



Spare parts & maintenance guide

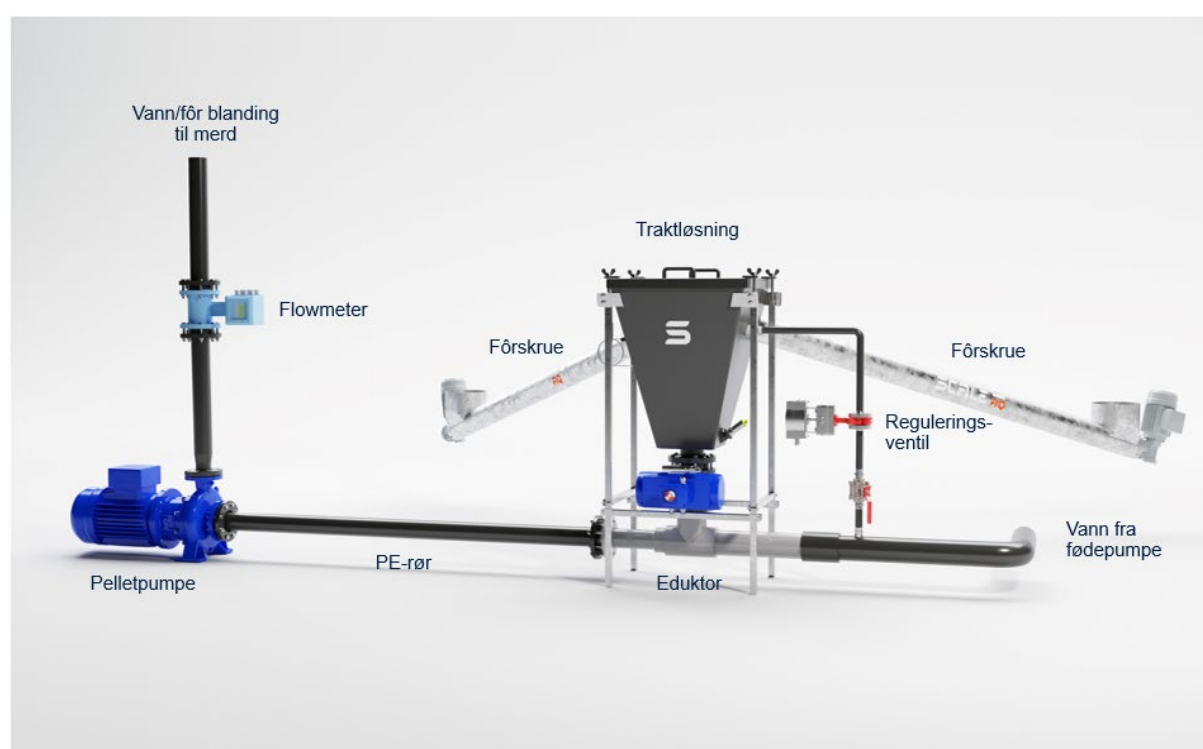
ScaleAQ Water Feeding System

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This catalogue includes spare parts used in the feeding system. It contains a complete overview with illustrations showing each part and where it is mounted.

The spare parts illustrations have position numbers showing where each part is mounted in each unit. This will help you locate the correct parts for your equipment.



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CONTENTS

1	Pipe supports and stands	5
1.1	1 Hole Pipe Support	5
1.2	15degree stand for feedpipe and pipe support.....	Feil! Bokmerke er ikke definert.
1.3	90 mm U-clamp	8
2	Pumps.....	9
2.1	Supply pump water feeding	9
3	Pelletpump.....	10
4	Sluice	12
4.1	ScaleAQ Water Feeding Sluice unit	12
5	Actuators/valves	13
5.1	Intake Valve/Actuator	13
5.2	Feeding line valves/actuators	13
6	Auger	15
6.1	Auger 0,8 m – 3,4 m	15
6.2	Auger 3,5 m – 4,5 m with shaft support.....	16
7	Silo Shut Off Plate	17
8	Frequency INverters	18
9	Sensors.....	19
9.1	Pressure transmitters	19
9.2	Flow transmitters	19
10	Feeding Cabinets.....	20
10.1	PLC CABINET	20
10.2	IO CABINET	21
10.3	Supply pump cabinet #502115.....	22
11	Pneumatics	23
11.1	Compressor.....	23
11.2	Drier.....	25
11.3	Filter	25
11.4	Oil for compressor	26
12	ScaleAQ server.....	26
13	Sponges.....	27
13.1	Sponge for cleaning pipes.....	27
14	Inlet VACsystem	28
15	Recommended Spareparts	31

IMPORTANT NOTE

Explanation of P&ID numbers:

Several places down below in this list we reference to the P&ID tag number. It is important to note this number and use this when ordering new parts and/or to communicate which part is broken or damaged. This to ensure that the correct part is replaced.

Manometer = PM

P= pressure

M=manometer

Pressure transmitter = PT

P= pressure

T=transmitter

Valve = VM

V=valve

M=manuell

Valve = VP

V=valve

P=pneumatic

Pumps= P

P=pump

Overflow detection guard = OD

O=overflow

D=detection

Flow transmitter = FT

F=Flow

T=transmitter

Drain valve = VD

V = valve

D= drain

Inlet filter = IF

I= inlet

F=filter

Numbering of valves and sensors: (examples)

First example:

Main inlet valve= VP-001

VP = valve pneumatic

First number = system (line) 0 (system zero (0) is always the inlet side)

Second number = if more valves than 9

Tredje tall = running number series of valves (up to 9)

Second example:

VM-001 = first manual valve on inlet

VM-002 = second valve on inlet

VM-003 = third valve on inlet

VM-004 = fourth valve on inlet

etc

Third example: pressure transmitter after pellet pump on line 5

PT-502

PT=trykktransmitter

First number = system (line) 5

Second number = if more lines than 9 (if not then zero (0) is used)

Third number = transmitter number 2 on that line

Fourth example, flow transmitter on line 11

FT-111

FT = Flow transmitter

First number = system (line) 1

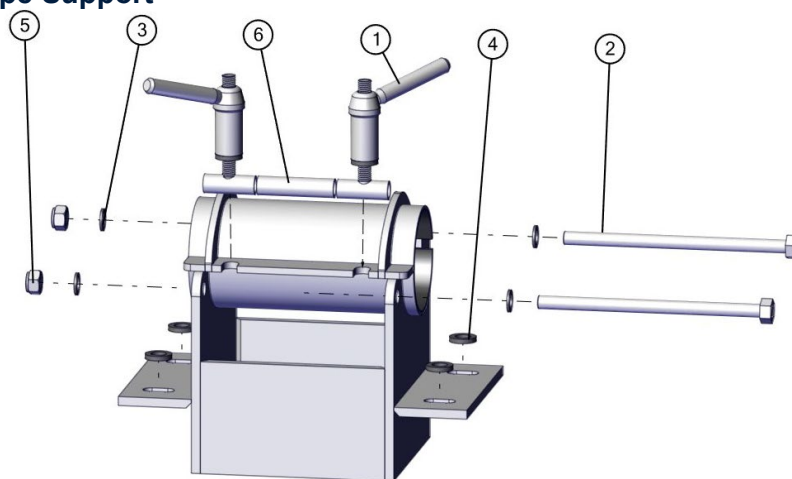
Second number = if more lines than 9, in this case 1, since this is line 11

Third number = flow transmitter no 1 on that line

1 PIPE SUPPORTS AND STANDS

1.1 1 Hole Pipe Support

#410770



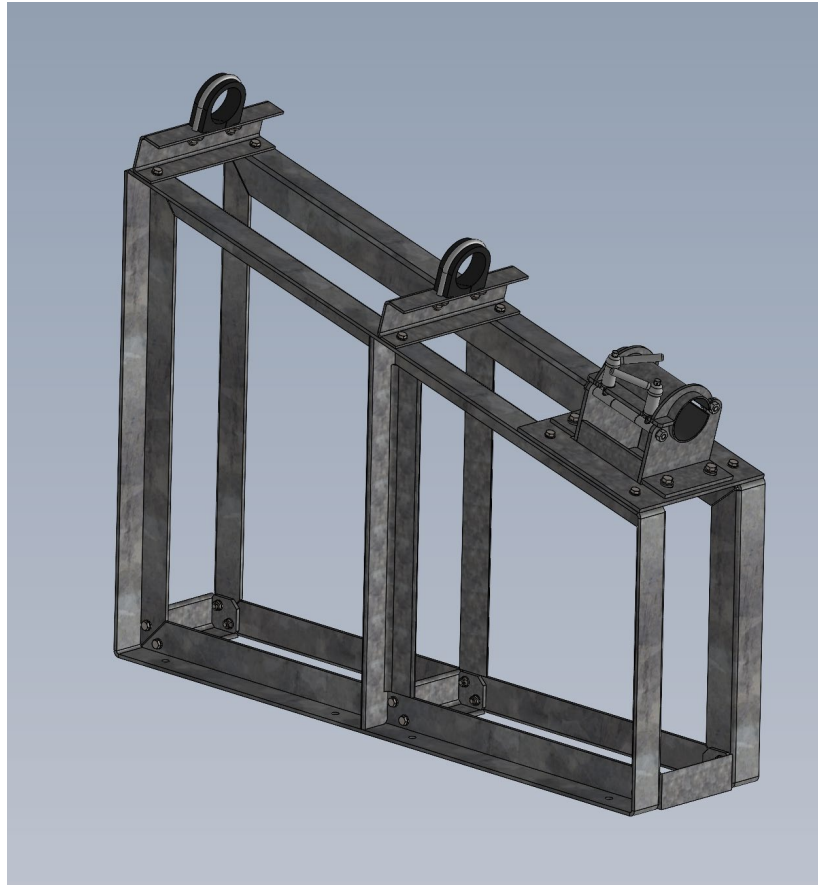
Position	Description	Product No.	Qty
1	Handle M12		2
2	Bolt M12		2
3	Washer for bolt		4
4	Washer		4
5	Nut M12 Nylock		2
6	Pipe lock		1

Maintenance:

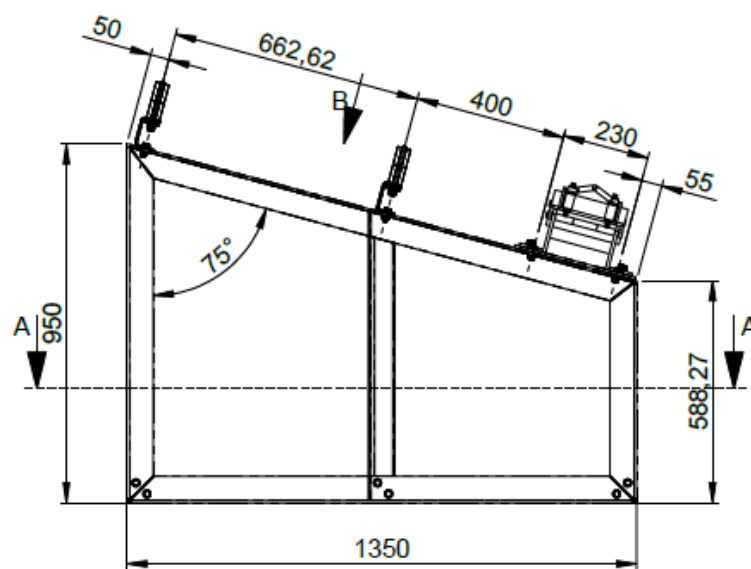
The User must ensure that the pipe support is always kept tight. Check for damages weekly.

1.2 15 Degree Frame – Single Feedline

#502765

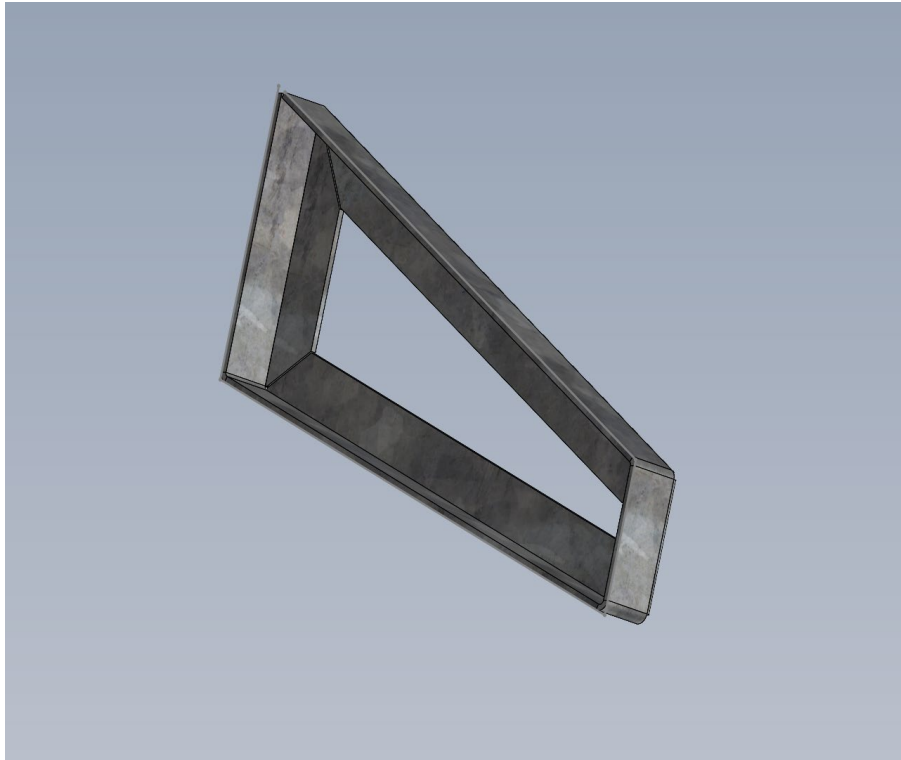


Picture shows stand with pipesupport and 90mm clamps. Pipesupport and clamps sold separately!

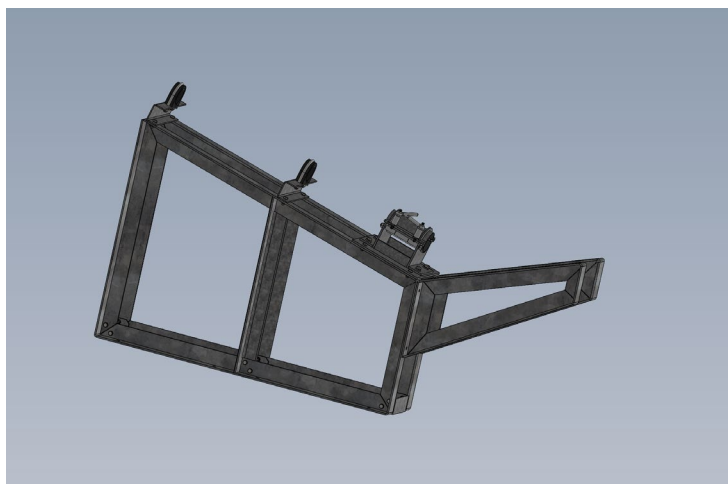


Dimentions

1.3 Support Bracket for 15 Degree Frame (2pcs) #502989



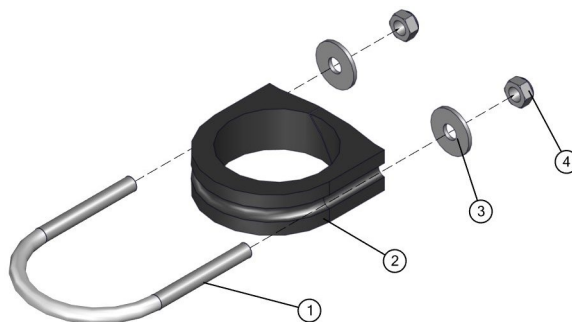
Support-arm for extra support of heavy waterfeeding lines



Support-arm attached to frame

1.4 90 mm U-clamp

#407644



Position	Description	Product No.	Qty
1	90mm Clamp u-bolt	407647	1
2	GMT 90mm clamp rubber	407646	1
3	Plain washer M12		2
4	Nylock nut M12		2

Maintenance:

The User must ensure that the U-clamps and pipe supports is always kept tight. Check for damages weekly on all equipment related to fastening feedpipes to barge or to pen.

2 PUMPS

2.1 Supply pump water feeding

Description	Product No.	Qty
SAQ WF Supply pump (motor and pump complete)	501609	1
SAQ WF Supply pump (only pump)	On request	
SAQ WF Supply pump (only motor)	On request	
SAQ WF Supply pump Mech.seal	504501	1
SAQ WF Supply pump Gasket 274,7/283,9X0,5	504500	1

Maintenance:

Follow manufacturer's instructions, see manufactures instruction manual page 21-28

Visual inspection every week looks for leaks on flanges and shafts.

See cleaning and maintenance routines form for intervals on maintenance. Below form is taken for manufacturers maintenance schedule, deviations between the two are possible, but follow ScaleAQ recommendations as a general rule. Contact ScaleAQ service for more information or ask for a ScaleAQ Service Agreement.

Pump Description:	Pump Type:	Serial no.:	Part name:	Part ref. no.:	Part no./ident no.:	Main parts changed in each pump	Recommended spares for 2 years of operation	Recommended spares for 5 years of operation	Recommended spares for x(7-10) years of operation
mp									
MK900 WATER PELLET PUMP	NB-AC 65-200/91/220 U3.40D-W133-38/300		VOLUTE CASING	102	540757	1			
MK900 WATER PELLET PUMP	NB-AC 65-200/91/220 U3.40D-W133-38/300		CASING COVER	161	749023	1			
MK900 WATER PELLET PUMP	NB-AC 65-200/91/220 U3.40D-W133-38/300		SHAFT ASSY.	220.1	749612	1		1	
MK900 WATER PELLET PUMP	NB-AC 65-200/91/220 U3.40D-W133-38/300		IMPELLER	230.01	749986	1			1
MK900 WATER PELLET PUMP	NB-AC 65-200/91/220 U3.40D-W133-38/300		O-RING	400.01	592309	1	1	1	
MK900 WATER PELLET PUMP	NB-AC 65-200/91/220 U3.40D-W133-38/300		MECHANICAL SEAL incl spacer	433.01	950405	1	1	1	
MK900 WATER PELLET PUMP	NB-AC 65-200/91/220 U3.40D-W133-38/300		IMPELLER NUT	922.01	14399	1			
MK900 WATER PELLET PUMP	NB-AC 65-200/91/220 U3.40D-W133-38/300		SPRING WASHER	936.01	21705	1			
MK900 WATER PELLET PUMP	NB-AC 65-200/91/220 U3.40D-W133-38/300		KEY	940.01	477896	1			
MK900 WATER PELLET PUMP	NB-AC 65-200/91/220 U3.40D-W133-38/300		BALLBEARING FOR EL. MOTOR		93190	2		2	
mp									
MK900 FEED PUMP	NB 150-200/01/230 U3.40D-W133-42/350		VOLUTE CASING	102	658999	1			
MK900 FEED PUMP	NB 150-200/01/230 U3.40D-W133-42/350		CASING COVER	161	47038	1			
MK900 FEED PUMP	NB 150-200/01/230 U3.40D-W133-42/350		SHAFT ASSY.	220.1	749705	1		1	
MK900 FEED PUMP	NB 150-200/01/230 U3.40D-W133-42/350		IMPELLER	230.01	543176	1			1
MK900 FEED PUMP	NB 150-200/01/230 U3.40D-W133-42/350		O-RING	400.01	592304	1	1	1	
MK900 FEED PUMP	NB 150-200/01/230 U3.40D-W133-42/350		MECHANICAL SEAL incl spacer	433.01	950407	1	1	1	
MK900 FEED PUMP	NB 150-200/01/230 U3.40D-W133-42/350		IMPELLER NUT	922.01	14400	1			
MK900 FEED PUMP	NB 150-200/01/230 U3.40D-W133-42/350		SPRING WASHER	936.01	17997	1			
MK900 FEED PUMP	NB 150-200/01/230 U3.40D-W133-42/350		KEY	940.01	470708	1			
MK900 FEED PUMP	NB 150-200/01/230 U3.40D-W133-42/350		BALLBEARING FOR EL. MOTOR		15347	2		2	

3 PELLETPUMPS

#451132

Description	Product No.
SAQ WF pelletpump (motor and pump complete)	451132
SAQ WF Pelletpump (only pump unit)	504292
SAQ WF Pelletpump motor 7,5kW	504281
SAQ WF Pelletpump motor 11kW	505954
SAQ WF Pelletpump Gasket 259/269,7X0,5	504283
SAQ WF Mech.seal + spacer sleeve	504282

Note: same pump unit on 7,5 and 11kW versions



Maintenance:

Follow manufacturer's instructions, see manufactures instruction manual page 21-28

Visual inspection every week looks for leaks on flanges and shafts.

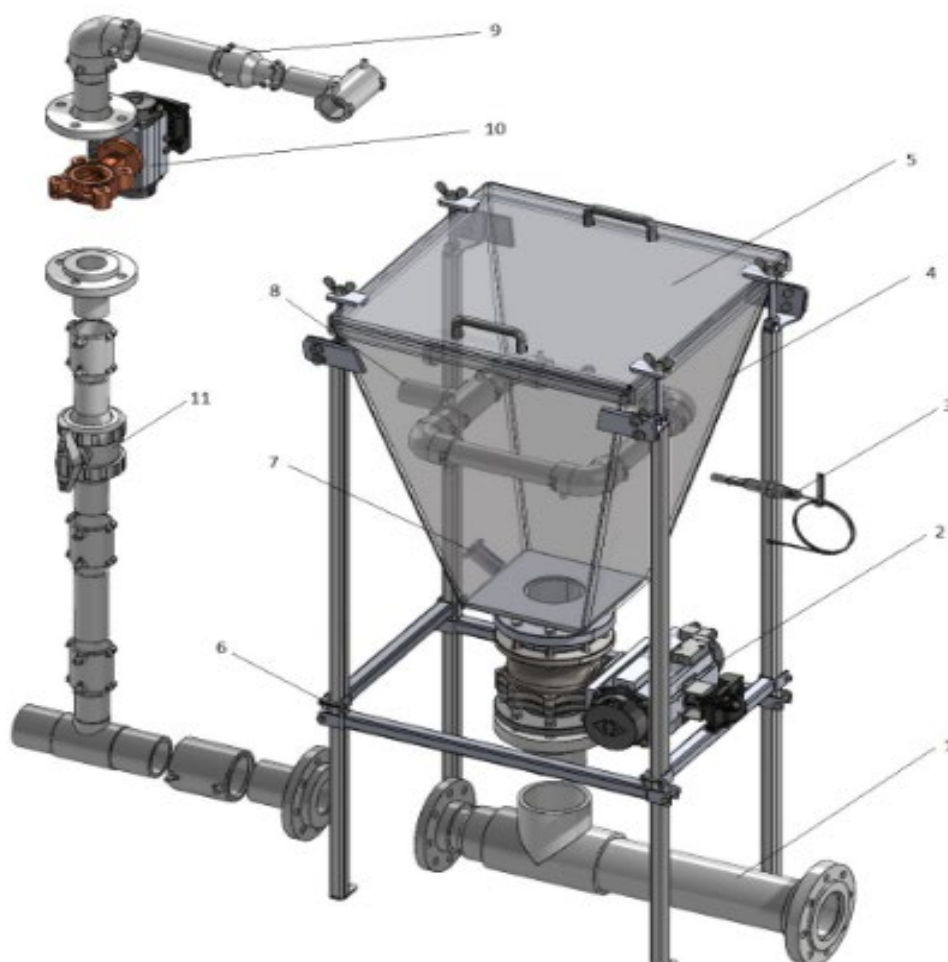
See cleaning and maintenance routines form for intervals on maintenance. Below form is taken for manufacturers maintenance schedule, deviations between the two are possible, but follow ScaleAQ recommendations as a general rule. Contact ScaleAQ service for more information or ask for a ScaleAQ Service Agreement.

Pump	Pump Type:	Serial no.:	Part name:	Part ref. no.:	Part no./Ident no.:	Main parts changed in each pump	Recommended spares for 2 years of operation	Recommended spares for 5 years of operation	Recommended spares for 10 years of operation
mpet									
MK300 WATER PELLETT PUMP	NB-AC 65-200/91/220 U3 40D-W133-38/300		VOLUTE CASING	102	540757	1			
MK300 WATER PELLETT PUMP	NB-AC 65-200/91/220 U3 40D-W133-38/300		CASING COVER	161	749023	1			
MK300 WATER PELLETT PUMP	NB-AC 65-200/91/220 U3 40D-W133-38/300		SHAFT ASSY.	220.1	749612	1		1	
MK300 WATER PELLETT PUMP	NB-AC 65-200/91/220 U3 40D-W133-38/300		IMPELLER	230.01	749986	1			1
MK300 WATER PELLETT PUMP	NB-AC 65-200/91/220 U3 40D-W133-38/300		O-RING	400.01	592309	1	1	1	
MK300 WATER PELLETT PUMP	NB-AC 65-200/91/220 U3 40D-W133-38/300		MECHANICAL SEAL incl spacer	433.01	950405	1	1	1	
MK300 WATER PELLETT PUMP	NB-AC 65-200/91/220 U3 40D-W133-38/300		IMPELLER NUT	922.01	14399	1			
MK300 WATER PELLETT PUMP	NB-AC 65-200/91/220 U3 40D-W133-38/300		SPRING WASHER	936.01	21705	1			
MK300 WATER PELLETT PUMP	NB-AC 65-200/91/220 U3 40D-W133-38/300		KEY	940.01	477896	1			
MK300 WATER PELLETT PUMP	NB-AC 65-200/91/220 U3 40D-W133-38/300		BALLBEARING FOR EL. MOTOR		93190	2		2	
MK300 FEED PUMP	NB 150-200/01/230 U3 40D-W133-42/350		VOLUTE CASING	102	658999	1			
MK300 FEED PUMP	NB 150-200/01/230 U3 40D-W133-42/350		CASING COVER	161	47038	1			
MK300 FEED PUMP	NB 150-200/01/230 U3 40D-W133-42/350		SHAFT ASSY.	220.1	749705	1		1	
MK300 FEED PUMP	NB 150-200/01/230 U3 40D-W133-42/350		IMPELLER	230.01	543176	1			1
MK300 FEED PUMP	NB 150-200/01/230 U3 40D-W133-42/350		O-RING	400.01	592304	1	1	1	
MK300 FEED PUMP	NB 150-200/01/230 U3 40D-W133-42/350		MECHANICAL SEAL incl spacer	433.01	950407	1	1	1	
MK300 FEED PUMP	NB 150-200/01/230 U3 40D-W133-42/350		IMPELLER NUT	922.01	14400	1			
MK300 FEED PUMP	NB 150-200/01/230 U3 40D-W133-42/350		SPRING WASHER	936.01	17997	1			
MK300 FEED PUMP	NB 150-200/01/230 U3 40D-W133-42/350		KEY	940.01	470708	1			
MK300 FEED PUMP	NB 150-200/01/230 U3 40D-W133-42/350		BALLBEARING FOR EL. MOTOR		15347	2		2	

4 SLUICE

4.1 ScaleAQ Water Feeding Sluice unit

#451178



Main parts

Pos.	Part	Material (Name)
1	Eductor	4" PVC eductor
2	Ball valve w/actuator	4" SS ball valve w/eductor
3	Level Switch	Level switch
4	MK 900 PE funnel	PE funnel
5	MK 900 PE lid	PE lid
6	MK 900 frame	Stainless steel frame - 316
7	Pressure transmitter	Pressure transmitter
8	Spraying nozzle pipe	PE Spraying nozzle pipe
9	Pipe parts for spraying pipe	PE Pipe parts for spraying pipe
10	Ball valve w/actuator	2" SS ball valve w/eductor
11	Manual ball valve	2" manual ball valve PVC

Position	Description	Product No.
3	SAQ WF Sluice Float switch	502674
10	SAQ WF Sluice Postioner Burkert 8792 w/bracket	504685
10	SAQ WF Sluice Postioner Burkert 8792	502673
1	Enductor (PVC)	On request
10	SAQ WF Sluice – Filling valve DN50	502672
2	DN100 ball valve	On request
X	DN100 ball valve aktuator	On request
X	DN100 ball valve solenoid	On request

Maintenance:

Monthly check of bolts and fixings.

If valves have not been in use, operate valve several times to ensure they don't seas up.

Actuators have a life expectancy of 1 million movements.

Valves have a life expectancy of > ten years.

5 ACTUATORS/VALVES

5.1 Intake Valve/Actuator

Position	Description	Tag id no
X	Main inlet valve	VP-001
X	Main inlet valve aktuator	VP-001
1	Main inlet valve solenoid	VP-001
10	Manual valve inlet pump P-001	VM-001
2	Manual valve inlet pump P-002	VM-002
X	Manual valve inlet pump P-003	VM-003
X	Manual valve inlet pump P-001	VM-004
X	Manual valve inlet pump P-002	VM-005
X	Manual valve inlet pump P-003	VM-006
X	Non-return valve inlet pump P-001	NR-001
X	Non-return valve inlet pump P-002	NR-002
X	Non-return valve inlet pump P-003	NR-003

5.2 Feeding line valves/actuators

Please see P&ID for which tag-id number each valve has

Position	Description	Tag id no
X	Pneumatic valve into feeding line - valve	VP-011
X	Pneumatic valve into feeding line - aktuator	VP-011
1	Pneumatic valve into feeding line - solenoid	VP-011
	<i>Valve above is the same on all feeding lines – first and second number in tag id changes</i>	

2	Pneumatic valve – filling of sluice - valve	VP-012
X	Pneumatic valve – filling of sluice - actuator	
X	Pneumatic valve – filling of sluice - solenoid	
	<i>Valve above is the same on all feeding lines – first and second number in tag id changes</i>	
X	Pneumatic valve – bottom valve sluice - valve	VP-013
X	Pneumatic valve – bottom valve sluice - actuator	
X	Pneumatic valve – bottom valve sluice - solenoid	
	<i>Valve above is the same on all feeding lines – first and second number in tag id changes</i>	
X	Pneumatic valve – last valve on feedline - valve	VP-014
X	Pneumatic valve – last valve on feedline - actuator	VP-014
X	Pneumatic valve – last valve on feedline - solenoid	VP-014
	<i>Valve above is the same on all feeding lines – first and second number in tag id changes</i>	
X	Manual valve – before filling of sluice - valve	VM-011
	<i>Valve above is the same on all feeding lines – first and second number in tag id changes</i>	

Maintenance:

Valves, actuators and solenoids are maintenance free in principle but needs to be operated at least once a month in standstill condition. Estimated lifecycle interval for these valves is between half a million and one million movements.

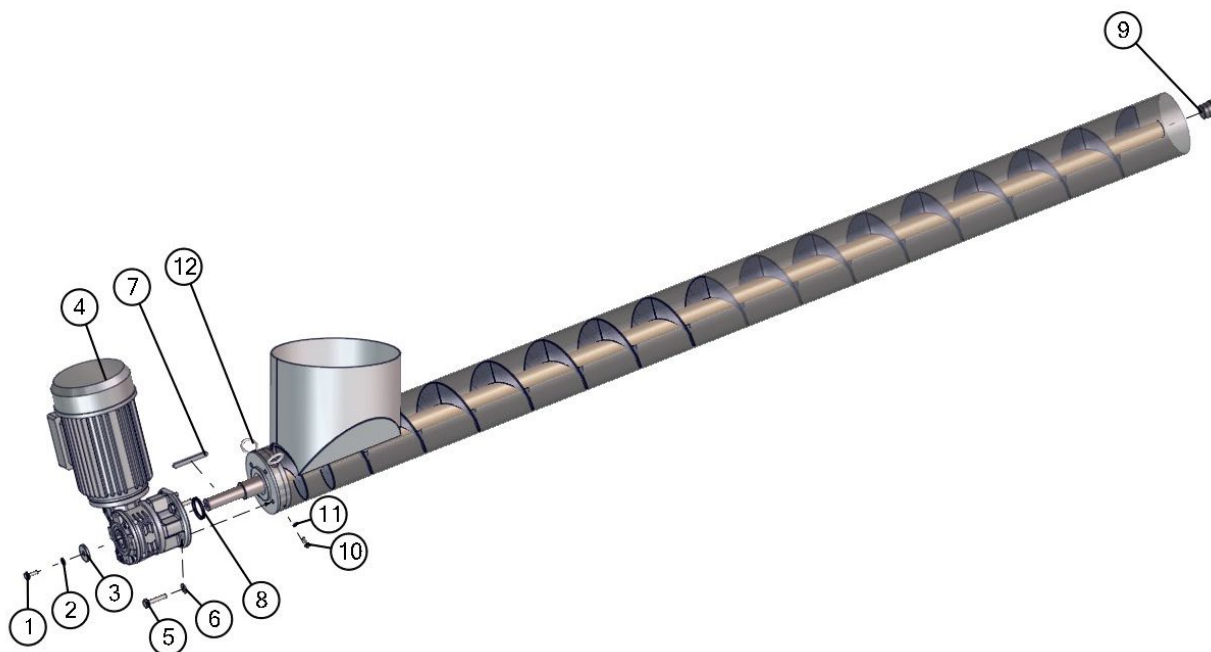
Gaskets are normally no required to be changed, if there is leaky valve then the whole valve is changed.

It is very important that the correct P&ID tag id number is communicated when service or changing of a valve is needed.

6 AUGER

The length of the auger varies from installation to installation.

6.1 Auger 0,8 m – 3,4 m



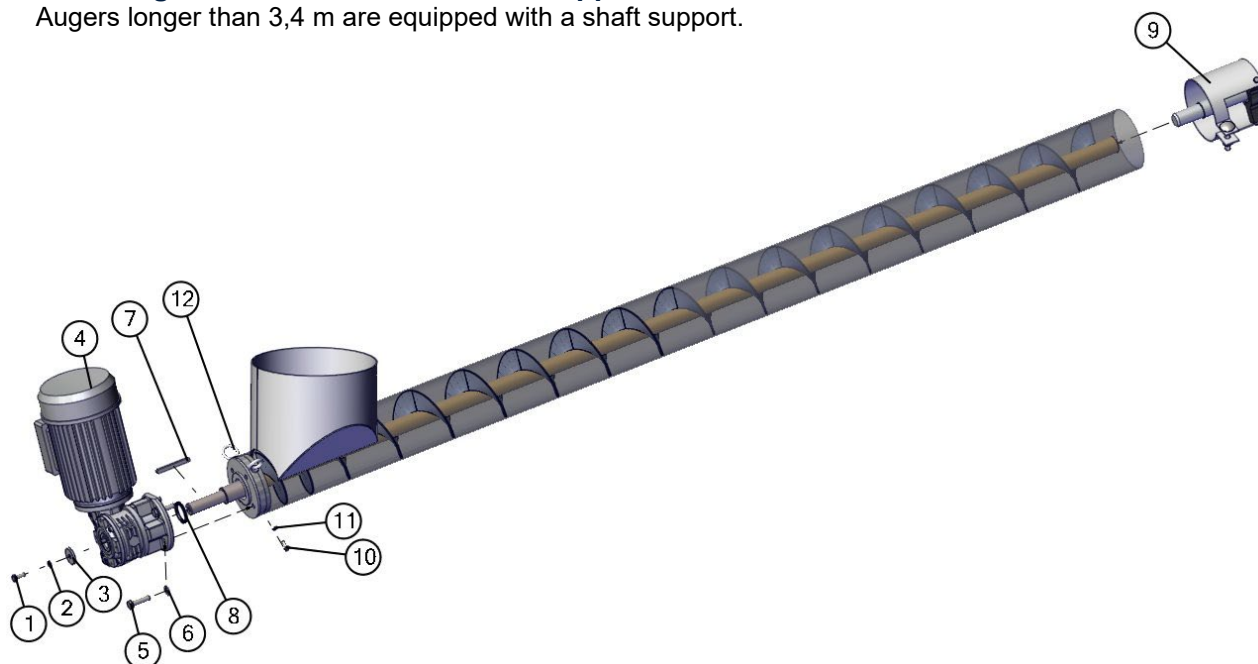
Position	Description	Product No.	Qty
1	Hex screw grade a b M8x20		1
2	Curved spring lock washer DIN 128 - A8		1
3	Motor washer	407872	1
4	Auger motor	407869	1
	Gear 1/18 VS50 18 IEC80B14A + FC	408380	1
5	Hex screw grade a b M10x40		4
6	Washer DIN 125 - A 10.5		4
7	Key 8x7x70	409589	1
8	Seal 35X45X4	407877	1
9	Tube plug	411559	1
10	Hex screw grade a b M6x16		2
11	Curved spring lock washer DIN 128 - A6		2
12	M6 eyebolt	407871	2

Misc. parts:

Part No.	Description
408348	Chain for installing the auger below the silo
407874	Flat hose PVC (to cover and seal)
407876	M6 chain shackle
408277	HPJ clamp 210 mm to seal the hose on the boxer
408279	HPJ clamp 260 mm to seal the hose to the auger inlet
1262671	Nipple M20 (cable gland)

6.2 Auger 3,5 m – 4,5 m with shaft support

Augers longer than 3,4 m are equipped with a shaft support.



Position	Description	Product No.	Qty
1	Hex screw grade a b M8x20		1
2	Curved spring lock washer DIN 128 - A8		1
3	Motor washer	407872	1
4	Auger motor	407869	1
	Gear 1/18 VS50 18 IEC80B14A + FC	408380	1
5	Hex screw grade a b M10x40		4
6	Washer DIN 125 - A 10.5		4
7	Key 8x7x70	409589	1
8	Seal 35X45X4	407877	1
9	Auger shaft support	420294	1
10	Hex screw grade a b M6x16		2
11	Curved spring lock washer DIN 128 - A6		2
12	M6 eyebolt	407871	2

Misc. parts:

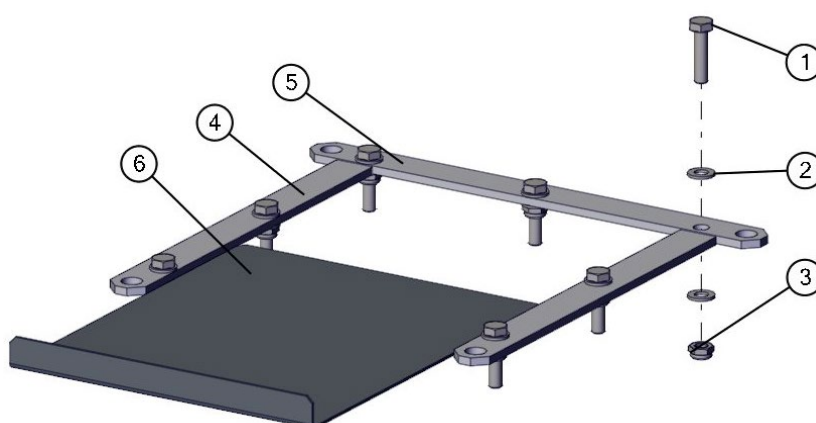
Part No.	Description
408348	Chain for installing the auger below the silo
407874	Flat hose PVC (to cover and seal)
407876	M6 chain shackle
408277	HPJ clamp 210 mm to seal the hose on the boxer
408279	HPJ clamp 260 mm to seal the hose to the auger inlet
1262671	Nipple M20 (cable gland)

Maintenance:

The User shall inspect the Auger weekly to ensure that the seal, where the auger penetrates the Sluice Box, is in good condition and to ensure that the Plastic Skirt, which wraps around the silo outlet and the Auger, is free of any damage that may allow feed to escape and fall to the floor.

7 SILO SHUT OFF PLATE

#408544



Position	Description	Product No.	Qty
1	Hex screw grade a b M10x40		7
2	Plain washer grade a M10		14
3	Lock nut M10		7
4	Flange Packer B	408545	2
5	Flange Packer	408546	1
6	Shut off plate	407886	1

8 FREQUENCY INVERTERS



Only qualified personnel (electricians) can replace these components. It is recommended to contact ScaleAQ for service!

Description	Product No.
Frequency-Drive 22kW 400V (for supply pumps 15kW)	501228
Frequency-Drive 11kW 400V (for pellet pumps 7,5kW)	501189

Maintenance:

Clean outside of inverter of dust once a year. Use a dry cloth, no water.

9 SENSORS

9.1 Pressure transmitters



Description	Product No.
SAQ WF Vegabar 28 – WF Feedline (0 - 5 bar (PP - 222 2H9)	502340
SAQ WF Vegabar 28 – WF Sluice (pp-222 ZBC 226)	504381

Maintenance:

Cleaning of sensor end is recommended every year.

Reset of zero point is required every two years. Must be performed by ScaleAQ technician.

9.2 Flow transmitters



Contact type



Noncontact type

Description	Product No.
Flow transmitter – water feeding – noncontact (8045)	451059
SAQ WF Flow transmitter – contact (type 8045) W/fit	502273
<i>Check which type flow transmitter is installed before ordering, 451059 is only installed in a few of the early systems. 502273 is standard on all new systems.</i>	

Maintenance:

Removal of transmitters and cleaning of sensor end is recommended every year.

Running of Xtune program to reset transmitter is required every year and **every time** there has been a change in the valve it operates.

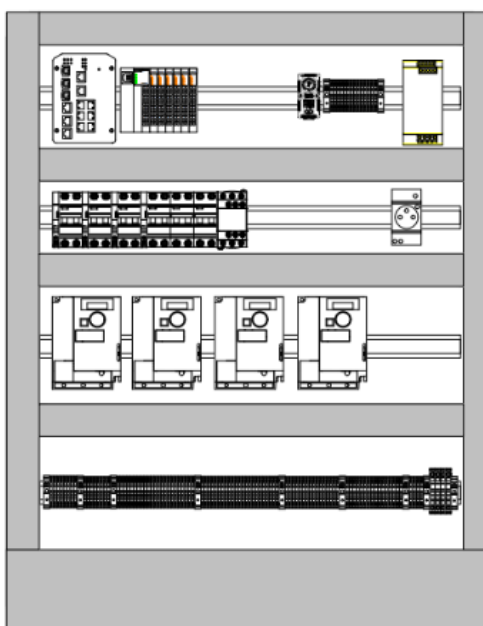
10 FEEDING CABINETS

10.1 PLC CABINET

#451189



Only qualified personnel (electricians) can replace these components. It is recommended to contact ScaleAQ for service!



Picture above is of an PLC Cabinets inside

Position	Description (only needed spares)	Product No.	Qty
1	Power supply		1
2	Crevis GT-3114		4
3	Crevis GT-4214		1
4	Crevis GT-12DF		3
5	Crevis GT-226F		2
6	Crevis GN-9289		1
7	PLC X10 control		1
8	ATV320 inverter for auger		4
9	Jetnet 5010G		1

Maintenance:

The User must ensure that the door(s) are kept closed and locked at all times.

No objects are to be placed in front of the Feeding Cabinet, which may hinder someone trying to access

the System switches or Emergency Stop button.

The User shall ensure that the Cabinet is not subjected to excess heat or moisture from poor maintenance of the Facility, i.e. missing doors or windows exposing the cabinet to the elements.

Dust filter in fan needs to be changed when needed, inspection of this filter every year is required.

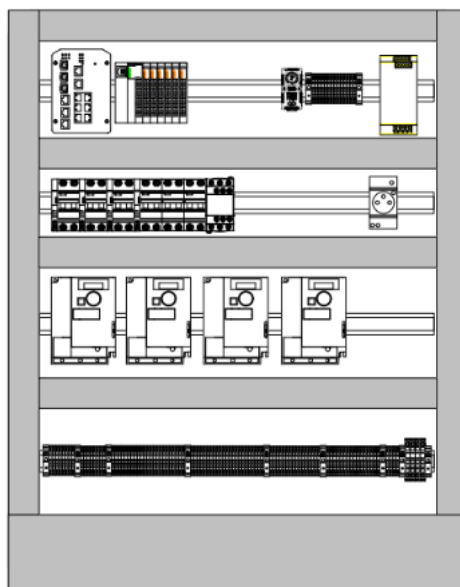
Check of operation of fan is required every year.

10.2 IO CABINET

#451190



Only qualified personnel (electricians) can replace these components. It is recommended to contact ScaleAQ for service!



Picture above is of an PLC Cabinets inside

Position	Description (only needed spares)	Product No.	Qty
1	Power supply		1
2	Crevis GT-3114		4
3	Crevis GT-4214		1
4	Crevis GT-12DF		3
5	Crevis GT-226F		2
6	Crevis GN-9289		1
7	PLC X10 control		1
8	ATV320 inverter for auger		4
9	Jetnet 5010G		1
10			1
11			1
12			1
13			1
14			1

Maintenance:

The User must ensure that the door(s) are kept closed and locked at all times.

No objects are to be placed in front of the Feeding Cabinet, which may hinder someone trying to access

the System switches or Emergency Stop button.

The User shall ensure that the Cabinet is not subjected to excess heat or moisture from poor maintenance of the Facility, i.e. missing doors or windows exposing the cabinet to the elements.

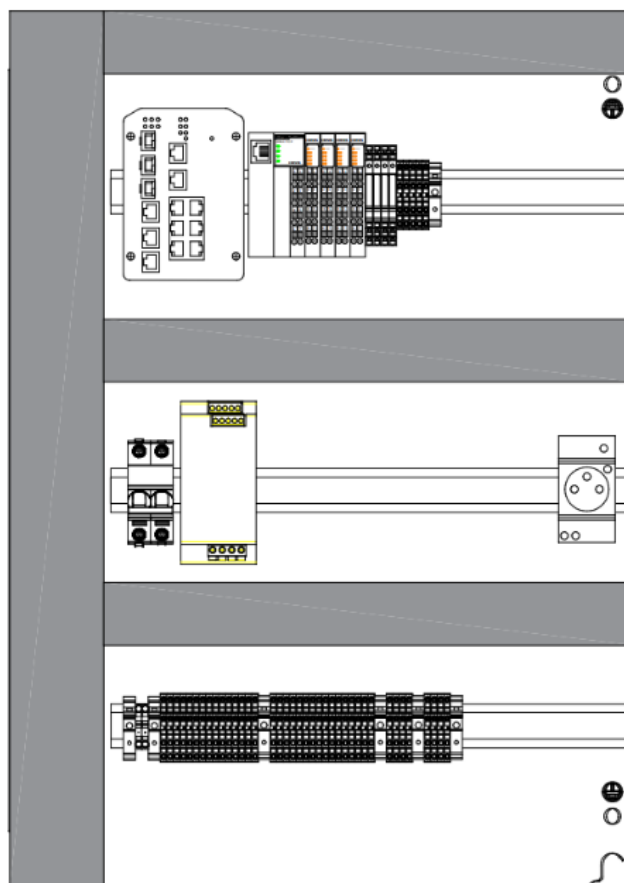
Dust filter in fan needs to be changed when needed, inspection of this filter every year is required.

Check of operation of fan is required every year

10.3 Supply pump cabinet #502115



Only qualified personnel (electricians) can replace these components. It is recommended to contact ScaleAQ for service!



Position	Description (only needed spares)	Product No.	Qty
1	Power supply		1
2	Crevis GT-3114		1
3	Crevis GT-4214		1
4	Crevis GT-12DF		1
5	Crevis GT-226F		1
6	Crevis GN-9373		1
8	Jetnet 5010G		1

Maintenance:

The User must ensure that the door(s) are kept closed and locked at all times.

No objects are to be placed in front of the Feeding Cabinet, which may hinder someone trying to access the System switches or Emergency Stop button.

The User shall ensure that the Cabinet is not subjected to excess heat or moisture from poor maintenance of the Facility, i.e. missing doors or windows exposing the cabinet to the elements. inspection of this filter every year is required.

11 PNEUMATICS

11.1 Compressor

#502137

Description	Product No.	Qty
SAQ WF Compressor 400V CP4200 RT w/drier and filter	504049	1
SAQ WF Compressor 400V CP4200 RT (only compressor)	505866	

Maintenance:

Any air leaks on the pneumatic system can cause the compressor to malfunction. If the compressor is running a lot more than usual, an investigation on a possible air leak, should be performed or ScaleAQ Service should be contacted as soon as possible.

Slow valve operation could also be caused by an air leak on the pneumatic system.

Service to entire pneumatic system is critical to the entire water feeding system and should be a high priority.

See attached maintenance labels from manufacturer:

Torquing of the compressor head bolts:

TABLE 1 – TIGHTENING OF HEAD TENSION RODS		
	Nm Min. torque	Nm Max. torque
Screw M6	9	11
Screw M8	22	27
Screw M10	45	55
Screw M12	76	93
Screw M14	121	148

Picture above is from manufacturers instruction manual, see this for more information.

TABLE 2 – MAINTENANCE			
FUNCTION	AFTER THE FIRST 100 HOURS	EVERY 100 HOURS	EVERY 300 HOURS
Cleaning of intake filter and/or substitution of filtering element		•	
Change of oil*	•		•
Tightening of head tension rods	The check must be carried out prior to the first compressor starting.		
Draining tank condensate	Daily		
Checking the tension of the belts	Periodically		

Picture above is from manufacturers instruction manual, see this for more information.



Picture above is of a compressor of similar type as used

11.2 Drier

#ask ScaleAQ for drier for water feeding

Position	Description	Product No.	Qty
1	Beko drypoint RA	On request	1

Maintenance:

No maintenance is required, only ensure that unit is running.

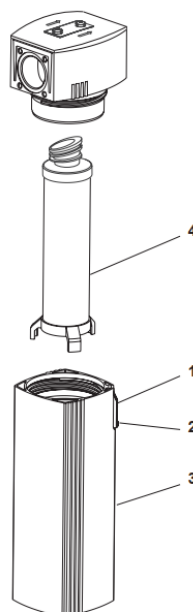


Picture above is of an drier of similar type as used

11.3 Filter

#502676

Position	Description	Product No.	Qty
1	Filter housing screw		
2	Filter housing slide		
3	Filter housing		
4	SAQ WF CP-4200 Filter for pneumatics drier	502676	1



Picture above is for filter on compressor CP-390

Maintenance:

See manufacturers manual.

11.4 Oil for compressor

#502675

Position	Description	Product No.	Qty
1	SAQ WF CP-4200 Oil for compressor	502675	1

TABLE 2 – MAINTENANCE			
FUNCTION	AFTER THE FIRST 100 HOURS	EVERY 100 HOURS	EVERY 300 HOURS
Cleaning of intake filter and/or substitution of filtering element		•	
Change of oil*	•		•
Tightening of head tension rods	The check must be carried out prior to the first compressor starting.		
Draining tank condensate	Daily		
Checking the tension of the belts	Periodically		

Picture above is from compressor maintenance manual, please see manual before changing oil or other maintenance work is performed.

12 SCALEAQ SERVER

#420732



Only qualified personnel ScaleAQ personnel can replace these components.

Maintenance:

Only ScaleAQ personel can perform service and maintenance work on this server solution.

No specific maintenance routines is required from customers side other can keeping the environment the server is in at a stable humidity and temperature range.

13 SPONGES

#ScaleAQ are evaluating the best sponge used, contact product responsible water feeding for information or requests to do testing on your site.

Below are itemno for a sponge that is tested.

13.1 Sponge for cleaning pipes

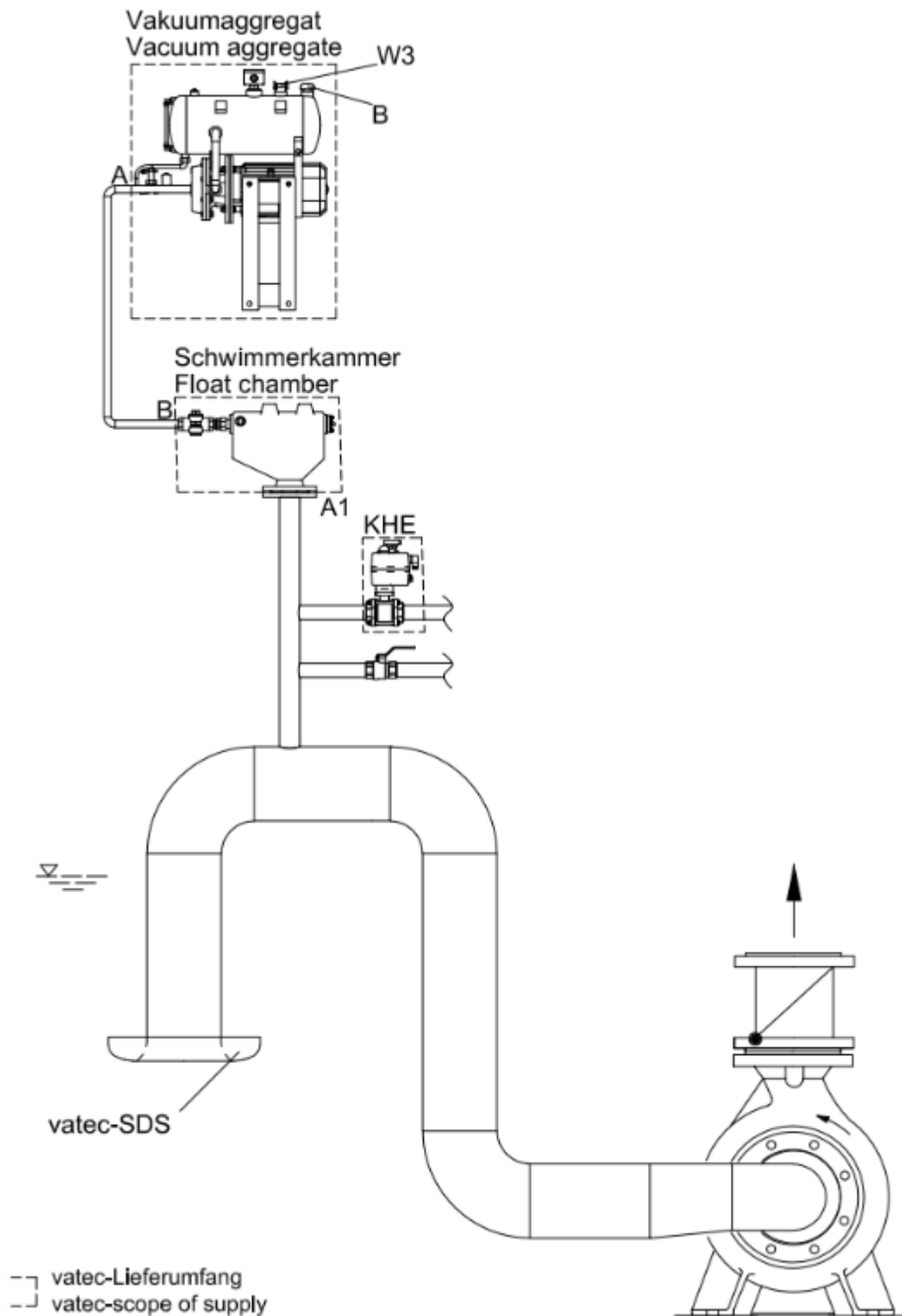
Position	Description	Product No.
1	SAQ WF cleaning sponge	505796



Picture above is of sponge type.

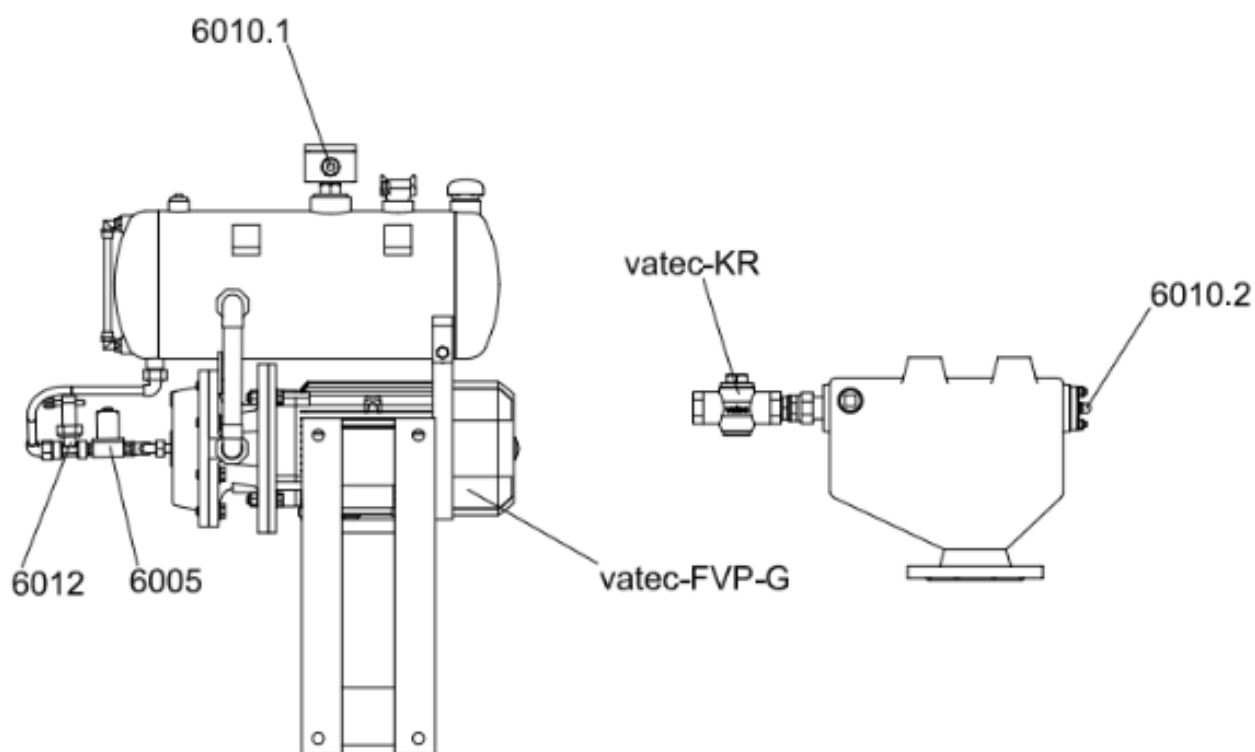
14 INLET VACUUM-SYSTEM (VATEC SYSTEM)

14.1 General overview



Picture above is meant as illustration of a general system

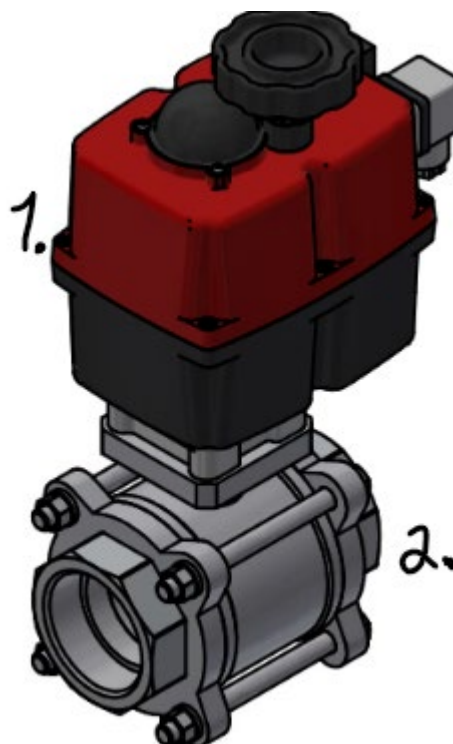
14.2 Spareparts for Inlet Vacuum-system (vatec)



Bestelltext (Beispiel)	Order Text (Example)
ASVA1351-U - 8330259 - 6005	
Typ	Type
Baugröße	Size
Komm.-Nr.	Serial No.
Position	Position

Pos.	Stck. Pcs.	Teil	Part
6005	1	Magnetventil Betriebsflüssigkeit	Solenoid Valve Service Liquid
6010.1	1	Schwimmerschalter Umlaufbehälter	Level Switch Circulation Tank
6010.2	1	Schwimmerschalter Vakuumbehälter	Level Switch Vacuum Tank
6012	1	Strömungswächter	Flow Control
vatec-FVP-G	1	Flüssigkeitsring-Vakuumpumpe	Liquid Ring Vacuum Pump
vatec-KR	1	Vakuumgesteuertes Absperrventil	Vacuum controlled Shut-Off Valve

Detail picture of spare parts



Inlet vacsystem valve+ actuator (505733)

Position	Description	Product No.
x	SAQ WF Inlet VACsystem (Vatec system) (complete system new)	503602
x	SAQ WF Inlet VACsystem Float Chamber level switch (6010.2)	506138
6010.1	SAQ WF Inlet VACsystem Circulation tank level switch (6010.1)	506139
1 + 2	SAQ WF Inlet VACsystem valve+actuator (J4c_555 + VLA-521T)	505733
1	SAQ WF Inlet VACsystem Aktuator (J4C_555)	505735
2	SAQ WF Inlet VACsystem Valve (VLA-521T)	505734
FVP-G	SAQ WF Inlet VACsystem pump vatec (FVP-G)	506142
KR	SAQ WF Inlet VACsystem Vacuum-controlled shut off-valve (vatec-KR)	506143
6005	SAQ WF Inlet VACsystem solenoid valve service liquid tank (6005)	506144
6012	SAQ WF Inlet VACsystem flow control (6012)	506145

15 RECOMMENDED SPAREPARTS (PER CUSTOMER SITE)

Below is a list of the recommended spare parts that each feeding system has available onsite. Please see the manual if the part can be changed without contacting ScaleAQ service. Several parts in this feeding system requires special competence with setup to ensure proper operation of the feeding system.

Qty:	Description:	Itemno:	ScaleAQ setup needed:
1pcs	Pellet pump complete with motor and pump	501609	
2pcs	gasket set for intake pump	504685/504500	
2pcs	gasket set for pelletpump	504283	
4pcs	Pressure transmitter – feedline	502340	
2pcs	Pressure transmitter – sluice	504381	
1pcs	Flow transmitter	check type page 19	x
2pcs	Sluice filling valve DN50	502672	
2pcs	ScaleAQ WF Positioner kit	504685	x
1pcs	Power supply PLC/IO cabinet	449950	
1pcs	Crevis GT-3114	451001	x
1pcs	Crevis GT-4214	451004	x
1pcs	Crevis GN-9289	450249	x
1pcs	Crevis GN-9373	501614	x
1pcs	Inverter pellet pump 11kW	501189	x
1pcs	Float switch sluice	502674	
4pcs	Oil for pneumatic compressor	502675	
1pcs	Filter for pneumatic drier	502676	
5pcs	Sponges for cleaning feed pipes	505796	
1pcs	Auger motor and gear	407869/408380	
1pcs	Inlet VACsystem Valve	505734	

Notes:

These spares must be stored correctly according to the manufacturer's specifications. ScaleAQ recommends they are stored onboard the barge to ensure easy access if needed during repair or maintenance.