

CP5 and CP7

ENERGY
IE5
EFFICIENCY



General

For safety during installation and later use it is very important that installation, operating and maintenance instructions are carefully followed.

You are requested to keep this instruction manual at a location where it will be available at all times, and it should be submitted to the person who is responsible for this product. In the event that the instruction manual is lost, you are welcome to order a new one from your dealer.

If any doubt should arise with regard to the content of these instructions, please contact the distributor.

Proper use

System Cleaners' system is exclusively designed to transport and pressure-increase of water to satellite stations. All other forms of application or use not within the scope of the above are considered to be improper and inconsistent with the requirements and regulations, and may lead to hazardous situations.

System Cleaners A/S cannot be held liable for consequential damage resulting from improper use of the equipment.

Proper use includes the following:

- The instructions, regulations and recommendations concerning the system stated in the instruction manual
- Observance of the specified inspection and maintenance intervals
- Correct maintenance of good operating condition of the system
- Observance of the specified environmental and operating conditions

Proper use also includes observance of all information that is stated in this instruction manual. This applies in particular to the specified safety instructions.

Liability

Each user must handle and use the system in a responsible manner.

It is therefore of great importance that this instruction manual is available to the sanitation employee concerned at all times.

Safety

The design of the system complies with generally accepted technical regulations and provisions concerning the working environment and accident prevention. Despite this, risks can occur during use that can lead to physical inconvenience for the user or a third party or have an impact on the machine or other equipment.

The system must therefore be in prime technical condition before use and may only be used in accordance with its purpose and with strict observance of the safety requirements and operating instructions. In particular, malfunctions and irregularities that can affect safety must be remedied immediately.

Warranty

For a period of 24 months from the date of delivery, your dealer will honor a warranty on parts that do not function properly due to material defects or manufacturing faults. The warranty does not cover wearing parts. The warranty will cover replacement or repair of the defective part. Costs with regard to dismantling, forwarding and reassembly are defrayed by the purchaser. Any return shipments from System Cleaners A/S following completed repairs are defrayed by System Cleaners A/S. The defective parts remain the property of System Cleaners A/S.

Claims that may be made for legal reasons, ordinary wear and tear, as well as damage to parts that can be attributed to negligent or improper handling are not covered by the warranty. The warranty will be void if the system has been exposed to frost. The warranty will also be void if modifications or repairs have been carried out by unauthorized personnel. Warranty claims will only be accepted if they are reported to System Cleaners A/S immediately after damage has been discovered. The warranty is terminated if there is a change of ownership of the machine. System Cleaners A/S and its dealers cannot be held liable for personal injury, damage to equipment, loss of earnings, including production losses, losses to stock or similar that may have arisen as a result of defects or delayed delivery of the sold product, irrespective of the cause, including manufacturing faults or material defects. In addition, please refer to our general terms and conditions of sales and delivery.

Disposal

Please be aware of the following applicable provisions: the equipment must be disposed of according to its nature and applicable requirements, e.g. electrical scrap, synthetic material, stainless steel, brass, etc.

Labelling

The system is equipped with a type plate containing technical data.

The type plate is located on a fixed part of the system.

Declaration of conformity (electrical)

We declare that this product is in conformity with the following directives:

- 2006/42/EC Directive on Machinery
- 2014/35/EU Low Voltage Directive
- 2014/30/EU EMC Directive



Per Kjøller
Development Manager

DESCRIPTION

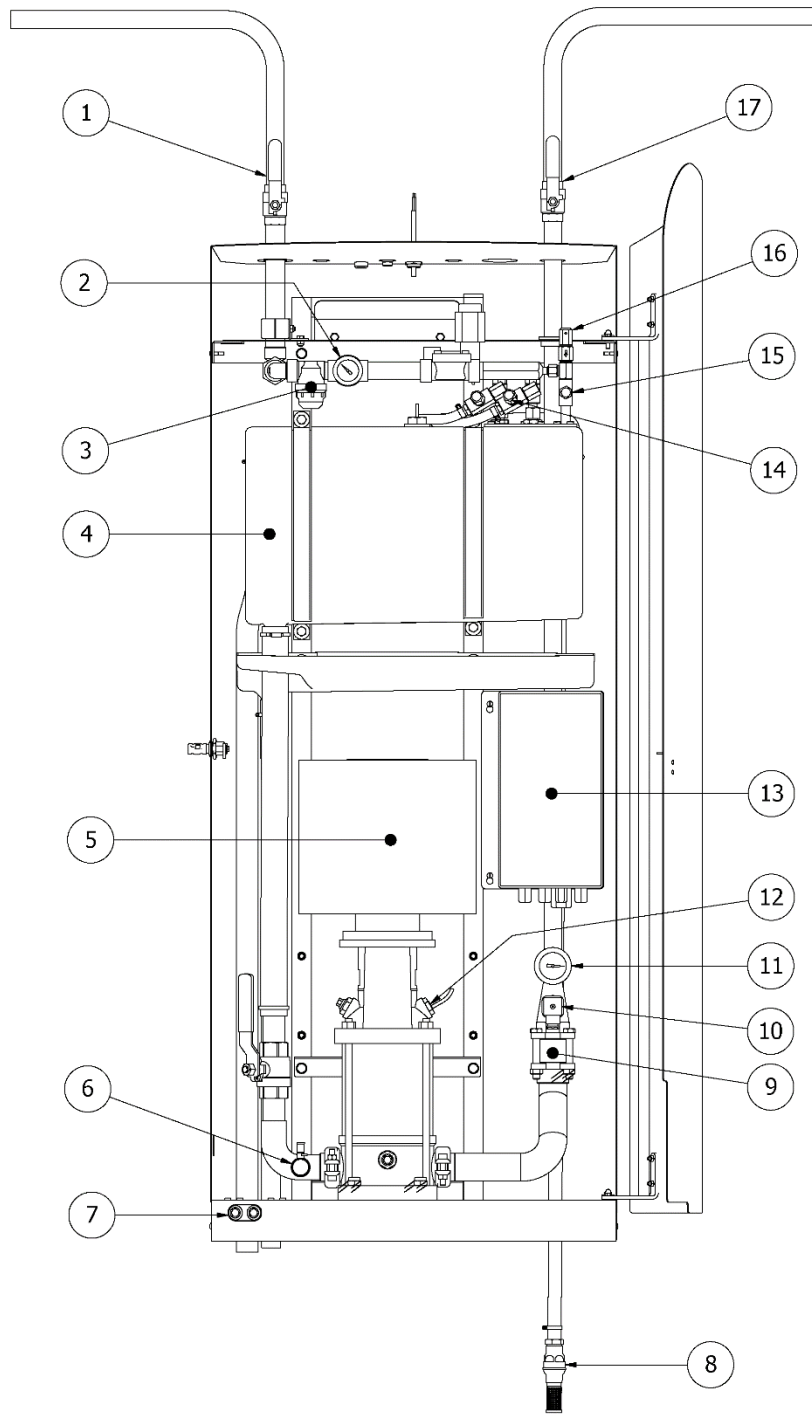
Chemical pump station

A chemical pump station is connected to electrical power, water mains, one chemical and supplies a pre-diluted chemical to satellites, main stations, automatic satellites and automatic main stations.

In the built-in tank, water and chemical are mixed and a built-in pump increases the pressure of the mixture.

With a potentiometer located in the control the pump pressure can be adjusted and is constant regardless of the number of connected satellites in use.

The chemical pump station is protected from excessive water temperatures by a switch in the pump.



Pos	Description
1	Input 3/4"
2	Gauge water
3	Strainer
4	Mixing tank
5	Pump
6	Ball valve
7	Start/Stop
8	Suction hose chemical
9	Non-return valve
10	Pressure transmitter
11	Gauge outlet pressure
12	Temperature switch
13	Control
14	Dosing valve chemical
15	Dosing valve by-pass
16	Vacuum breaker
17	Outlet 3/4"

INSTALLATION

Storage

The machine must not be exposed to frost unless it has been emptied of water (frost protected). Even brief periods of exposure to frost may cause damage to the equipment.

Store the equipment in a frost-free room in the original packing.

Installation

Place the equipment in a frost-free room, well protected from the sun and place it on a hard surface.

Make sure that, in the event of failing non-return valves in the air and water supply, there are suitable back-flow preventers fitted.

Local regulations may require installation of a back-flow protecting device to prevent compressed air or chemicals getting into the water supply.

Piping

The piping should be made from materials suitable for the media in the pipes, the maximum pressure and temperature.

It is the fitter's responsibility to ensure that the piping including all armatures conform to local regulations.

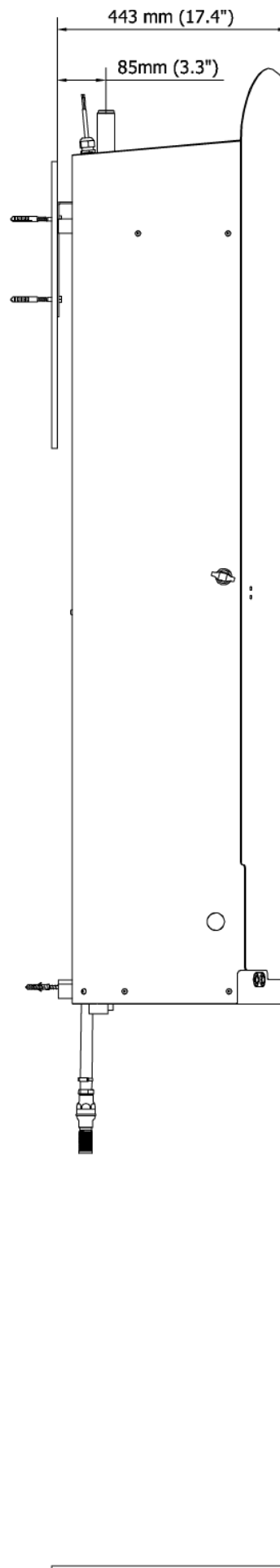
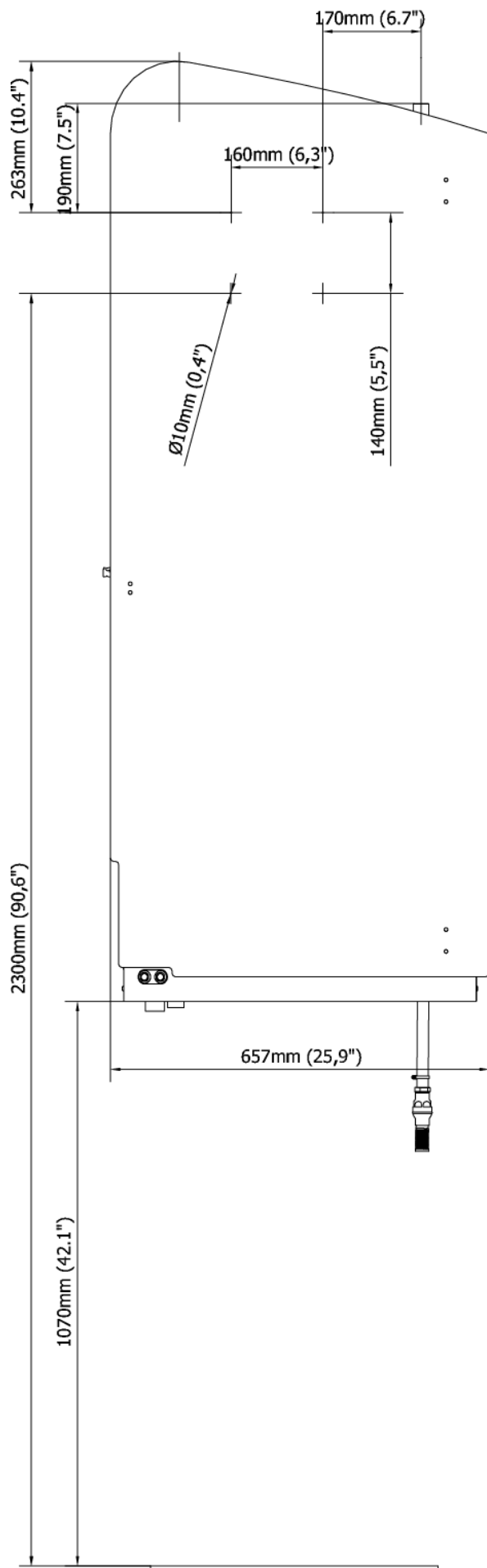
The installation must be performed such that forces from pipes etc. are not transferred to the equipment during and after fitting, as this may result in leaks or damage the equipment.

Select a pipe size so that the flow velocity in the pipe is up to 3 meters/second (10 feet/second). This gives a normally accepted pressure loss and low noise from the flow.

In order to facilitate maintenance of the equipment, it is recommended to fit a shut-off valve in the pipelines immediately at the connections for water.

Pipe supports

Always use pipe supports designed for the pipe size and material and maximum working pressure and temperature.



COMMISSIONING

Flushing

Pipes etc. must be flushed efficiently before connecting the unit.

Before commencing operation on the unit or following repair work, the unit must be flushed thoroughly to remove any impurities or foreign bodies.

Dosing

Adjust the dosing according to the chemical supplier's recommendations.

Always calibrate and, if required, document the dosing on a regular basis.

OPERATION

Safety

It is recommended that suitable working clothes be worn. For protection against certain types of detergents, always use protective goggles, respiratory protective equipment and rubber gloves.

It is recommended that non-slip footwear be worn since the floor can be slippery due to the presence of water and foam.

This system may only be operated, maintained and – not least - repaired by persons who are familiar with the system and properly trained to carry out the job concerned.

It is the customer's responsibility that these installation and operating instructions are supplemented by in-house instructions concerning inspection and reporting, industrial management, personnel training, etc.

Do not carry out any work if you are unsure of the consequences or are insufficiently skilled to carry it out. If in doubt, you should contact your superior or your agent in advance.

Never direct the water jet at other persons.

Never direct the water jet at electrical installations.

Check that couplings "lock" when hoses and nozzles are fitted. If possible, practise this procedure before operation. Always relieve the pressure in the rinsing hose by opening the low-pressure gun or valve after the water supply has been shut off before dismantling the couplings and removing the hose.

During operation of the system, ensure that the low-pressure gun/valve is closed before releasing the handle.

When the low-pressure gun or valve is opened, the water jet will result in a certain amount of counter-pressure. Therefore make sure that you hold the handle firmly and have a firm foothold.

Before removing the cabinet, the power supply must be switched off.

Safety precautions and safety devices must comply with national regulations applicable at any time.

Internally, protection corresponds to IP 55. On a number of components hazardous voltages can occur. During operation the cabinet must always be closed.

Never insert or remove a plug from an electrical socket unless the power has been switched off.

System Cleaners low-pressure systems may only be used in conjunction with soaps and chemicals that are approved for cleaning within the food or transport industries.

Soaps and chemicals that are classified as highly corrosive, toxic or which pose a health risk to humans or animals may not be used.

The system must not be used together with solvents or volatile liquids that pose a health risk or are inflammable.

In the event that the system is used with non-approved soaps, chemicals or solvents, System Cleaners A/S disclaims all liability.

If in doubt, please contact your soap or chemical supplier and read the supplier manual.

In the event that you use the system with chemicals that require mandatory labelling, or if the water temperature exceeds 50°C, a low-pressure gun with an automatic closing device must be used.

Start

The system starts automatically in the event of falling pressure in the outlet pipe like when the operator opens the low pressure gun or valve.

Pressure setting (potentiometer)

The pressure set point can be adjusted with the potentiometer located in the control box.

Leaks

If there are leaks in the system's non-return valve, pipelines or satellites, the pump will start although there is no water being used.

MAINTENANCE

Water filter

Depending on the mains water quality it may be necessary to clean the water filter on a regular basis to prevent the pump from stopping.

Shaft seal

The shaft seal does not require maintenance. Leaks are normally a sign of dry running caused by insufficient water supply to the pump.

Water non-return valve

Water non-return valves are critical wear parts and should be replaced yearly.

Pump, motor and frequency drive

Scaling compromises the function of the pump and de-scaling following the chemical supplier's guidelines may be necessary on a regular basis.

Motor and frequency drive do not require maintenance.

Injector system

The injector system consists of foot strainer, dosing valve, non-return valve and injector.

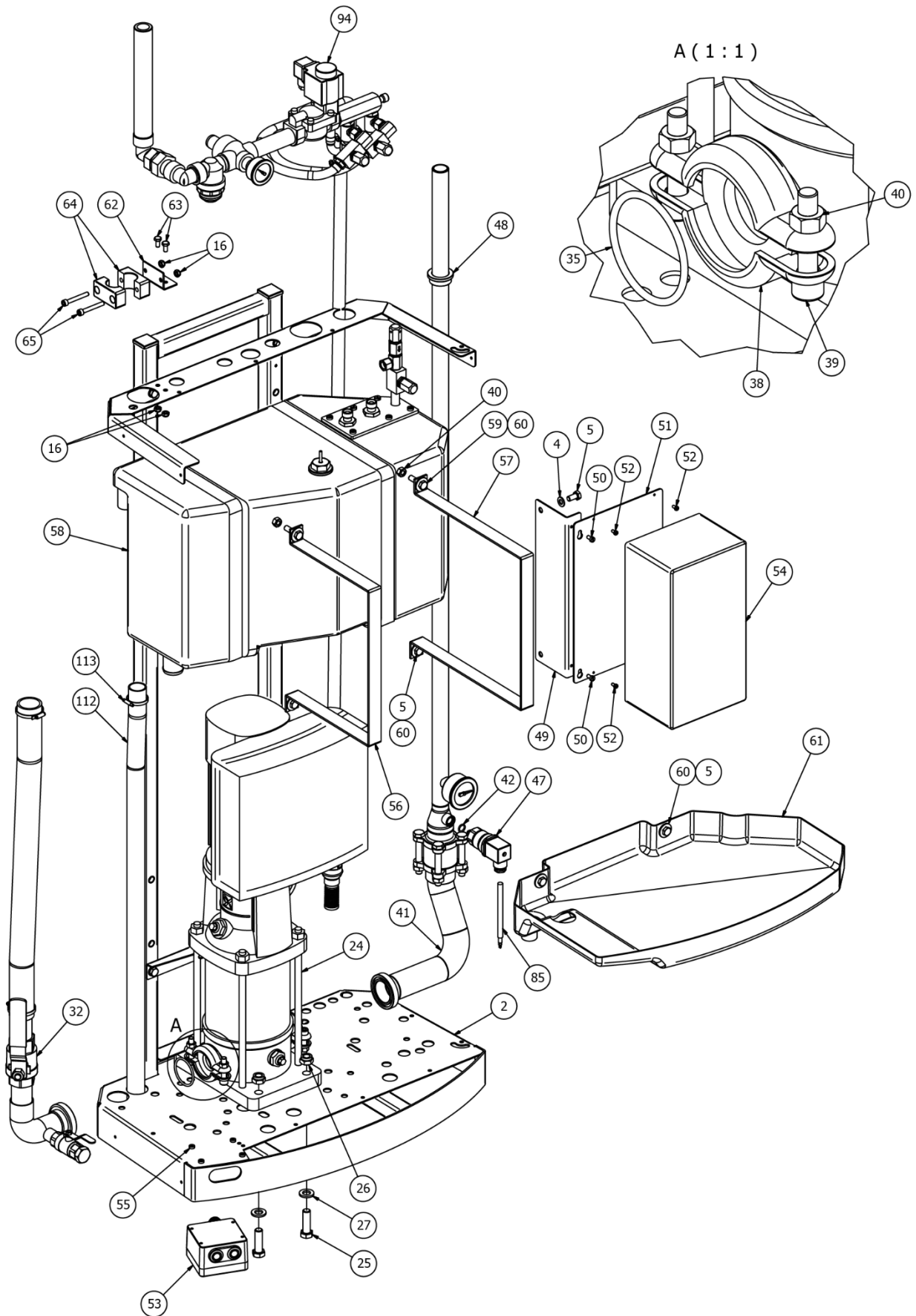
Chemical residues compromises the function of the injector and flushing with warm water after each use is required to maintain trouble free operation.

Depending on the water quality it may be necessary to de-scale the water side of the injector on a regular basis following the chemical supplier's guidelines.

TROUBLE SHOOTING

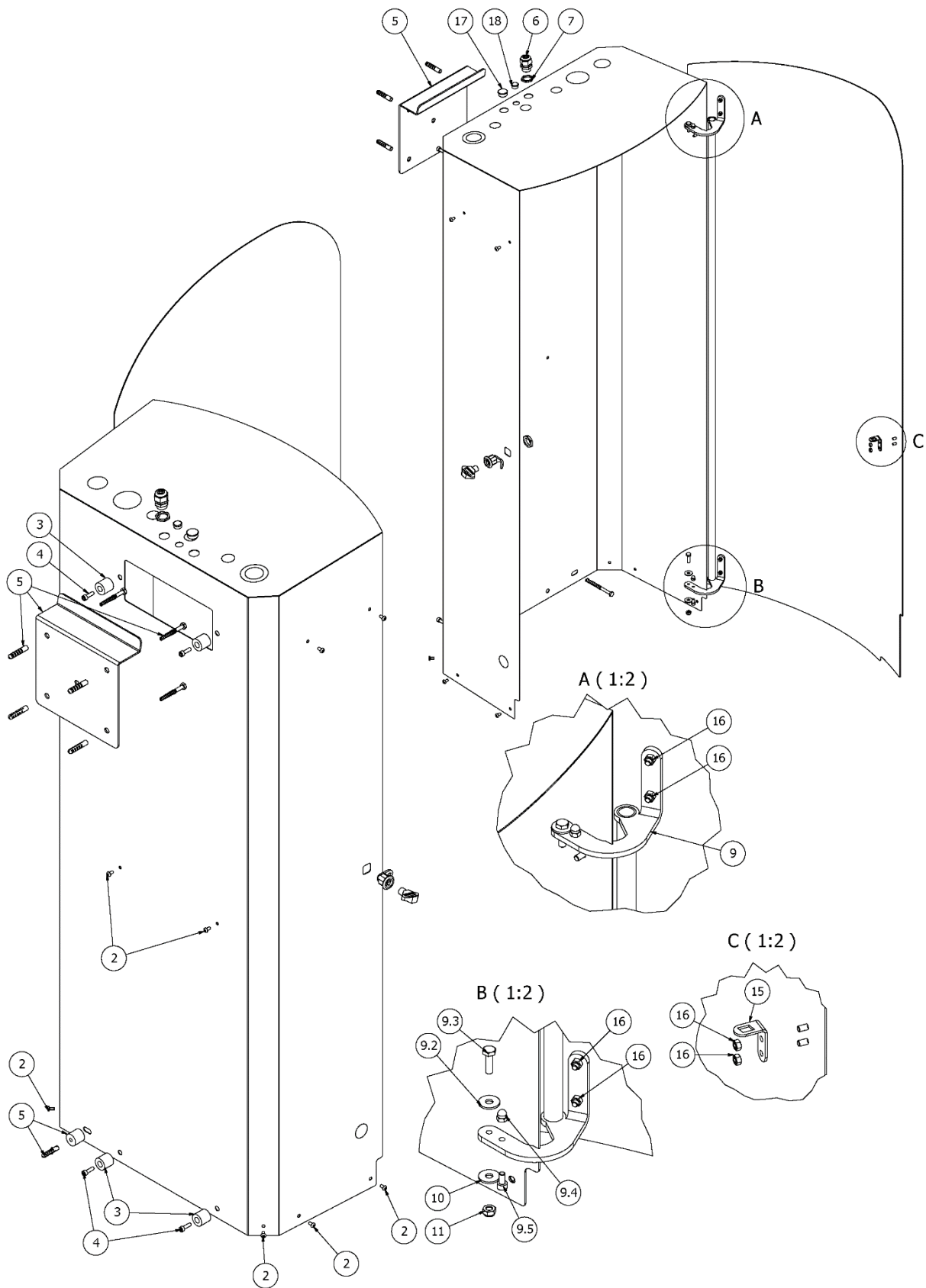
Fault	Cause	Remedy
Pump does not stop	Non-return valve in pump outlet pipe valve leaking	Clean or replace non-return valve
	Isolating valve closed	Open Isolating valve
	Leak in pipe to satellites	Tighten leak in pipe
	Leak in satellite	Tighten leak
	Pressure transmitter defective	Replace pressure transmitter
	Less than 10 meters (30 feet) of pipe between chemical pump station and satellite	Increase pipe length
	Closing valves placed in pipe between chemical pump station and satellite	Remove closing valves
Pump does not start	Mains power supply disconnected	Connect to mains power supply
	Start button not pressed	Press green start button
	Mixing tank empty	Wait till tank is full. Pump will start automatically
	Chemical container empty (When fitted with optional empty sensor)	Replace with full container
Pumps stops during operation	Mixing tank empty	Reduce flow to satellites to below flow of water
	Water temperature exceeds 50°C	Reduce water temperature below 30°C
Incorrect chemical concentration	Filter or non-return valve in suction tube blocked	Clean filter or non-return valve
	Dosing valve blocked	Clean dosing valve
	Viscosity of chemical product too high	Use other type of chemical
No suction of chemicals	Water inlet pressure too low	Increase inlet pressure according to specification
	Strainer blocked	Clean strainer
	Holes for membrane in solenoid valve blocked by impurities or scaling	Clean solenoid valve

SPARE PARTS MACHINE



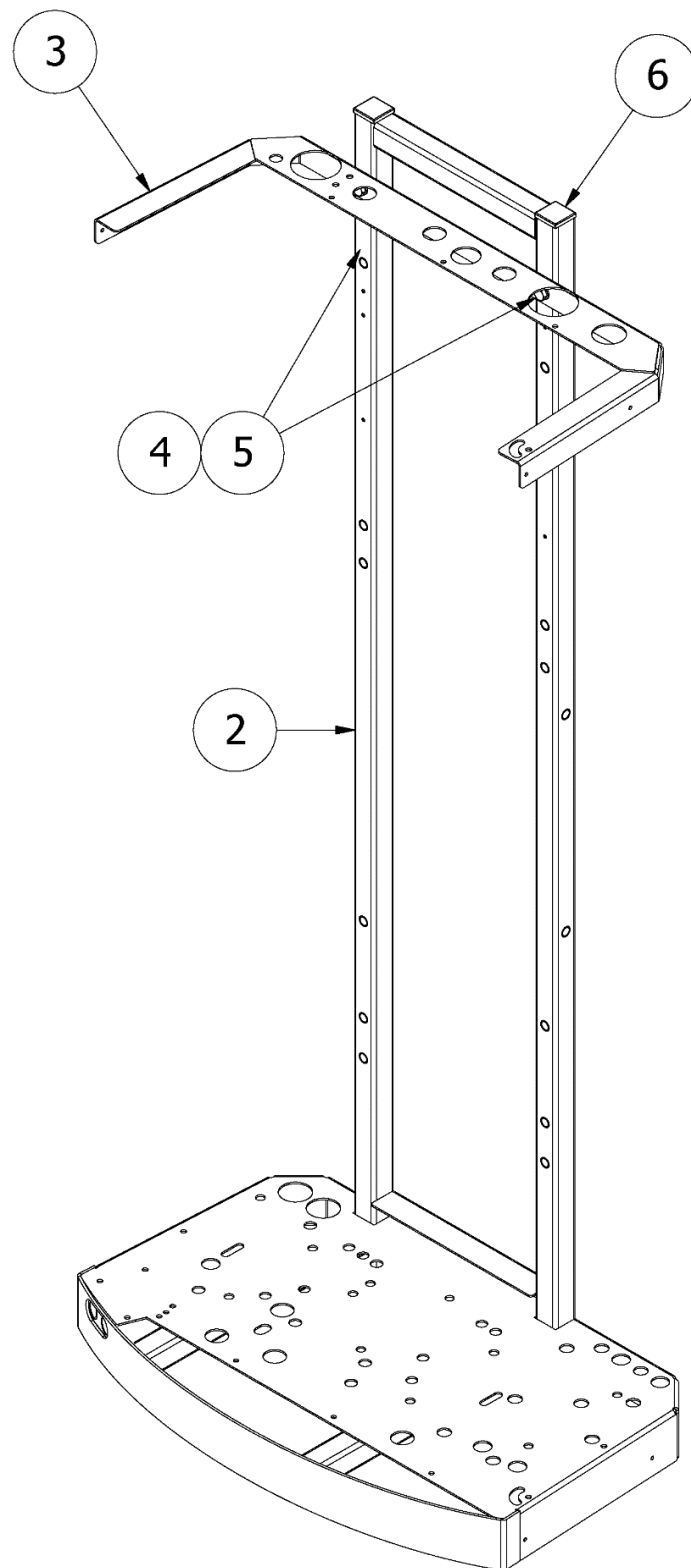
Pos.	Part no.	Description	Material	Version
2	46-023015	Pump bracket 1500 mm G5,5	AISI 304	All
4	08-300803	Plane washer ø8	A2	All
5	08-200808	Set screw M8x16	A2	All
16	08-000602	Lock nut M6	A2	All
24	06-000805	Pump CRNE 1-12 1,1 KW Clamps	-	CP5 1X230V/50Hz - 1X230V/60Hz
24	06-000910	Pump CRNE 3-9 2,2 kW clamps	-	CP7 3x230V/50Hz - 3X230V/60Hz
24	06-000305	Pump CRNE 3-9 2,2 kW clamps	-	CP7 3x380-500v/50-60Hz
25	08-201207	Set screw M12x40	A2	All
26	08-001201	Lock nut M12	A2	All
27	08-301202	Disc washer ø12	A2	All
32	20-000290	Ball valve 1/2" blue	AISI 316	All
35	17-030003	O-ring 46,04x3,53	Viton	All
38	30-740483	Flexi clamps ø48,3	-	All
39	08-800803	Cheese-head screw M8x40	A2	All
40	08-000801	Nut M8	A2	All
41	02-120005	Outlet pipe 3/4" BSP clamps	-	BSP
41	02-120006	Outlet pipe 3/4" NPT clamps	-	NPT
42	17-030055	O-ring 10x2 Viton 75 sh	Viton	All
47	36-100070	Pressure transmitter 0-60 bar 1/4"	-	All
48	04-100060	Plastic bushing 3/4"-1"x15	POM/C	All
49	42-300000	Plate for control	AISI 304	All
50	08-100505	Screw M5x10 cylinder head	A2	All
51	42-300010	Electrical control bracket	AISI 304	All
52	08-100408	Screw M4x8 cylinder head	A2	All
53	36-800025	On/off buttons	-	All
54	37-500600	Control CP 5 1x230V/50-60Hz	-	1X230V/50Hz - 1X230V/60Hz
54	37-500680	Control CP 5/7 3x230V/50-60Hz	-	3x230V/50Hz - 3X230V/60Hz
54	37-500730	Control CP7 3x400V/50Hz	-	3x400V/50Hz
54	37-500750	Control CP 7 3x460V/60Hz	-	3x460V/60Hz
55	08-104015	Screw for plastic 5x12	A2	All
56	44-920020	Bracket for tank (shortest)	AISI 304	All
57	44-920010	Bracket for tank (longest)	AISI 304	All
58	02-160091	Mixing tank	-	CP5
58	02-160090	Mixing tank	-	CP7
59	08-200807	Set screw M8x30	A2	All
60	08-300802	Disc washer ø8	A2	All
61	46-402000	Spill pan black	ABS	All
62	42-600012	Elbow 30x30x2 L = 52	AISI 304	All
63	08-200601	Set screw M6x12	A2	All
64	14-400269	Pipe clamp ø26,9 green	Plastic	All
65	08-100021	Allen screw M6x45 CH RF	A2	All
85	35-410091	Cable 3x0,5mm² PVC	-	All
94	02-160070	Injector system BSP	-	CP5 BSP
94	02-160071	Injector system NPT	-	CP5 NPT
94	02-160080	Injector system BSP	-	CP7 BSP
94	02-160081	Injector system NPT	-	CP7 NPT
112	55-200083	Hose ø25/ø33x830	PVC	All
113	15-312032	Hose clip 20-32mm SS	A2	All

CABINET



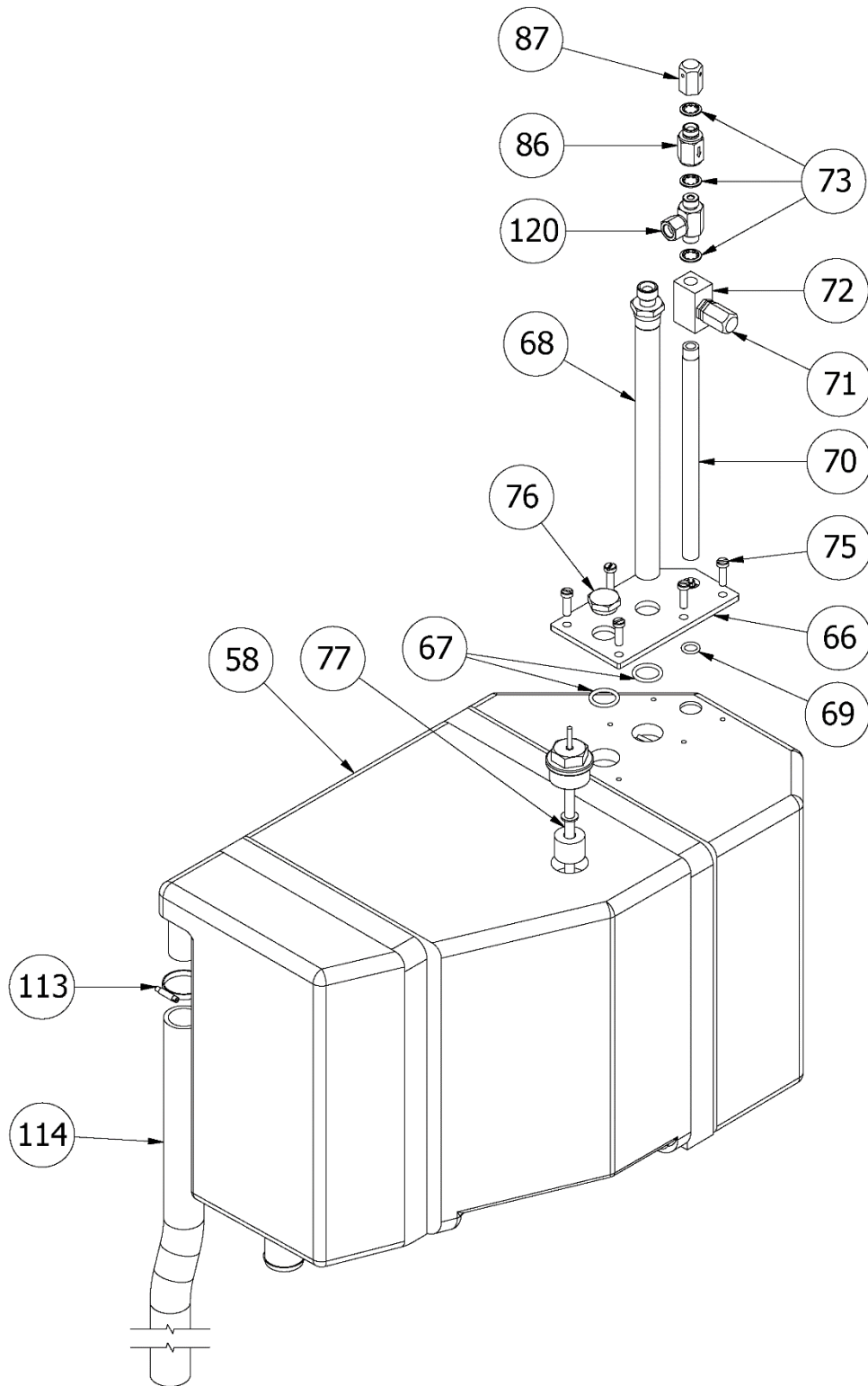
Pos.	Part no.	Description	Material
1	46-401502	Housing 1500mm G5	AISI 304
2	08-100515	Screw buttonhead M5x10mm	A2
3	04-000174	Spacer ø6/ø25x24 black	PVC-U
4	08-800601	Cheese-head screw M6x20	A2
5	43-100070	Wall bracket	-
6	35-700201	Screwed cable connection	Plastic
7	35-700200	Cablenut M20x1,5	Brass
8	41-231501	Door 1500mm G5	AISI 304
9	42-600052	Hinge for door 1500 mm complete	-
9.2	08-300602	Disc washer ø6	A2
9.3	08-200602	Set screw M6x20	A2
9.4	08-000504	Cap nut M5	A2
9.5	08-800505	Cheese-head screw M5x10	A2
10	08-300605	Disc washer ø6	Nylon
11	08-000602	Lock nut M6	A2
12	72-000040	Lock with hook	AISI 304/Plastic
13	72-000030	Nut for lock	Nylon
14	72-100010	Key for housing	Plastic
15	72-000051	Strike plate 300 mm cabinet	-
16	08-000502	Lock nut M5	A2
17	010-200200	Plastic plug ø23xø20mm	Nylon
18	04-000012	Blind plug ø15 black	polyethylene

FRAME



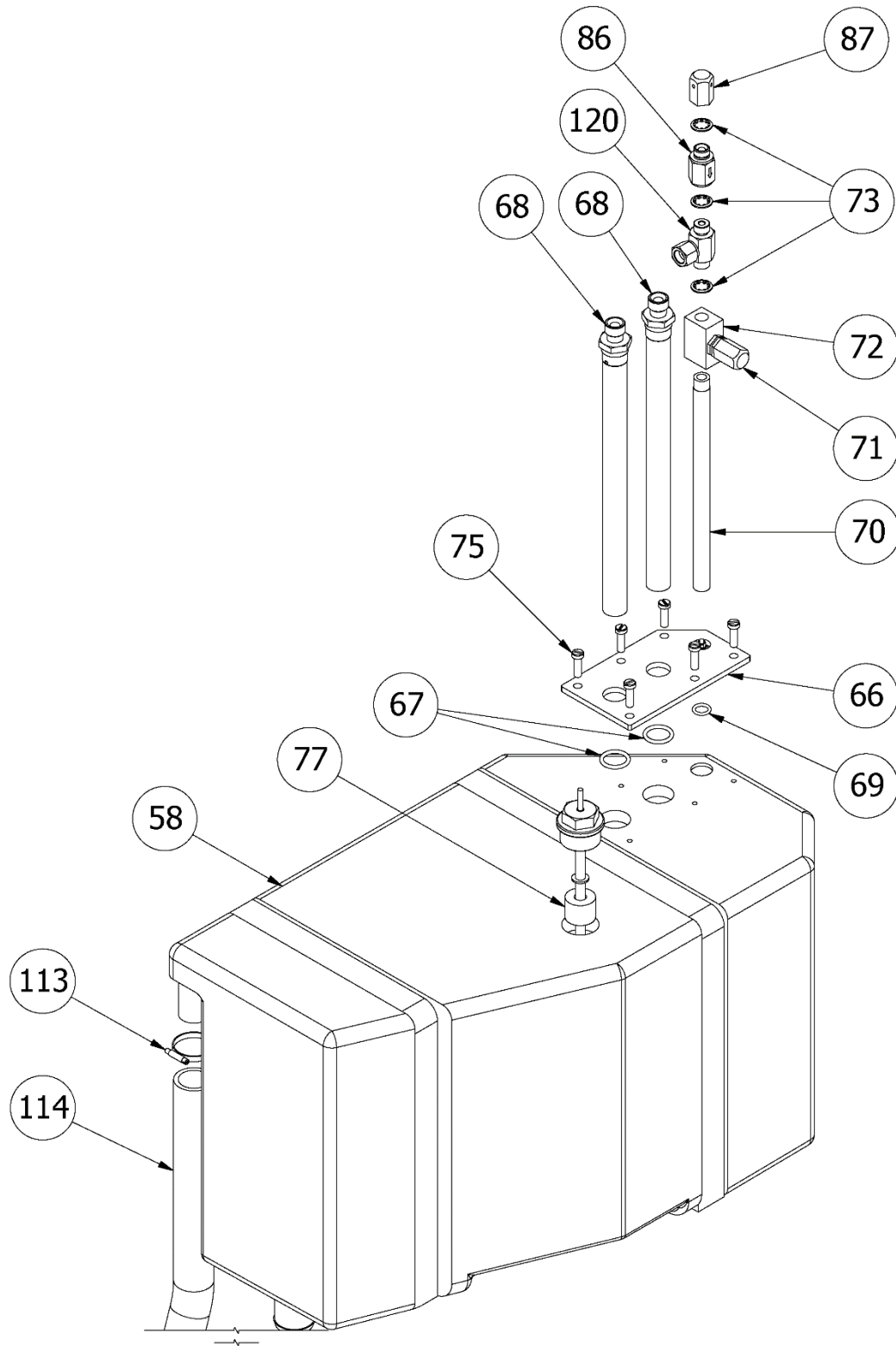
Pos.	Part no.	Description	Material
2	46-023015	Pump bracket 1500 mm G5,5	AISI 304
3	46-160130	Bracket for hinge G5,5	AISI 304
3	46-160140	Bracket for air G5,5	AISI 304
3	46-160150	Bracket for prediluted	AISI 304
4	08-300803	Plane washer ø8	A2
5	08-200808	Set screw M8x16	A2
6	04-000072	Plastic knob 30mm	Plastic

MIXING TANK CP5



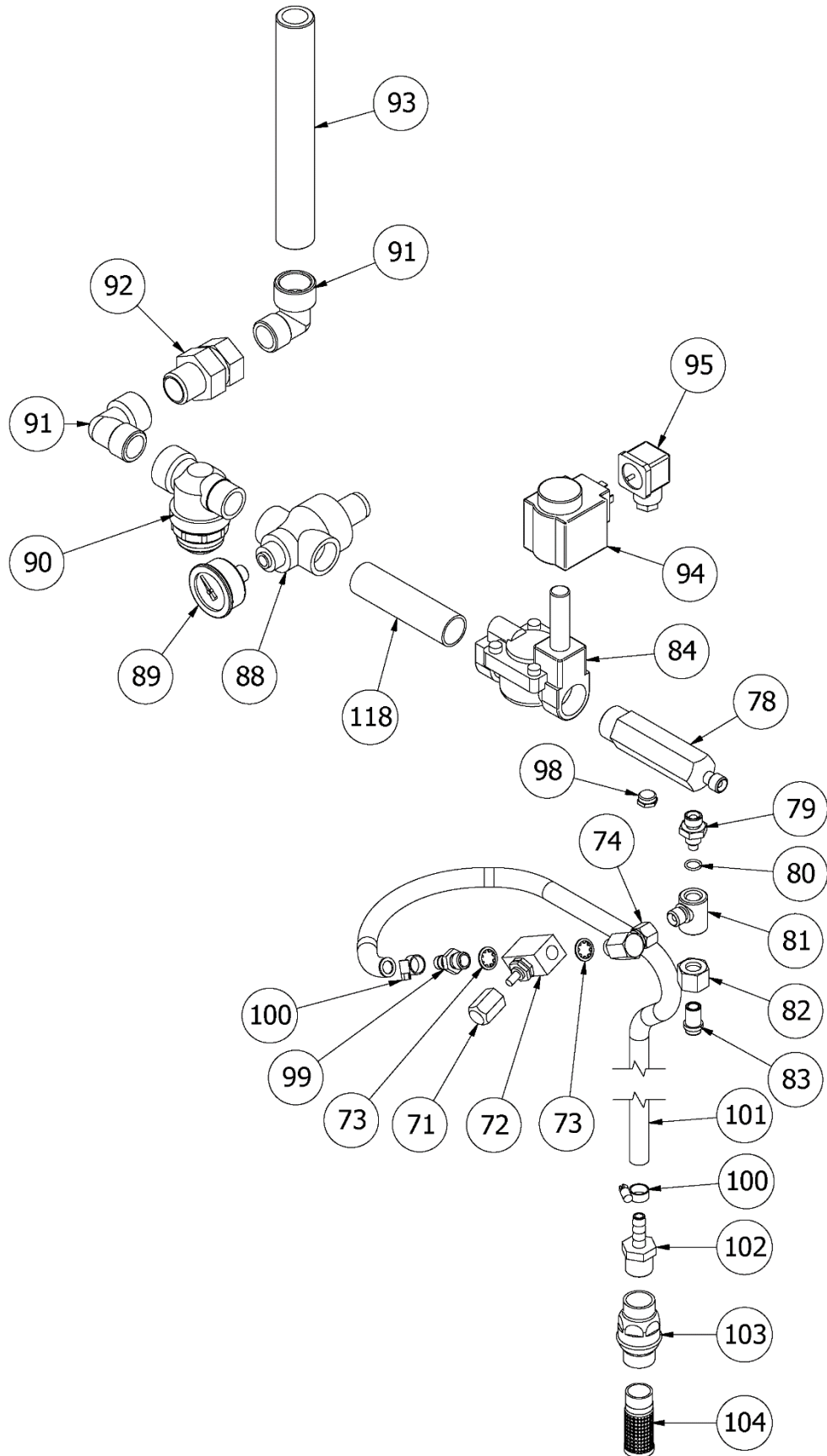
Pos.	Part no.	Description	Material
58	44-900030	Mixing tank, plastic	PE-MD
66	44-920030	Handle for pipe for mixing tank	AISI 304
67	17-030001	O-ring 19x3 70 shore	Viton
68	26-200031	Filling pipe ø20x1,5x250	AISI 316
69	17-030002	O-ring 10,6x2,4 70 shore viton	Viton
70	26-200040	Filling pipe 1/4"x320	AISI 316
71	20-900027	Cap nut	AISI 303
72	20-400011	Needle valve 1/4"	-
73	17-000012	Gasket 1/4"	PA12
75	08-100016	Tapping screw 5,5x25 PH RF	A2
76	16-500020	Plug M22x1	AISI 316
77	36-200030	Level control with float	PE-MD
86	20-200029	Bleed valve 1/4" SS	-
87	20-410011	Cap nut 1/4" with holes	AISI 316
113	15-312032	Hose clip 20-32mm SS	A2
114	55-200084	Hose ø25/ø33x1220	PVC
120	15-600025	Tee 1/4" with nut	-

MIXING TANK CP7



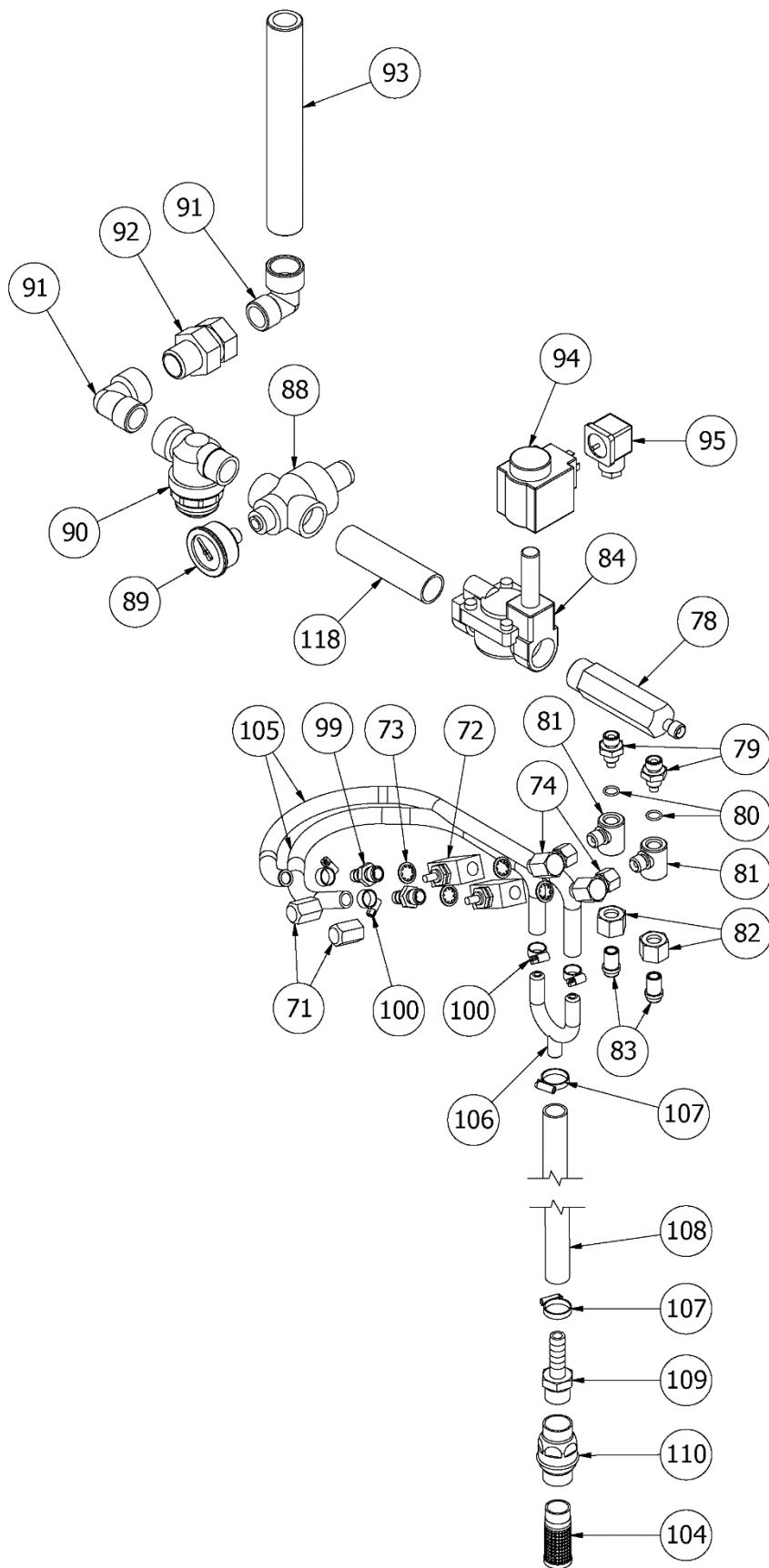
Pos.	Part no.	Description	Material
58	44-900030	Mixing tank, plastic	PE-MD
66	44-920030	Handle for pipe for mixing tank	AISI 304
67	17-030001	O-ring 19x3 70 shore	Viton
68	26-200031	Filling pipe ø20x1,5x250	AISI 316
69	17-030002	O-ring 10,6x2,4 70 shore viton	Viton
70	26-200040	Filling pipe 1/4"x320	AISI 316
71	20-900027	Cap nut	AISI 303
72	20-400011	Needle valve 1/4"	-
73	17-000012	Gasket 1/4"	PA12
75	08-100016	Tapping screw 5,5x25 PH RF	A2
77	36-200030	Level control with float	PE-MD
86	20-200029	Bleed valve 1/4" SS	-
87	20-410011	Cap nut 1/4" with holes	AISI 316
113	15-312032	Hose clip 20-32mm SS	A2
114	55-200084	Hose ø25/ø33x1220	PVC
120	15-600025	Tee 1/4" with nut	-

INJECTOR SYSTEM CP5



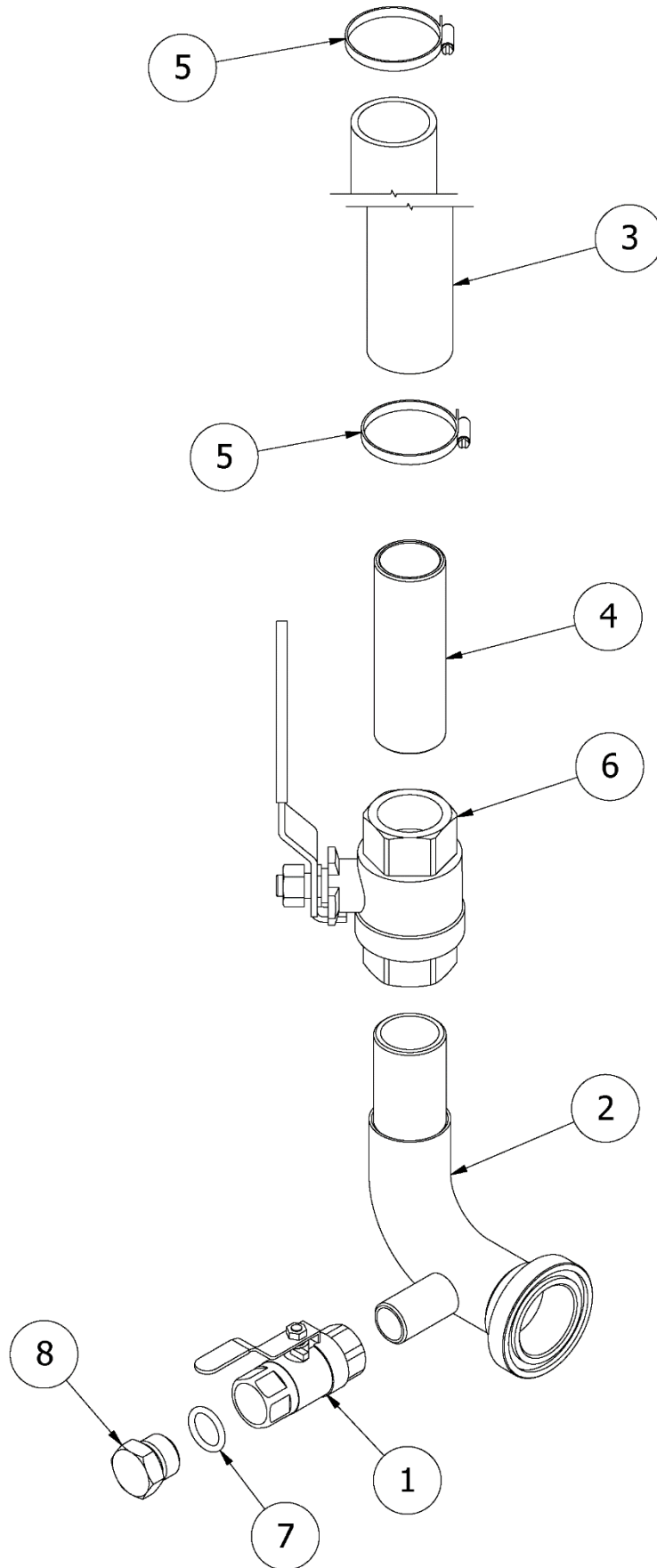
Pos.	Part no.	Description	Material	Version
71	20-900027	Cap nut	AISI 303	All
72	20-400011	Needle valve 1/4"	-	All
73	17-000012	Gasket 1/4"	PA12	All
74	15-600020	Elbow 1/4" with nut	AISI 316	All
78	25-330010	Manifold	AISI 316	All
79	27-200140	Water nozzle ø5,5 KPE	AISI 316	All
80	17-000032	O-ring 10,1x1,6 NBR 70 shore	NBR	All
81	27-010031-01	Injector housing	AISI 316	All
82	16-900010	Nut 3/8"	AISI 316	All
83	16-800090	Nipple for needle valve	AISI 316	All
84	20-100120	Servo valve 3/4" (NC)	Nickel-plated brass	All
88	19-000340	Water pressure control valve 3/4"	Plastic/Brass	All
89	22-000031	Gauge ø40 0-12 bar	AISI 304/brass/glycerine	All
90	20-500050	Strainer 3/4" brass	Nickel-plated brass	All
91	15-600240	Elbow 3/4" 90° E/I	Nickel-plated brass	All
92	15-800061	Union 3/4"	Brass	All
93	25-000281	Inlet pipe 3/4"x210 BSP	AISI 316	BSP
93	25-000282	Inlet pipe 3/4"x210 NPT	AISI 316	NPT
94	20-110120	Coil 24V AC 50 Hz	Plastic/Steel	50 Hz
94	20-110124	Coil 24V AC 60 HZ	Plastic/Steel	60 Hz
95	20-120021	Plug for large coil	-	All
98	16-501401	Plug 1/4"	AISI 316	All
99	55-600020	Hose nipple 1/4"x10,5	AISI 316	All
100	15-310814	Hose clip 8-16mm	A2	All
101	55-200037	Suction hose 3/8"x3300 white	PVC	All
102	55-600140	Hose nipple 1/2"x10	AISI 316	All
103	20-200092	Non-return valve 1/2"	AISI 316	All
104	27-300060	Suction filter 1/2"	AISI 316	All
118	25-100270	Intermediate pipe 3/4"x100	AISI 316	All

INJECTOR SYSTEM CP7



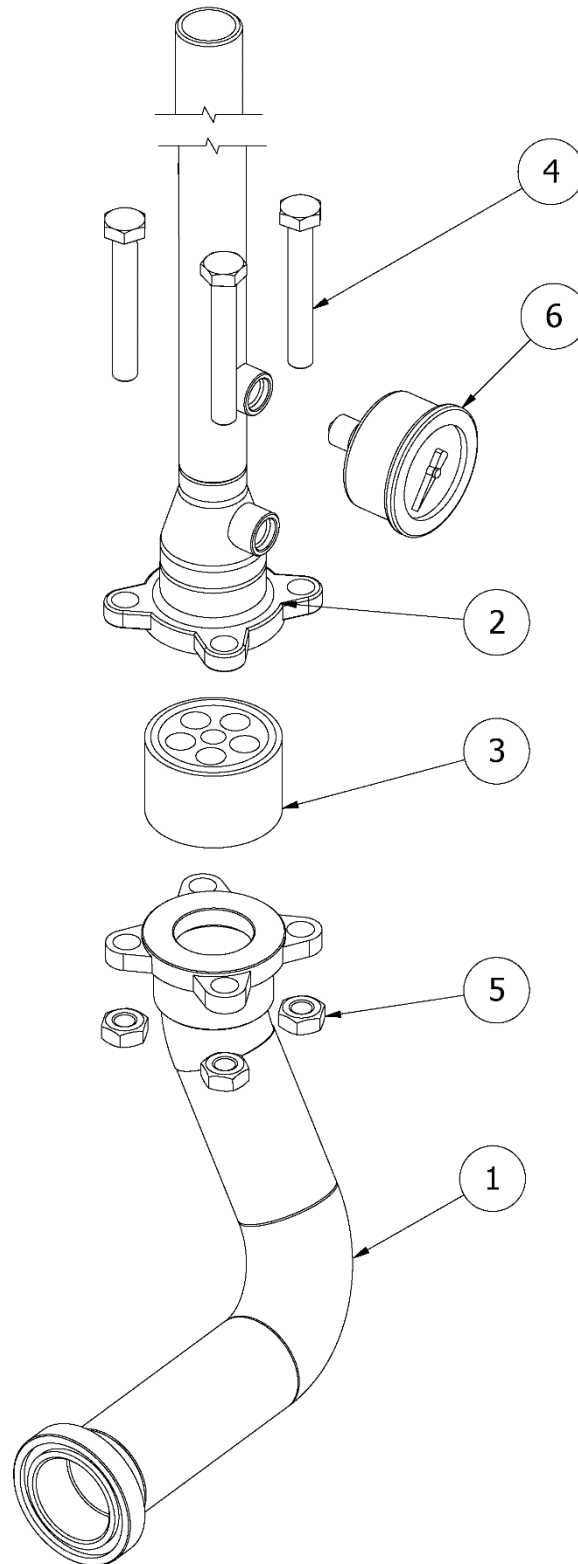
Pos.	Part no.	Description	Material	Version
71	20-900027	Cap nut	AISI 303	All
72	20-400011	Needle valve 1/4"	-	All
73	17-000012	Gasket 1/4"	PA12	All
74	15-600020	Elbow 1/4" with nut	AISI 316	All
78	25-330010	Manifold	AISI 316	All
79	27-200140	Water nozzle ø5,5 KPE	AISI 316	All
80	17-000032	O-ring 10,1x1,6 NBR 70 shore	NBR	All
81	27-010031-01	Injector housing	AISI 316	All
82	16-900010	Nut 3/8"	AISI 316	All
83	16-800090	Nipple for needle valve	AISI 316	All
84	20-100120	Servo valve 3/4" (NC)	Nickel-plated brass	All
88	19-000340	Water pressure control valve 3/4"	Plastic/Brass	All
89	22-000031	Gauge ø40 0-12 bar	AISI 304/brass/glycerine	All
90	20-500050	Strainer 3/4" brass	Nickel-plated brass	All
91	15-600240	Elbow 3/4" 90° E/I	Nickel-plated brass	All
92	15-800061	Union 3/4"	Brass	All
93	25-000281	Inlet pipe 3/4"x210 BSP	AISI 316	BSP
93	25-000282	Inlet pipe 3/4"x210 NPT	AISI 316	NPT
94	20-110120	Coil 24V AC 50 Hz	Plastic/Steel	50 Hz
94	20-110124	Coil 24V AC 60 HZ	Plastic/Steel	60 Hz
95	20-120021	Plug for large coil	-	All
99	55-600020	Hose nipple 1/4"x10,5	AISI 316	All
100	15-310814	Hose clip 8-16mm	A2	All
104	27-300060	Suction filter 1/2"	AISI 316	All
105	55-200036	Suction hose 3/8"x400 white	PVC	All
106	55-600090	Hose connector Y SS 12mm	AISI 316	All
107	15-311222	Hose clip 12-22mm	A2	All
108	55-200053	Suction hose 1/2"x3200 white	PVC	All
109	55-600080	Hose nipple 1/2"(ex)xø13,5x40	AISI 316	All
110	20-200090	Non-return valve 1/2" water	AISI 304/Viton	All
118	25-100270	Intermediate pipe 3/4"x100	AISI 316	All

INLET PIPE



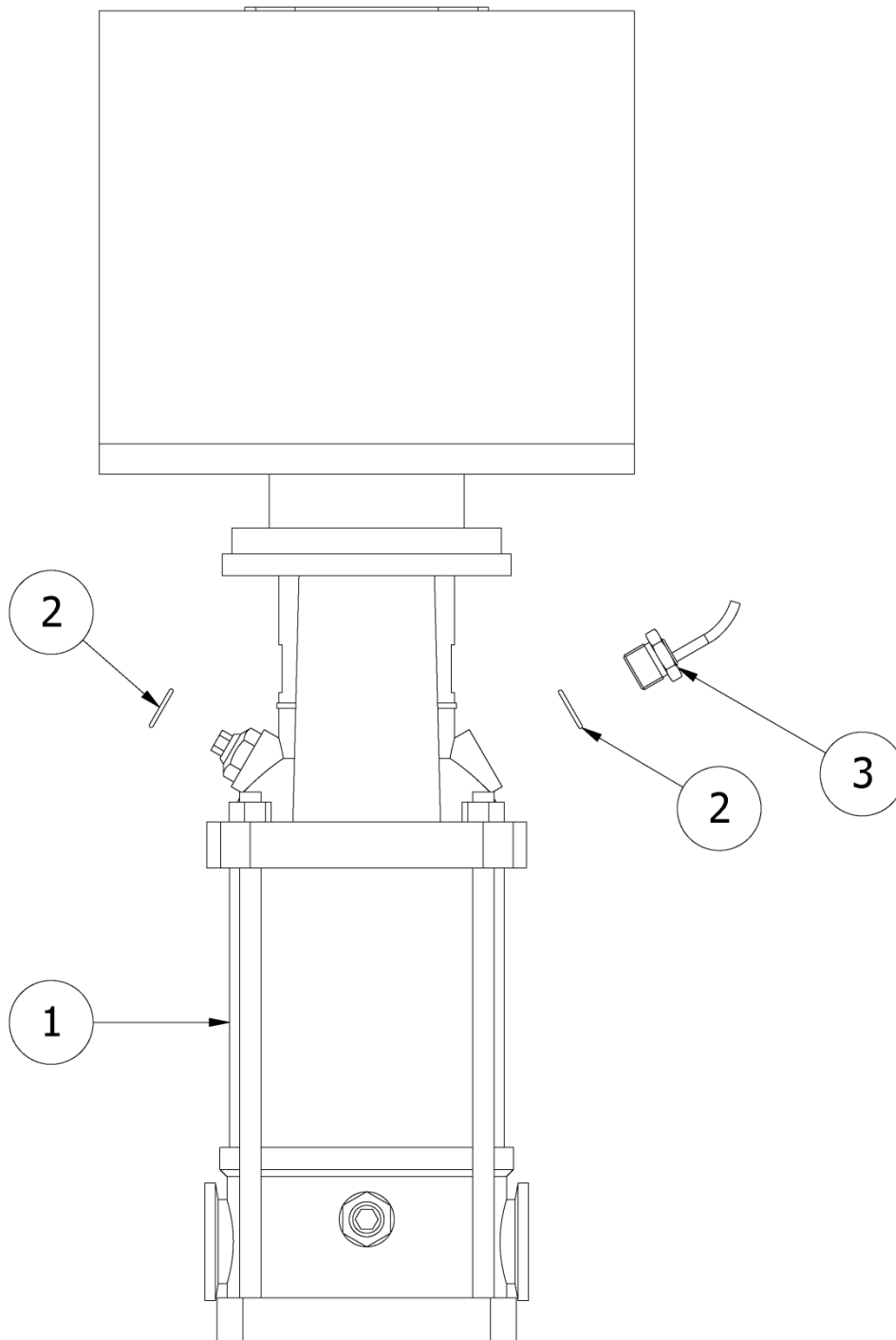
Pos.	Part no.	Description	Material
1	20-000220	Ball valve 1/2" blue	AISI 316
2	30-521201	Pump coupling 1.1/4" inlet	AISI 316
3	55-200085	Hose ø32/ø42x595	PVC
4	15-510200	Nipple pipe 1"x100	AISI 316
5	15-313045	Hose clip 30-45mm	A2
6	20-000290	Ball valve 1/2" blue	AISI 316
7	17-030004	O-ring 17x3 70 sh	Viton
8	16-501202	Filling plug 1/2"	AISI 304

OUTLET PIPE



Pos.	Part no.	Description	Material	Version
1	30-511201	Pump coupling 1.1/4" outlet	AISI 316	All
2	25-250041	Outlet pipe 1.1/4"/3/4" BSP	AISI 316	BSP
2	25-250042	Outlet pipe 1.1/4"/3/4" NPT	AISI 316	NPT
3	20-211112	Non-return valve 1.1/2" PN60	Viton/AISI 316	All
4	08-201006	Bolt M10x70 (hexagon)	A2	All
5	08-001001	Nut M10	A2	All
6	22-000042	Gauge ø50 0-60 bar SS	AISI 304/brass/glycerine	All

PUMP



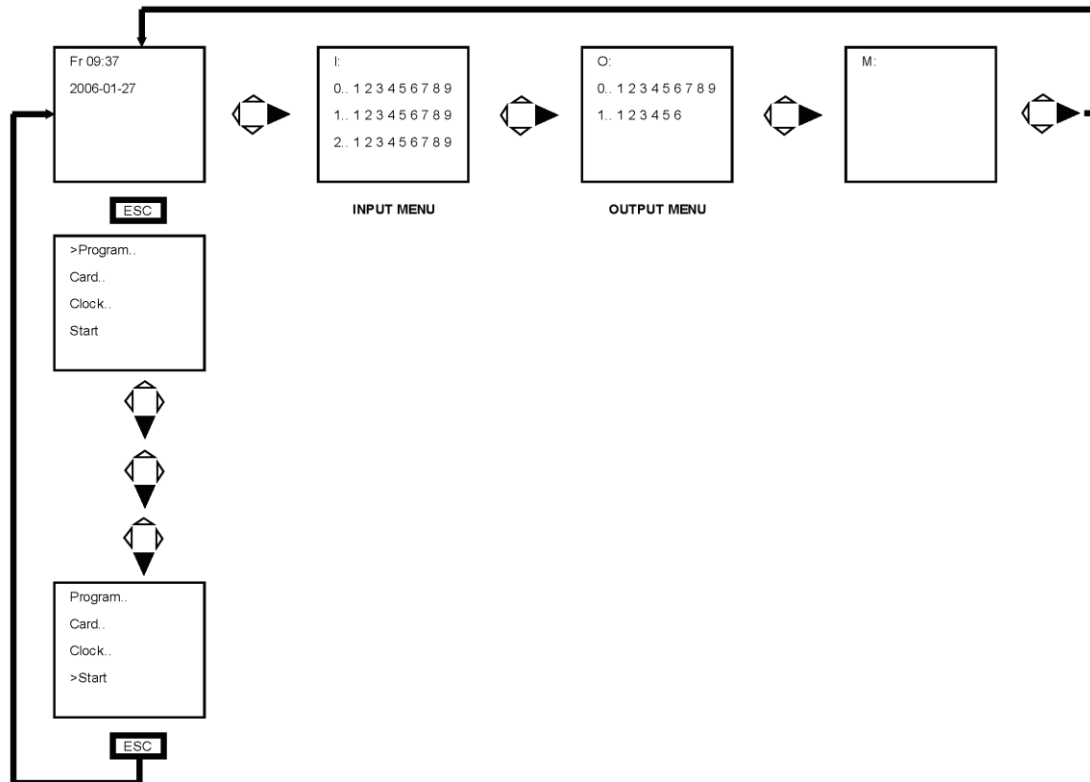
Pos.	Part no.	Description	Material	Version
1	31-011200	Pump CRNE 1-12-A-CA-GI-E-HQQE	-	CP5 1X230V/50Hz - 60Hz
1	31-309004	Pump CRNE 3-9J 2,2 kW	-	CP7 3x230V/50Hz - 60Hz
1	31-309003	Pump CRNE 3-9J 2,2 kW	-	CP7 3x400V/50Hz - 3x460V/60Hz
2	17-020080	O-ring 18x2 70 shore	EPDM	All
3	32-000050	Temperature switch 50° KPE	-	All

ELECTRICAL CONTROL



Pos.	Part no.	Description	Model
1K7	36-600900	Contacteur 9 A 24V AC	All
1A4	39-LOGO	Siemens LOGO! module 24V	All
-	39-LOGOPRO	Programme module	All
1T3	35-900082	Transformer 25VA 230V	CP5 and CP5
1T3	35-900083	Transformer 25VA 460V	CP7
1T3	35-900080	Transformer 230/400V - 24V	CP7

LOGO! MODULE



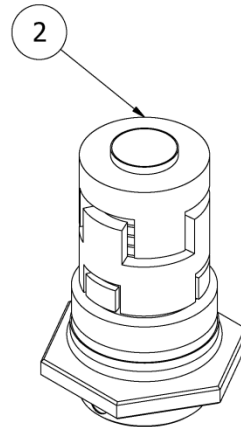
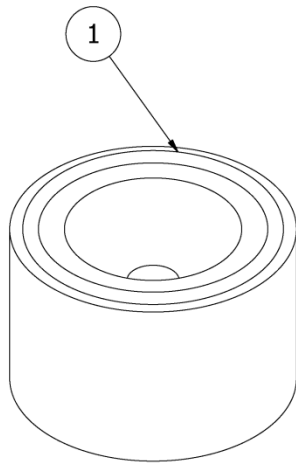
SIEMENS LOGO! MODULE - INPUT

OFF		ON	
1	Start/stop button: "O" activated	1	Start/stop button: "O" not activated
2	Start/stop button: "I" not activated	2	Start/stop button: "I" activated
3	Temperature switch: pump temp. above 50°C	3	Temperature switch: pump temp. below 50°C
4	Suction lance in chemical container: Low level	4	Suction lance in chemical container: Level OK.
5	Level switch: Level in premixing tank below minimum	5	Level switch: Level in premixing tank above minimum
6	Level switch: Level in premixing tank below maximum	6	Level switch: Level in premixing tank at maximum

Siemens LOGO! module - Output

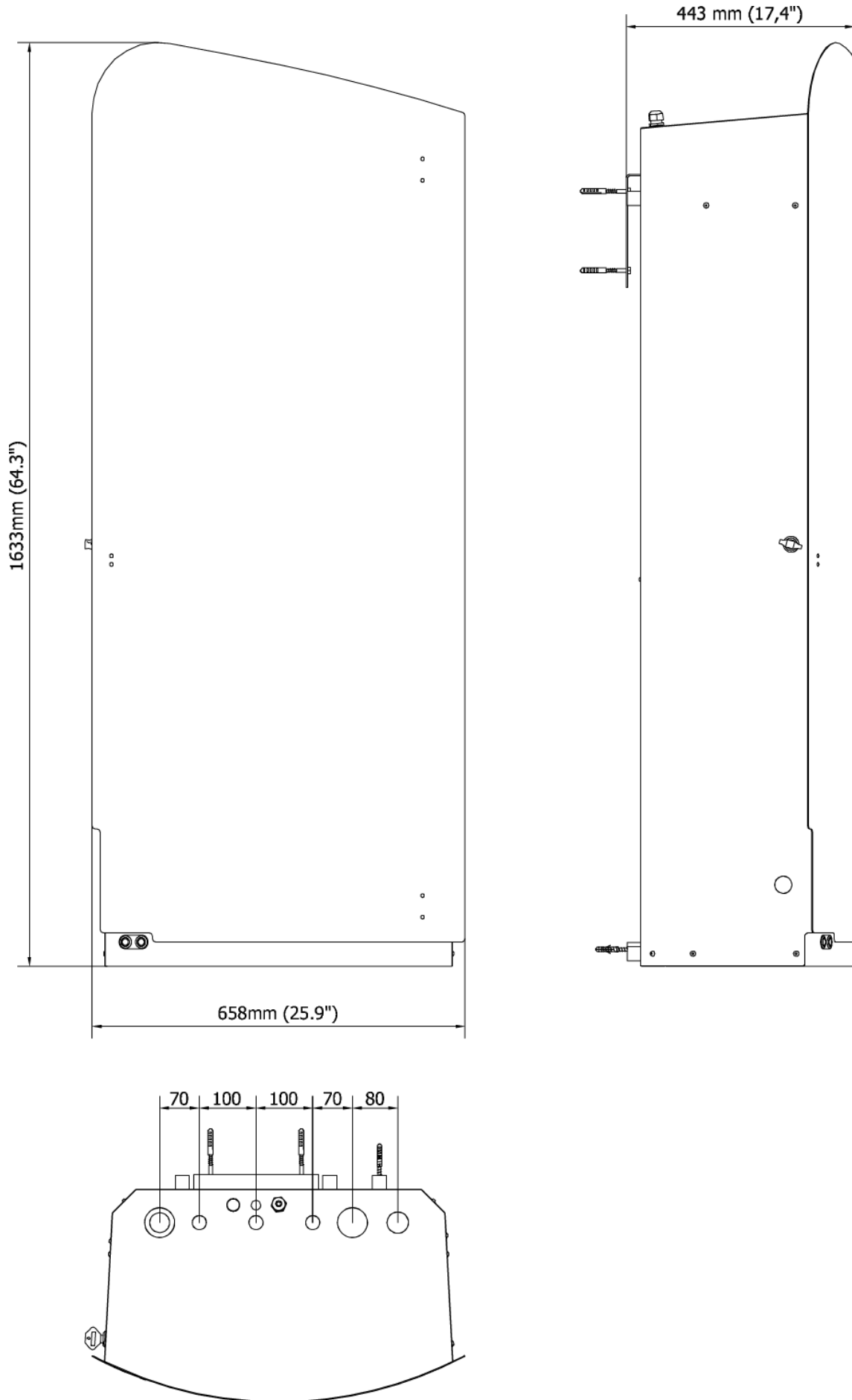
OFF			
1	Green operating lamp off	1	Green operating lamp on
2	Pilot solenoid valve (water to injector) closed	2	Pilot solenoid valve (water to injector) open
3	Grundfos pump voltage off	3	Grundfos pump voltage on
4	Output signal to pump Operation not allowed	4	Output signal to pump Operation allowed

RECOMMENDED SPARE PARTS



Pos.	Part no.	Description	Material
1	20-211112	Non-return valve 1.1/2" PN60	Viton/AISI 316
2	32-300010	Shaft seal cartridge 1/3/5 M3	-

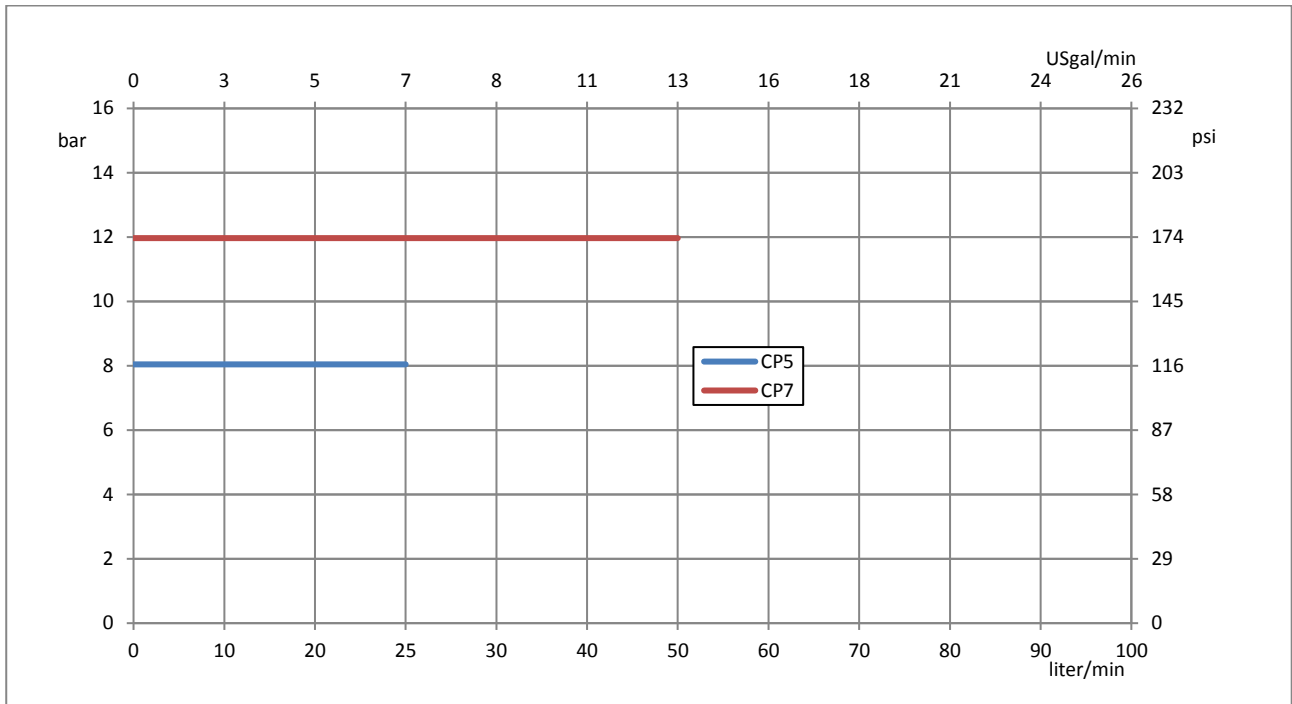
TECHNICAL SPECIFICATIONS



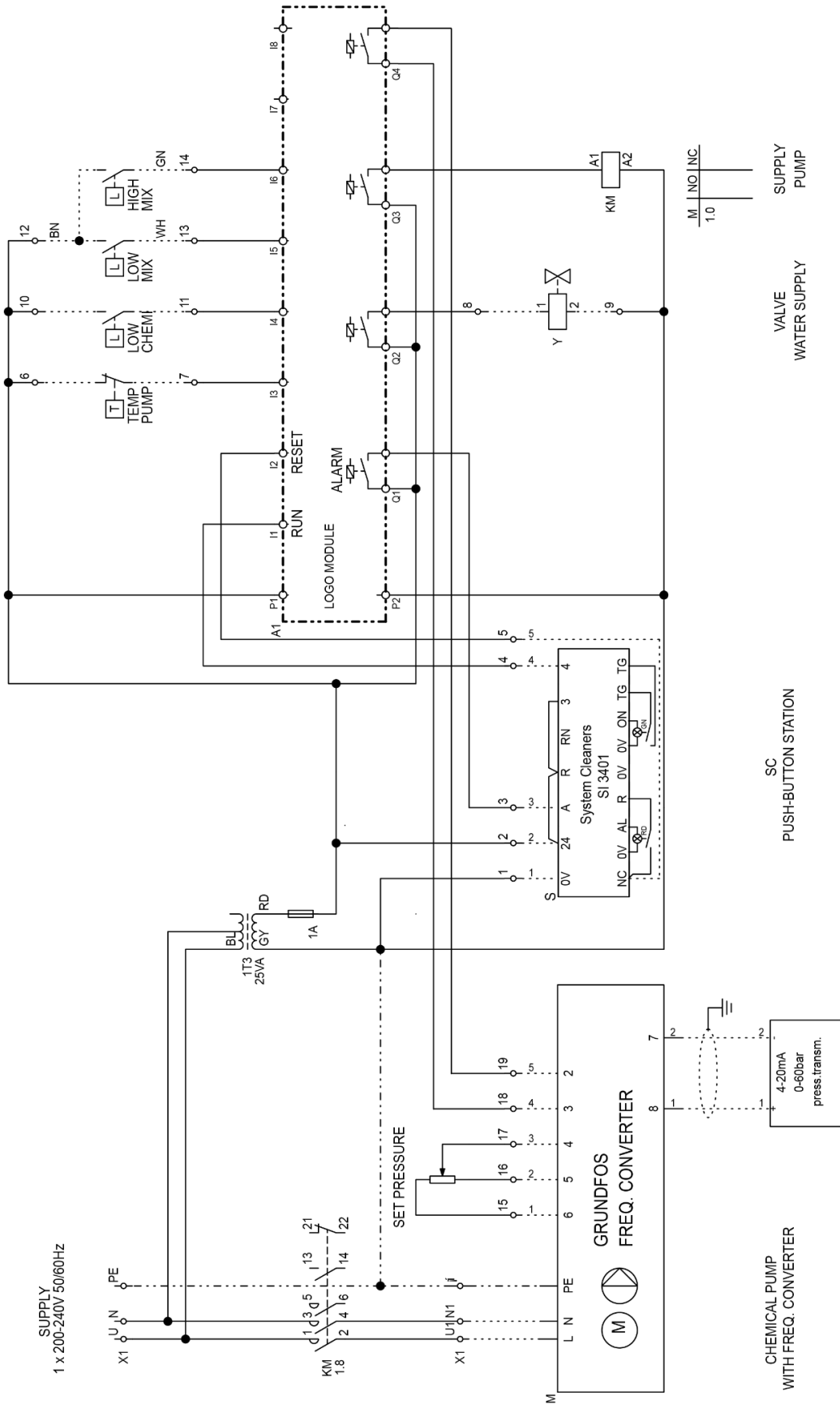
TECHNICAL SPECIFICATIONS

Model	CP5	CP7
Installation		
Ambient temperature	3-40°C / 37-104°F	
Pump		
Pump type	CRNE 1-12	CRNE 3-9J
Motor power	1.1 kW / 1.5 HP	2.2 kW / 3 HP
Frequency drive	Integrated	
Degree of protection	IP 54	
Connections		
Inlet	3/4" BSP or NPT	
Outlet	3/4" BSP or NPT	
Water, inlet		
Pressure	3-10 bar / 44-145 psi	
Temperature	3-30°C / 37-86°F	
Minimum pump cut-out temperature	50°C / 122°F	
Minimum recommended flow	37.5 liter/min / 9.9 USgal/min	75 liter/min / 19.8 USgal/min
Outlet		
Setpoint, adjustable	6-8 bar / 90-120 psi	6-12 bar / 90-180 psi
Maximum flow	25 liter/min / 6.6 USgal/	50 liter/min / 13.2 USgal/min
Electrical 230 V		
Voltage and frequency	1x200-240 V +/- 10% 50-60 Hz	3x208-230 V +/- 10% 50-60 Hz
Current	6.7-5.6 A	8.0 A
Recommended pre-fusing	16 A	16 A
Recommended cable cross section	3x1.5 mm ² / 3xAWG16	4x1.5 mm ² / 4xAWG16
Electrical 400 and 460 V		
Voltage and frequency	Not available	3x380-500 V +/- 10% 50-60 Hz
Current		4.15-3.4 A
Recommended pre-fusing		10 A
Recommended cable cross section		4x1.5 mm ² / 4xAWG16
Chemical		
Dosing range	0.2-6%	
Dimensions		
Weight	95 kg / 210 lbs	130 kg / 290 lbs

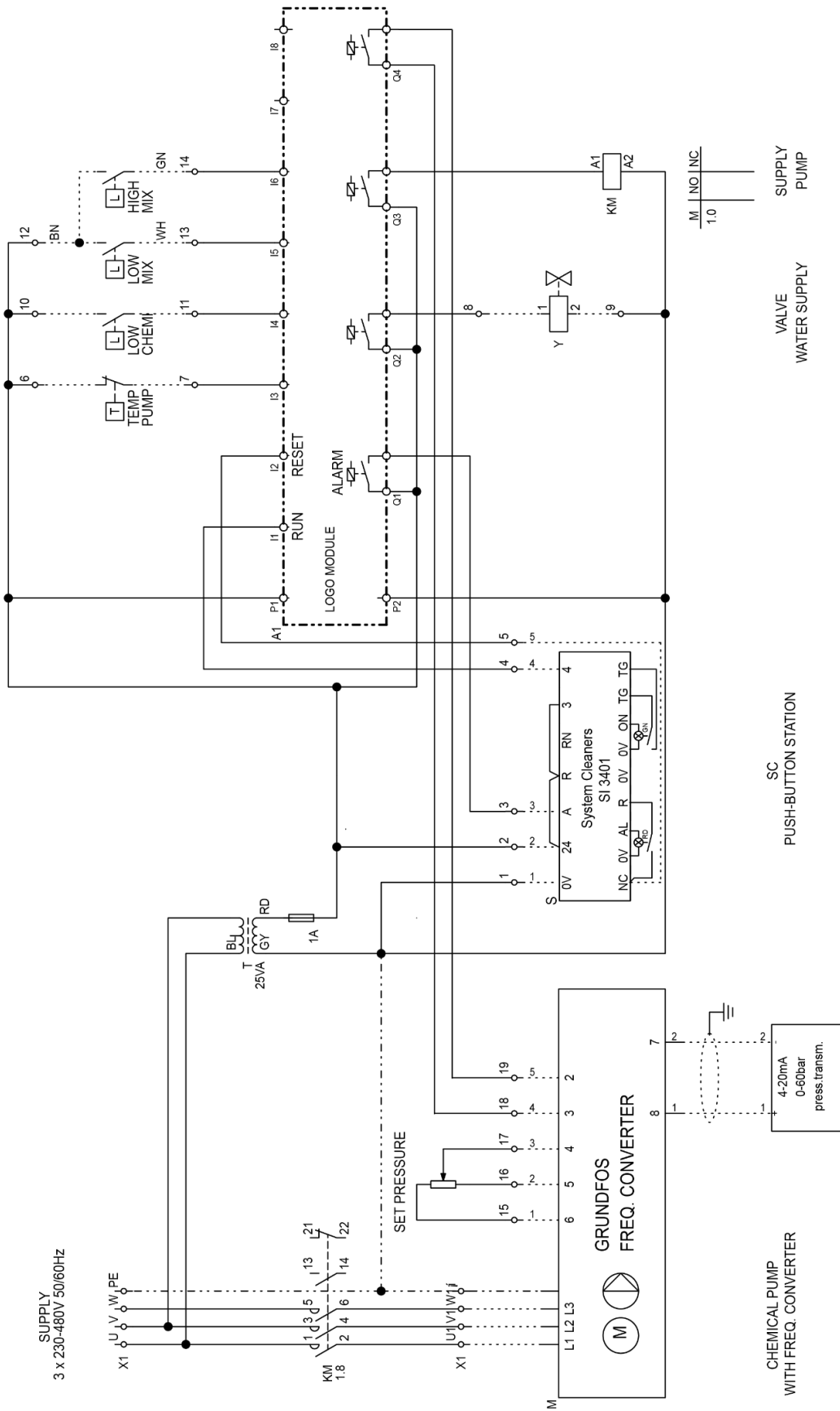
PUMP CURVE



WIRING DIAGRAM CP5



WIRING DIAGRAM CP7





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Please note:

We reserve the right to make alterations to the technical specifications without notice.