

redox

CONSTANT CORROSION CONTROL



eleXion

Redox HC+

(Basic installation manual)

Redox 600 HC+ (Basic installation manual).

Contents

Transportation2

Fixing the vessel.....4

Valve kit installation.....5

Inlet and outlet connections.6

Installation Principle8

Dimensions3

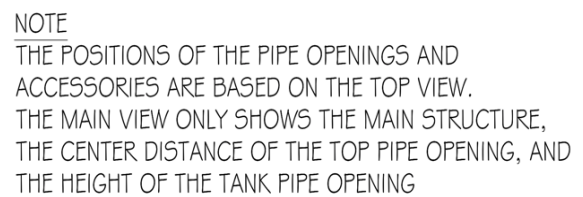
Commissioning the reaction vessel9

Technical information

redoX XL+ 2000			
Dimensions			
Tank height (including AAV)		3304 mm	
Tank width (excluding manhole)		1264 mm	
Shell thickness		8mm	
Vessel information			
Design code		PED 2014/68/EU	
Weight		TBC	
Wet side material		316 SS	
External jacket material		304 SS	
Top head vessel construction		Oval 8 mm	
Bottom head vessel construction		Oval 8mm	
Cylinder type		Cylindrical	
Insulation		Rock wall 75 mm	
Tank support		4 legs	
Lifting lugs		2 lugs	
Tank finish		Pickled & passivated	
Test pressure		16 bar	
Maximum operating pressure		10 bar	
UP TO 24 BAR AVAILABLE ON REQUEST			
Maximum operating temperature		100 degrees	
Effective capacity		2000 litres	
Connection sizes			
Air vent		¾”	
Quick vent		1”	
Inlet		DN 65 flange	
Outlet		DN 65 flange	
Drain		2”	
Pressure gauge connection		½”	
Anode access		DN 450 vertical hanging manhole	
Operating information			
Circulating water volume only/ Buffer vessel volume not included			
Maximum system volume heating		<600,000 litres	
Maximum system volume cooling		<440,00 litres	
Recommended flow rate		<400 lpm	
Anode Structure		High purity	
Anode type		Exposed	
Anode maintenance meter		mA 50	
redoX XL+ 2000 Supplied Valves & accessories			
Item description	Part number	Size	Quantity
AAV	501500	¾”	1
Inlet/outlet 90-degree elbows	62660010	DN 65	2
Automatic balancing valve (103 valve - Caleffi)	10311323H	DN 65	1
Water meter	WDE-K50/P50WH	DN 65	1
Butterfly valve	140-1802 CST	DN 65	4
Pressure gauge	BES21921	⅜"	1
Brass bush	BES6623	⅜" X ½”	1
Pressure gauge isolation valve	IT0910012	½”	1
Drain valve	IT0910200	2”	1
Pump	60220914	DAB Evoplus 60/340.65 M	1



Dimensions



Transportation

redoX HC+ reaction vessels are supplied with lifting eyes capable of supporting the weight of the tank, allowing the installer to lift the reaction vessel into position.

The installer is responsible for ensuring suitable straps, supports and appropriate health and safety measures are enforced while maneuvering the reaction vessel into position.



Fixing the vessel

The vessel must be fixed into location before attempting to open the hinged manhole door, failure to do so could cause the vessel to fall over.

The location in which the reaction vessel is to be installed must be designed to take the weight of the reaction vessel when full of water.

Any platforms, plinths, bases and frames must be capable of taking the weight of the tank when full and provide solid fixings to ensure the vessel is firmly secured to the structure.

Use only the supplied fixings.

Each foot consists of two fixing points.

Ensure that the supplied anchor bolts are firmly secured.

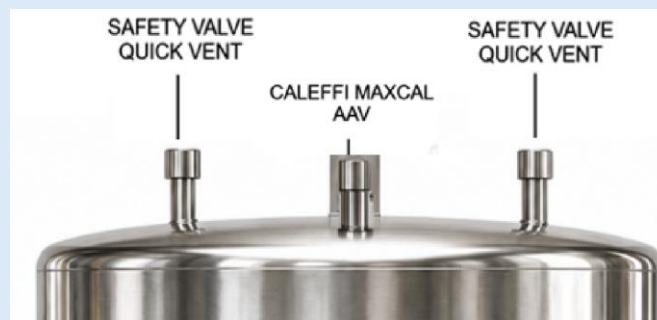


Valve kit installation

Top connections

The redoX 600 HC+ is supplied with all valves required to complete the installation of the reaction vessel.

The reaction vessel lid has 3 x 1" connections.



The center connection is for use with the Caleffi MAXCAL AAV.

No additional isolation should be fitted before the Maxcal AAV.



The two outer connections are interchangeable to suit site preference.

A safety valve (PRV) is supplied with the tank designed to operate if the maximum design pressure of the vessel is exceeded (10 bar).

The second connection can be utilized as a quick vent, to aid in filling and draining of the reaction vessel. A 1" isolation valve is supplied.

It may be preferable for the installer to install a pipe arrangement between the top of the reaction vessel and the isolation valve, with this terminating at low level. This will aid the installer in accessing the isolation valve during routine maintenance and initial filling.



Bottom connection

At the base of the reaction vessel is a 2” female BSP connection, which is to be utilized as the base drain for the reaction vessel.

A 2” BSP F x F isolation valve has been provided, alongside a 2” BSP nipple.

It is advisable that the base drain is not reduced down in size to aid future maintenance.

It is preferable that the base drain is either discharged directly into a drain (through additional pipe work, installed via the installer) or directly into an IBC tank capable of taking the total volume of the reaction vessel (to aid in water conservation during routine maintenance).

Inlet and outlet connections.

At the rear of the tank located at high and low levels are the inlet and outlet connections for the reaction vessel.

The installer must install the valve kit as described below.

The supplied ABV has been preset to ensure the maximum flow rate of the redoX HC+ 600 is not exceeded.

The ABV has been preset and calibrated at the factory, during commissioning eleXion will confirm the flow rate is correct via use of the supplied water meter. Alternatively, the installer can use the supplied binder points and appropriate meter to register the flowrate through the ABV.

The inlet to the reaction vessel is the lower connection.

The outlet connection is the higher connection.

Supplied inlet and outlet connections are both DN65 flanges, which can be installed in any orientation to suit site installation preference.

The supplied long radius 90 degree elbows (DN65) allow the installer to change the orientation of the pipe work to suit site conditions.

The pipe work can be installed to the left, right, up or downwards, alternatively the elbows can be discarded with the installer connecting directly to the rear of the vessel.

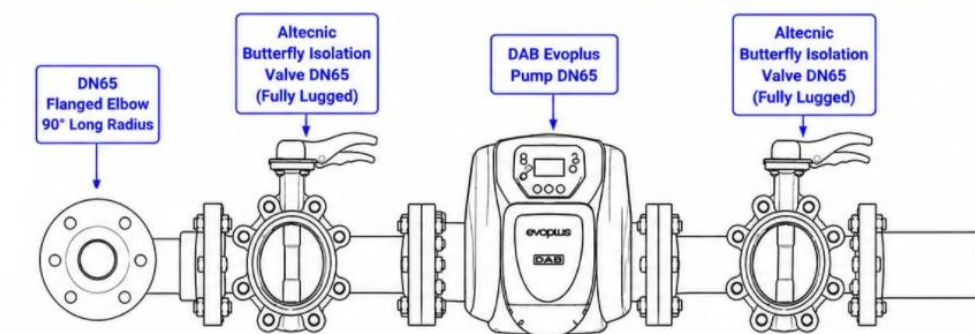
Inlet (lower connection) valve kit arrangement

- Long radius 90 degree elbow.
- Fully lugged butterfly valve
- DAB Evoplus pump
- Fully lugged isolation valve
- Installers pipe work

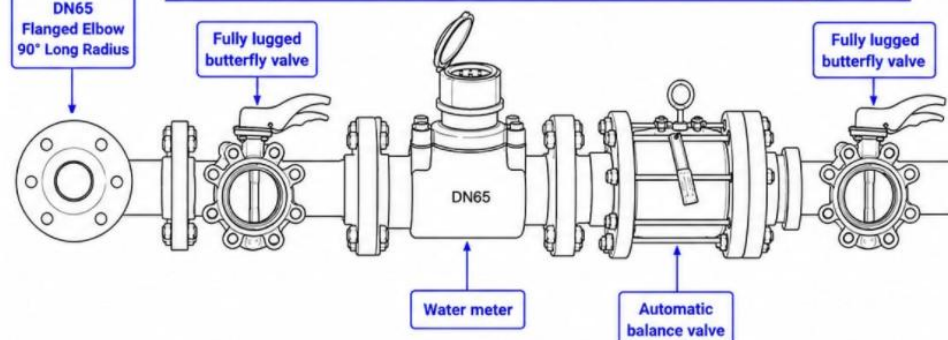
Outlet (upper connection) valve kit arrangement

- Long radius 90 degree elbow.
- Fully lugged butterfly valve
- Water meter
- ABV
- Fully lugged isolation valve
- Installers pipe work
- The pipe work installed via the installer should be at least DN65 in diameter.

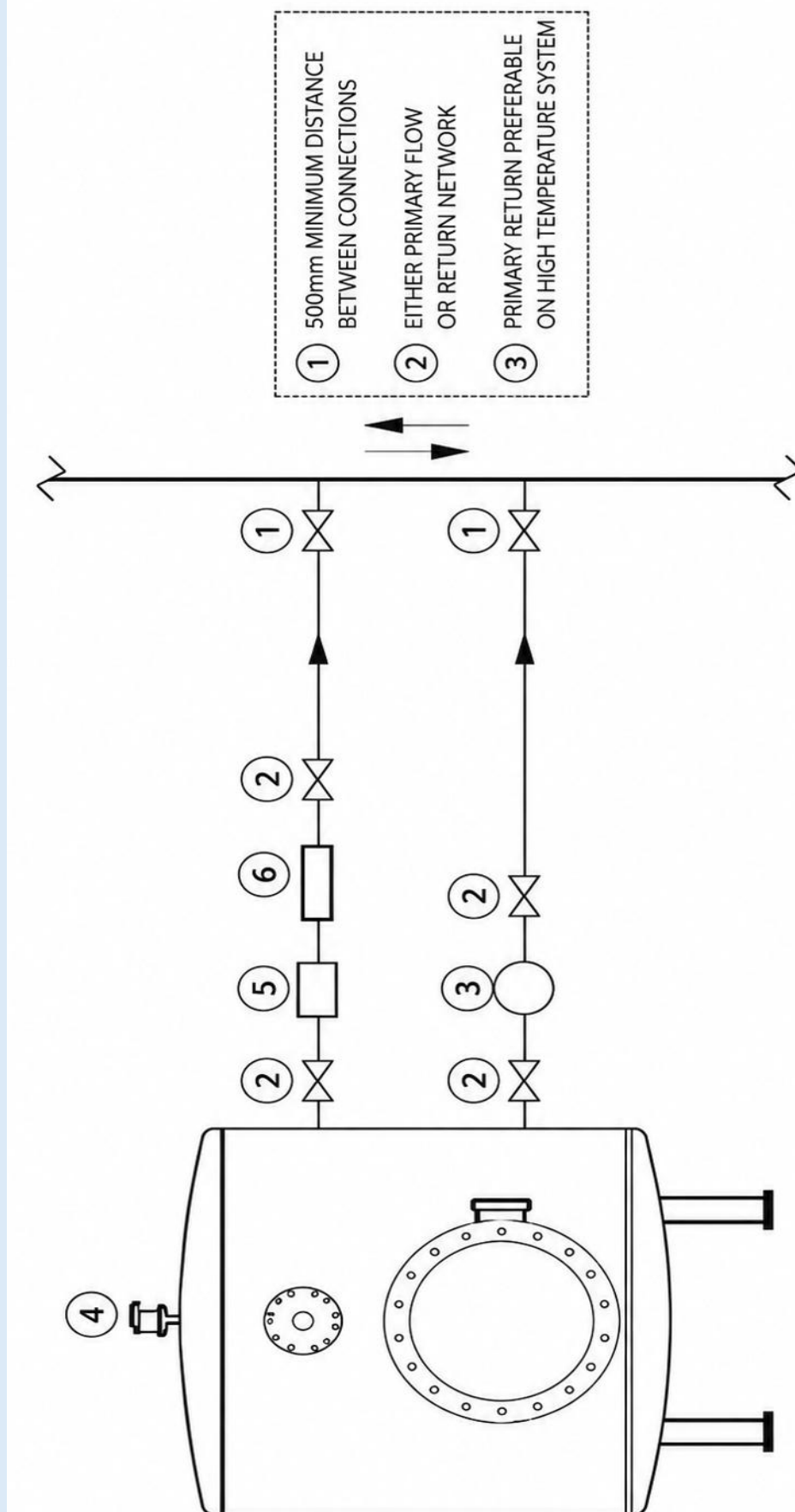
redoX Reaction Tank – Inlet Valve Kit Arrangement



redoX Reaction Tank – Outlet Valve Kit Arrangement



Installation Principle



Commissioning the reaction vessel

The installer must not fill the reaction vessel once installed.

The redox reaction vessel has been transported without the internal anode system installed. This is to protect the anode system during transport.

During commissioning eleXion will build the internal anode structure.

Once the anode system has been installed, the installer can then fill the reaction vessel and perform a local pressure test.

On completion, eleXion will continue to commission the redox reaction vessel and perform all tasks found within the commissioning checklist.