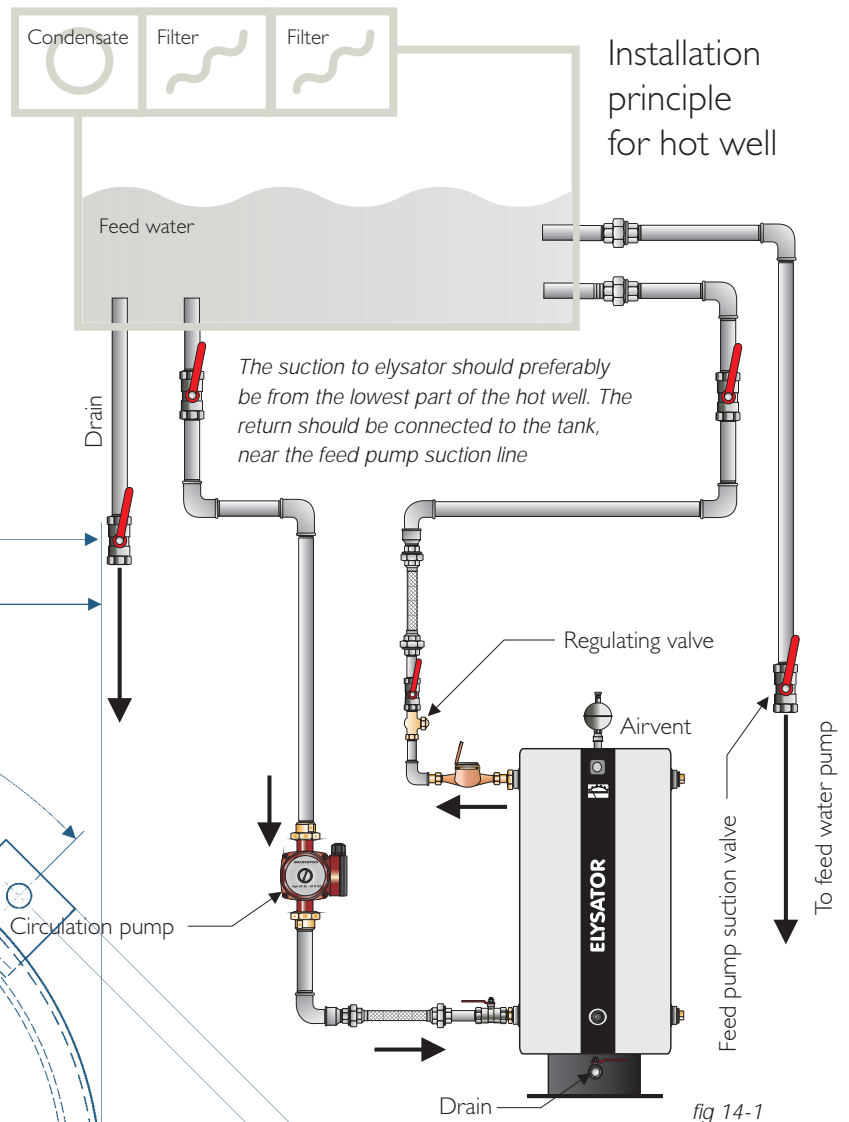
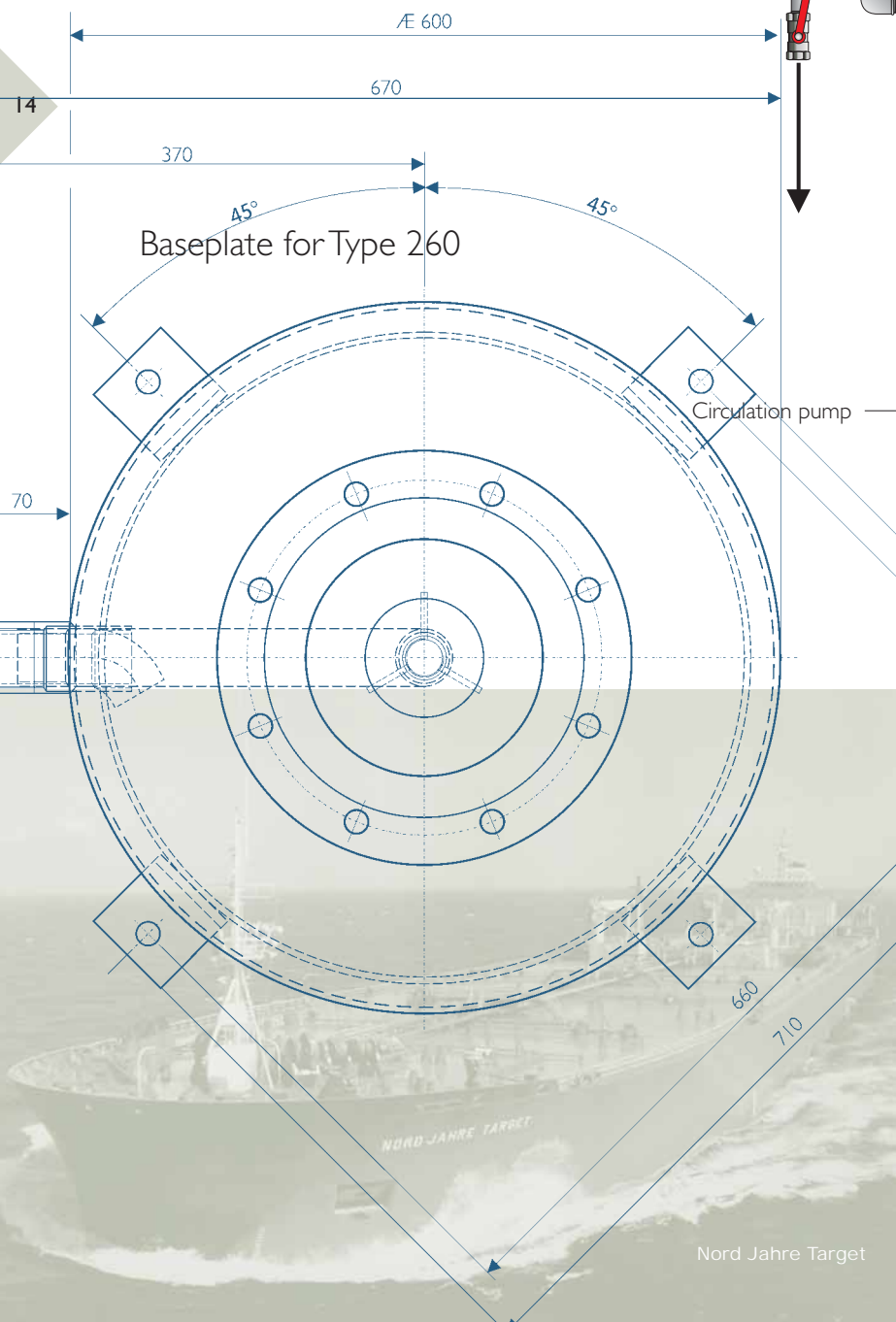
Products	Art.no	Art.no
ELYSATOR	T 800	T 1000
(complete) Hot water (rockwool insulation)	10 01 11	10 02 04
(complete) Chilled water (armaflex insulation)	10 01 22	10 02 05
Flowmeter 1 1/2" Vertical	10 00 93	10 00 19
Flowmeter 1 1/2" Downwards	10 00 69	10 01 09
Airvent 3/8"	10 00 00	10 00 00
Indicator /analog) "builtin" model	10 00 78	10 00 78
Anodes hot water 1 set	10 01 61	10 02 25
Anodes chilled water 1 set	10 01 62	10 02 26
Ballvalves (inlet / outlet) 1 1/2"	10 01 24	10 01 24
Regulating valve 1 1/2"	10 01 25	10 01 25
Pump 3x440V - 60Hz	10 02 37	10 02 37
Start Panel 3x440V -60Hz- 1,6A	10 00 16	10 00 68

Boiler installations

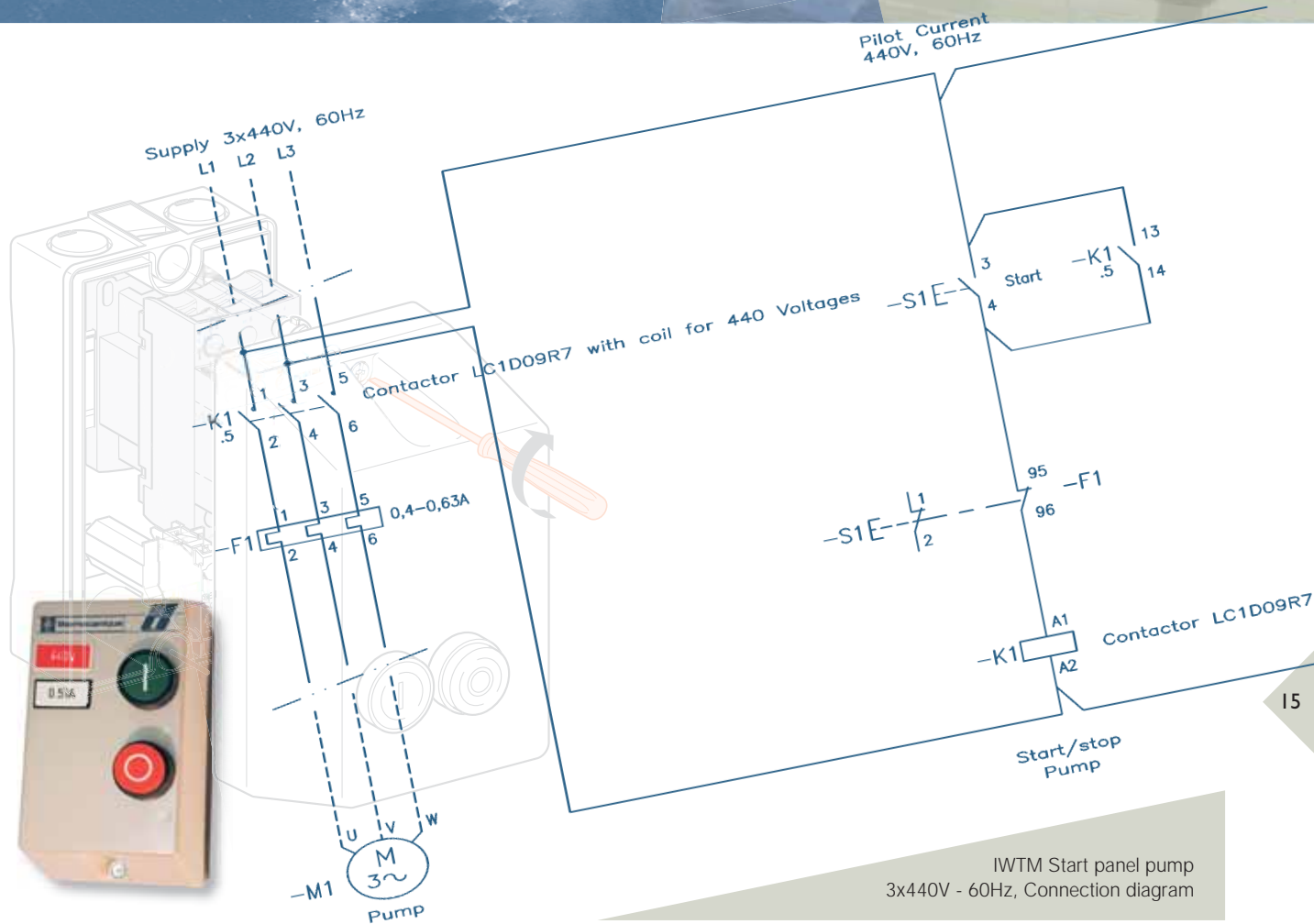
Boiler water treatment

The Elysator should be located preferably as shown on the illustration (fig. 14-1). Both suction and discharge line to be joined in the level of «low level» alarm in the hot well. A separate circulation pump to be mounted low as possible (normally from drain valve).

The water flow to be adjusted with the regulating valve after the water counter, while the ball valve on the inlet remains fully open. We underline the importance that the Elysator should be located as low as possible in above system (preferably deck



below hot well) or use by means of goose neck for compensation of deck below. in order that no air pocket will be built up inside in the Elysator, avoid cavitation in circulation pump and that the existing sludge in the system will enter more easily / faster into the Elysator. Some boiler plant might have been fitted with the anodes built-in in the hot well (feed w.tank). PS ! If it's not possible to install the Elysator below hotwell , there should be made a "goose neck" (above hight of hot well) to avoid any air inside the Elysator. Notice that hot well temperature to be kept from 90 to 95 °c. When boiler is idle the boiler should be topped up and if possible a circulation should be established between hot well and boiler(s). If the boiler is not under pressure then the Elysator circulating pump can be fitted with a recirculating line to the Boiler filling line with a valve.



Elysator type	75	100	260	500	800	1000
Order no.	10 00 03	10 01 52	10 00 14	10 00 09	10 00 15	10 00 19
Height mm.	1141	1141	1233	2135	2005	2405
Diam.mm	495	495	700	700	900	900
Pump type	3x440V - 60Hz	3x440V - 60Hz	3x440V - 60Hz	3x440V - 60Hz	3x440V - 60Hz	3x440V - 60Hz
Control panel	0,65A	0,65A	0,65	1,6A	1,6A	1,6A
System volume m3	20	30	70	120	220	300
Flow l/min (norm)	10	15	20	40	60	80
Flow l/min start up	15	20	50	100	150	200

Service and monthly reports

The Elysator requires minimum of following up, however some service is required, to ease the monitoring and routines we have an internet based monthly report system which makes it easy to share information & results between owner, superintendent ship and supplier.



Radiance of The Seas2

- IWTM will provide a login name & password to be used on iwtm.no / customers.
- Here you will find information regarding type of Elysators mounted on witch systems.
- You will be able to fill in your own comments regarding maintenance etc.
- Here you will also find comments on result from water analyses of samples received by us from you.
- Here you will download your own personalized monthly report form feed.
- End of each month an excel spreadsheet to be sent to iwtm for evaluation
- PH & conductivity to be measured together with readings from indicator and flow meter.
- (Flow l/min. will be calculated by spreadsheet).
- Also fill in remarks for repair done and when Elysator was last opened up and cleaned.
- An excellent tool for information and communication between us as supplier and you as Customer.
- If photos of boilers, engines etc are sent to us after any inspection, they can be downloaded to the vessels web page, thus keeping a paperless record and condition of water treatment.

Remark

The reports must be sent without fail at the end of every month to ensure effective and correct usage of Elysator. IWTM will not be responsible if timely reports are not received and reserves the right to cancel warranty under these conditions.

Water measurements

As the Elysator works without chemicals (inhibitors) the following parameters to be measured, pH, conductivity. It is advised that water-samples should be sent for laboratory analysis 3-4 times a year for complete analysis i.e. e. Iron and copper. (IWTM A/S, Norway does this on request). Free of cost the first year after installation.

Raw water qualities

Property	Limit
pH	Minimum 6
Conductivity $\mu\text{S/cm}$	50 - 600
Total hardness	Maximum 10 dH
Chlorides (Cl)	Maximum 80 mg/l
Sulphates (SO ₄)	Maximum 150 mg/l

Normal water properties when use of Elysator

Property	Limit
pH	8-11
Conductivity $\mu\text{S/cm}$	50-800 (normally below 400)
Total hardness	<10
Chlorides (Cl)	< 50 mg/l
Sulphates (SO ₄)	<100 mg/l
Iron (Fe) mg/l	< 1 mg/l
Copper (Cu) mg/l	< 1 mg/l



Options & spare parts

The Elysator can be connected to computers or digital indicators; this will give the option to have an alarm for certain anode levels (high / low) or reading of history. When using the digital indicator, this can either replace the analogue or be mounted in serial with the analogue indicator (galvanometer). The indicator can either be installed in the control room or nearby the Elysator. The transmitter is premounted in the Elysator



Carnival Conquest



Startpanel (complete) with digital indicator



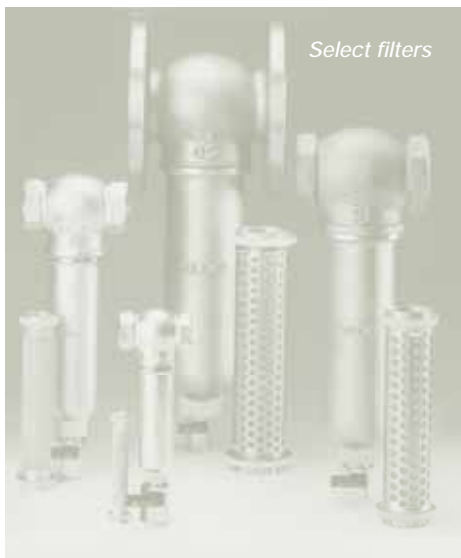
Digital indicator order no. 100080



Transmitter o.no. 100180

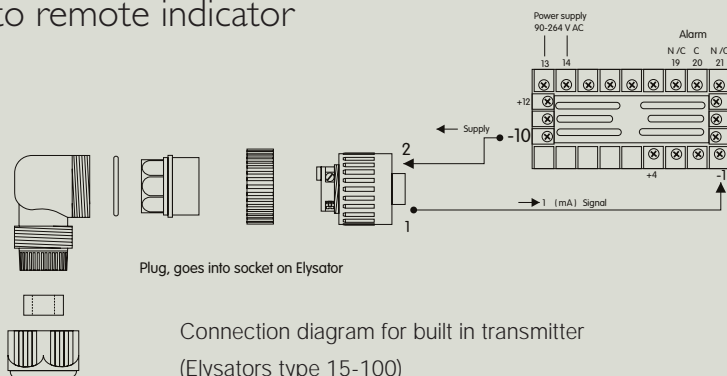


Automatic drain valve with timer



Select filters

External Wiring Sceme Signal Output to remote indicator





PC Multidirect

Order Code:100210

The PC MultiDirect (replacing PC22) is a modern, microprocessor-controlled photometer with a user friendly keyboard and large graphic display. It features a broad selection of pre-programmed methods based on the proven range of Lovibond® reagent tablets, liquid reagents, vial tests and powder reagents (VARIO Powder Packs). Moreover, you can also store your own methods. The calibration option, including software-supported adjustment, means that the PC MultiDirect photometer can be used as a testing instrument. The 7 standard rechargeable batteries (supplied) allow portable use. These standard batteries are available all over the world and are easy to change.

An intelligent, integrated charge controller allows battery charging (using the supplied power pack) whilst the instrument is in operation. The PC MultiDirect can also be operated without power pack using alkaline manganese batteries.

Parameters

The PC MultiDirect can be used for the following tests:

- Alkalinity-m
- Alkalinity-p
- Aluminium
- Ammonia
- Bromine
- Calcium Hardness
- **Chloride**
- Chlorine
- Chlorine Dioxide
- COD
- **Copper**
- Cyanuric Acid
- DEHA
- Fluoride
- Hydrogen Peroxide
- **Iron**
- Manganese
- Molybdate
- Nitrate
- Nitrite
- Ozone
- **pH**
- Phosphate
- Potassium
- Silica
- **Sulphate**
- Sulphide
- Sulphite
- **Total Hardness**
- Total Nitrogen
- Urea
- **Zinc**

*Parameters in bold letters:
this detailed tests are recommended every 3 months*



Handheld devices

PH order:100045

Conduct.HR 0 -19,90mS: 100047

Conduct.LR 0 - 1990uS : 100046

The new CHECKIT®micro WP series is a range of waterproof and dust-tight (IP67) units for determination of pH value, redox, conductivity, TDS, salinity and temperature. The compact, robust housing and the electrode replacement option meet the high standards required of state-of-the-art technology.

All units are equipped with an automatic switch-off and a "Hold" function which "freezes" the result in the display with a single key-press. The range includes several versions with different measuring ranges and levels of accuracy for different applications.

Sparepart list order code

Elysator & optionals Standard Elysators

IWTM

Type	Art.no.	Type	Art.no.	Type	Art.no.
Type TRIO		Elysator T 500 (complete)		Water analysing equipment	
Elysator Trio (complete)	10 02 17	Chilled water (armaflex insulation)	10 01 53	PC Multidirect colorimetric laboratory (and old PC 22)	
Flowmeter	10 00 77	Elysator T 500 Boiler, with pump etc.	10 00 09	PC Multidirect Photometer in case with tablets, charger etc.	10 02 10
Airvent	10 00 00	Flowmeter 1 1/2"	10 01 09	PC Multidirect charger	10 00 42
Indicator (analog)	10 00 78	Airvent	10 00 00	PC rechargeable battery 9 V	10 00 44
Anodes set	10 02 24	Indicator	10 00 78	Measuring Beaker (100 ml)	10 01 51
		Anodes (1 set)	10 01 59	Moulded cell (pack of 5)	10 00 41
		Ballvalves (inlet / outlet)	10 01 24	Battery for PC Multidirect	10 00 44
		Regulating valve	10 01 25	Printer for PC Multidirect	10 00 39
				Paper for printer	10 01 79
Type15				Glas stirring rod (crossing pin)	10 01 92
Elysator T 15 (complete)	10 01 64	Type 800		(100 tablets)	10 00 28
Flowmeter	10 00 77	Elysator T 800 (complete)		ALKA M	
TACOSSETTER	10 02 20	Hot water (rockwool insulation)	10 00 07	(100 tablets)	10 02 14
Airvent	10 00 00	Elysator T 800 (complete)		ALKA P	
Indicator (analog)	10 00 78	Chilled water (armaflex insulation)	10 00 16	(100 tablets)	10 02 15
Anodes set (3 pcs)	10 02 02	Elysator T 800 Boiler, with pump etc.	10 00 15	Aluminium No.1. (100 tablets)	10 01 98
Ballvalves (inlet / outlet)	10 00 71	Flowmeter 1 1/2"	10 01 09	Aluminium No.2. (100 tablets)	10 01 99
Regulating valve R15 3/4"	10 00 74	Airvent 3/8"	10 00 00	Ph 5,2-6,8 bromocresol purple (100 tablets)	10 00 28
		Indicator	10 00 78	pH 6,8-8,4 phenol red (100 tablets)	10 00 29
Type 25		Anodes hot water 1 set	10 01 61	pH 8,0-9,6 thymol blue (100 tablets)	10 00 30
Elysator T 25 (complete)	10 00 01	Anodes chilled water 1 set	10 01 62	Iron LR (100 tablets)	10 00 98
Flowmeter	10 00 77	Ballvalves (inlet / outlet)	10 01 24	Coppere zinc / declor (100 tablets)	10 01 83
Airvent	10 00 00	Regulating valve	10 01 25	Copper LR (100 tablets)	10 00 32
Indicator (analog)	10 00 78			Copper no. 1 (100 tablets)	10 02 38
Anodes set	10 01 75	Type 1000		Copper no. 2 (100 tablets)	10 02 39
Ballvalves (inlet / outlet)	10 00 71	Elysator T 1000 (complete)		Sulphate (100 tablets)	10 00 31
Regulating valve R15 3/4"	10 00 74	Hot water (rockwool insulation)	10 02 04	Sulfite (100 tablets)	10 00 36
		Elysator T 1000 (complete)		Hardcheck P (100 tablets)	10 01 44
Type 50		Chilled water (armaflex insulation)	10 02 05	Chlorides T1 (100 tablets)	10 00 34
Elysator T 50 (complete)	10 00 02	Elysator T 1000 boiler with pump etc.	10 00 19	Chlorides T2 (100 tablets)	10 00 35
Flowmeter	10 00 77	Flowmeter 1 1/2"	10 01 09	EDTA (100 tablets)	10 00 33
Airvent	10 00 00	Airvent 3/8"	10 00 00	Sulphate (100 tablets)	10 00 31
Indicator	10 00 78	Indicator	10 00 78	Oxygen set of vials inc. accessories	10 00 26
Anodes set	10 01 60	Anodes hot water 1 set	10 02 25	Oxygen adapter for ampoules	10 00 27
Ballvalves (inlet / outlet)	10 00 71	Anodes chilled water 1 set	10 02 26	Watertest bottles 1pc	10 01 67
Regulating valve	10 00 74	Ballvalves (inlet / outlet)	10 01 24		
		Regulating valve	10 01 25	Micro checkit series handheld series	
Type 75 -100				Micro checkit pH ++	10 00 45
Elysator T 75 (complete)	10 00 03	Spare parts for boiler systems		Micro checkit LR 0-1990 S/cm	10 00 46
Elysator T 75 Boiler with pump etc.	10 02 32	Elysator type 75-100		Micro checkit HR 0-19,9 mS	10 00 47
Elysator T 100 (complete)	10 00 05	Pump 340V - 60 Hz	10 00 49	ET260 Oxygen meter	10 01 93
Elysator t100 boiler , with pum etc.	10 01 52	Start panel	10 01 15	Batteries for micro checkit	10 01 78
Flowmeter	10 00 77	Gasket for pump	10 01 36	Buffer solution 100 ml pH 4	10 01 29
Airvent	10 00 00	Mechanical seal	10 02 27	Buffer solution 100 ml pH 7	10 01 30
Indicator	10 00 78			Buffer solution 100 ml pH 10	10 01 31
Anodes set typ 75	10 01 76	Elysator type 260		Buffer pH 10 tablets	10 00 94
Anodes set typ 100	10 01 57	Pump 340V - 60 Hz	10 01 37	Buffer pH 4 tablets	10 00 95
Ballvalves (inlet /outlet)	10 01 71	Start panel	10 01 15	Buffer pH 7 tablets	10 00 96
Regulating valve	10 00 74	Gasket for pump	10 01 36	Calibration solution 1442 S/cm	10 00 97
		Mechanical seal	10 02 28		
Type 260		Elysator type 500		Optionals	
Elysator T 260 (complete)		Pump 340V - 60 Hz	10 02 36	Digital indicator	10 00 80
Hot water - rockwool insulation	10 00 04	Start panel	10 00 68	Transmitter	10 01 80
Elysator T 260 (complete)		Gasket for pump	10 01 38	Filter for Elysator outlet 1"	10 01 13
Chilled water- armaflex insulation	10 00 12	Mechanical seal	10 02 30	Filter for Elysator outlet 2"	10 01 14
Elysator T 260 Boiler with pump etc.	10 00 14	Elysator type 800		Timer & automatic drain for filter	10 02 08
Flowmeter 1 1/2"	10 01 09	Pump 340V - 60 Hz	10 02 37	Timer & aut. drain for elysator 1"	10 02 29
Airvent	10 00 00	Start panel	10 00 68		
Indicator	10 00 78	Gasket for pump	10 01 39		
Anodes	10 01 78	Mechanical seal	10 02 31		
Ballvalves	10 01 03	Elysator type 1000			
Regulating valve	10 01 18	Pump 340V - 60 Hz	10 02 37		
		Start panel	10 00 68		
Type 500		Gasket for pump	10 01 39		
Elysator T 500 (complete)		Mechanical seal	10 02 31		
Hot water (rockwool insulation)	10 01 54				



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