VACUUM DEGASSER

VIRADEG USER MANUAL

Note

CONTENTS

1) PREFACE

This user manual describes the installation,comission and operation of the VIRADEG V4, V6 and V9

Read the instructions before installation,comissioning and operation.
Keep the instructions for future reference.

This manual has been composed with the utmost care. Should,however, this manual contain any inaccuracies, Vira Inc.cannot be held responsible for this.

This manual describes the installation commissioning and operation of the VIRADEG types :

Type	Product Description
V4	4 bar ViraDeg vacuum degasser
V4 - R	4 bar Auto-refillable ViraDeg vacuum degasser
V6	6 bar ViraDeg vacuum degasser
V6 - R	6 bar Auto-refillable ViraDeg vacuum degasser
V9	9 bar ViraDeg vacuum degasser
V9 - R	9 bar Auto-refillable ViraDeg vacuum degasser

1.1) Symbols

Throughout the instructions the following symbols are used ;

	Warning
	Important Note
	Risk of electric shock
	Risk of burning

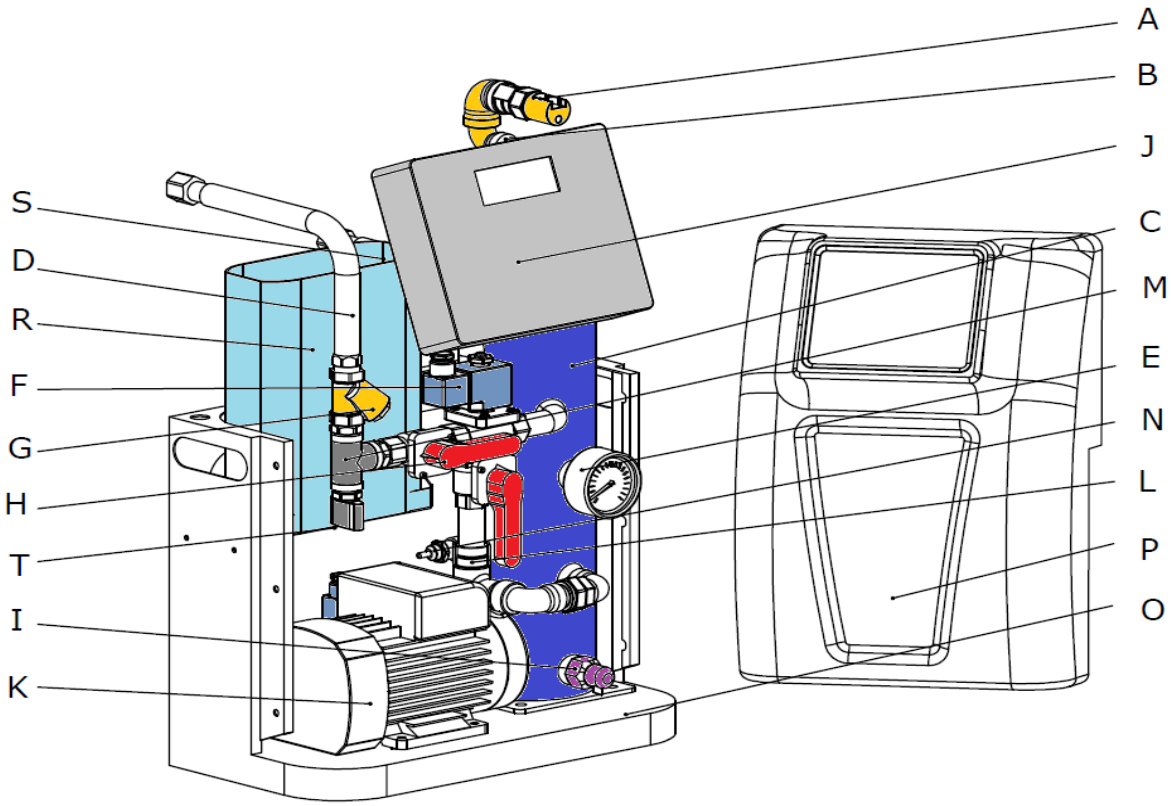
1.2) Scope of delivery

- ViraDeg
- User Manual
- Flex hoses
- Quick Setting Sheet
- Warranty Certificate

2) INTRODUCTION

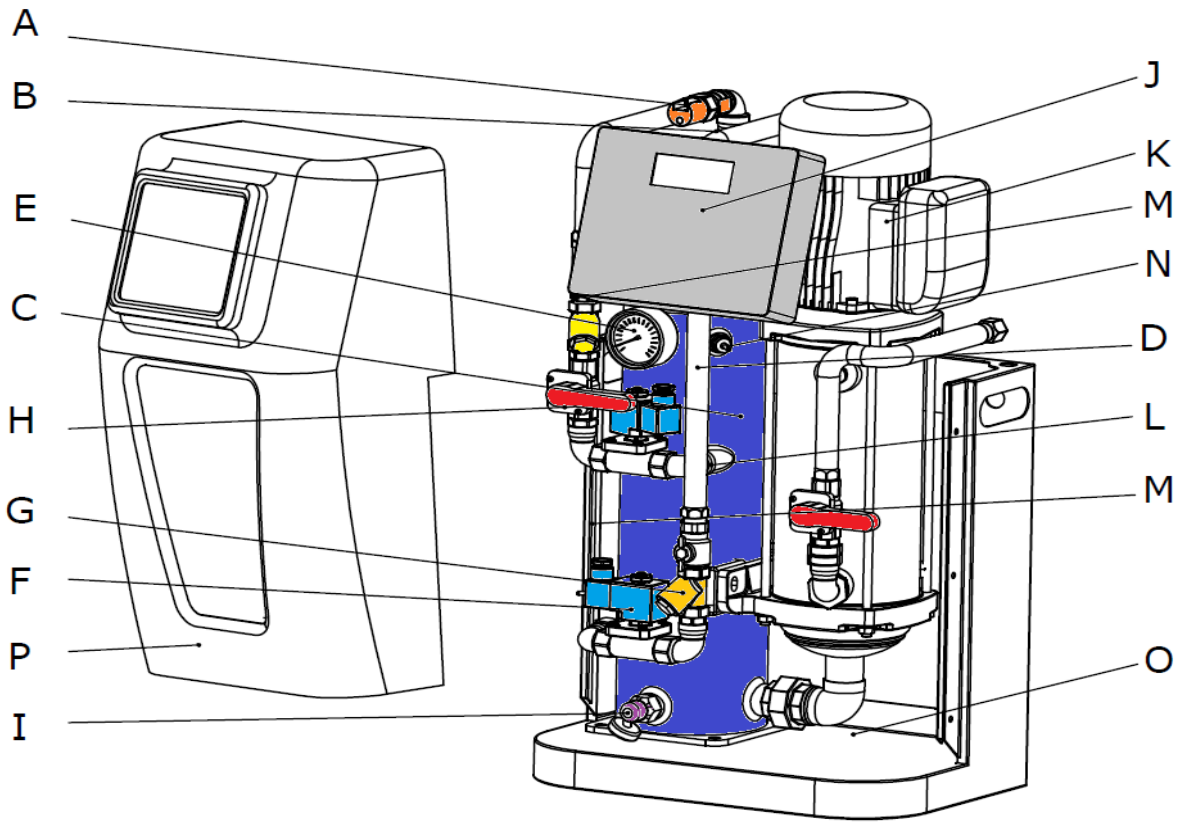
2.1) Overview of the units

2.1.1) Overview of V4



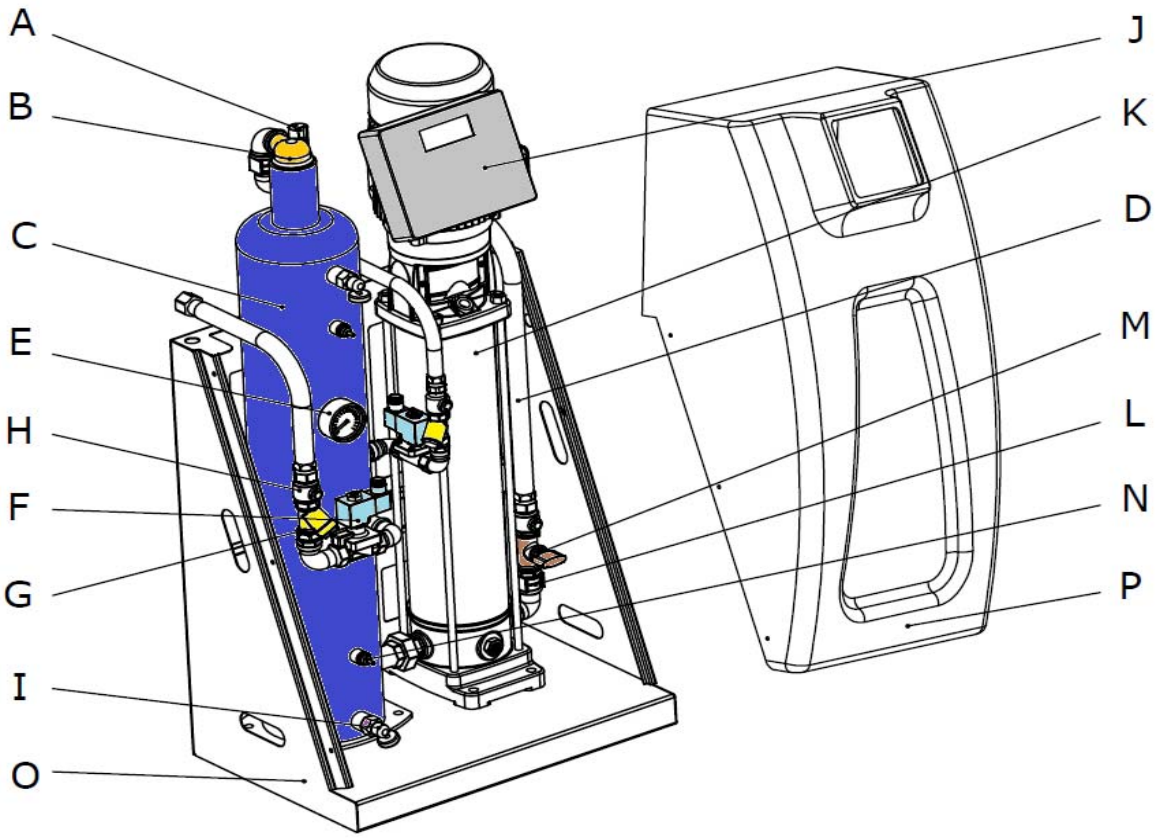
A	Flow Sensor	**K**	Pump
B	Auto Airvent	**L**	Check Valve
C	Deaeration Vessel	**M**	Pressure Sensor
D	Flex Hose	**N**	Level Probe
E	Manometer	**O**	Chasis
F	Solenoid Valve	**P**	Cover
G	Strainer	**R**	Refill Reservoir
H	Ball Valve	**S**	Float
I	Drain Valve	**T**	Thin Hose
J	Control Panel		

2.1.2) Overview of V6



A	Flow Sensor	**I**	Drain Valve
B	Auto Airvent	**J**	Control Panel
C	Deaeration Vessel	**K**	Pump
D	Flex Hose	**L**	Check Valve
E	Manometer	**M**	Pressure Sensor
F	Solenoid Valve	**N**	Level Probe
G	Strainer	**O**	Chasis
H	Ball Valve	**P**	Cover

2.1.3) Overview of V9



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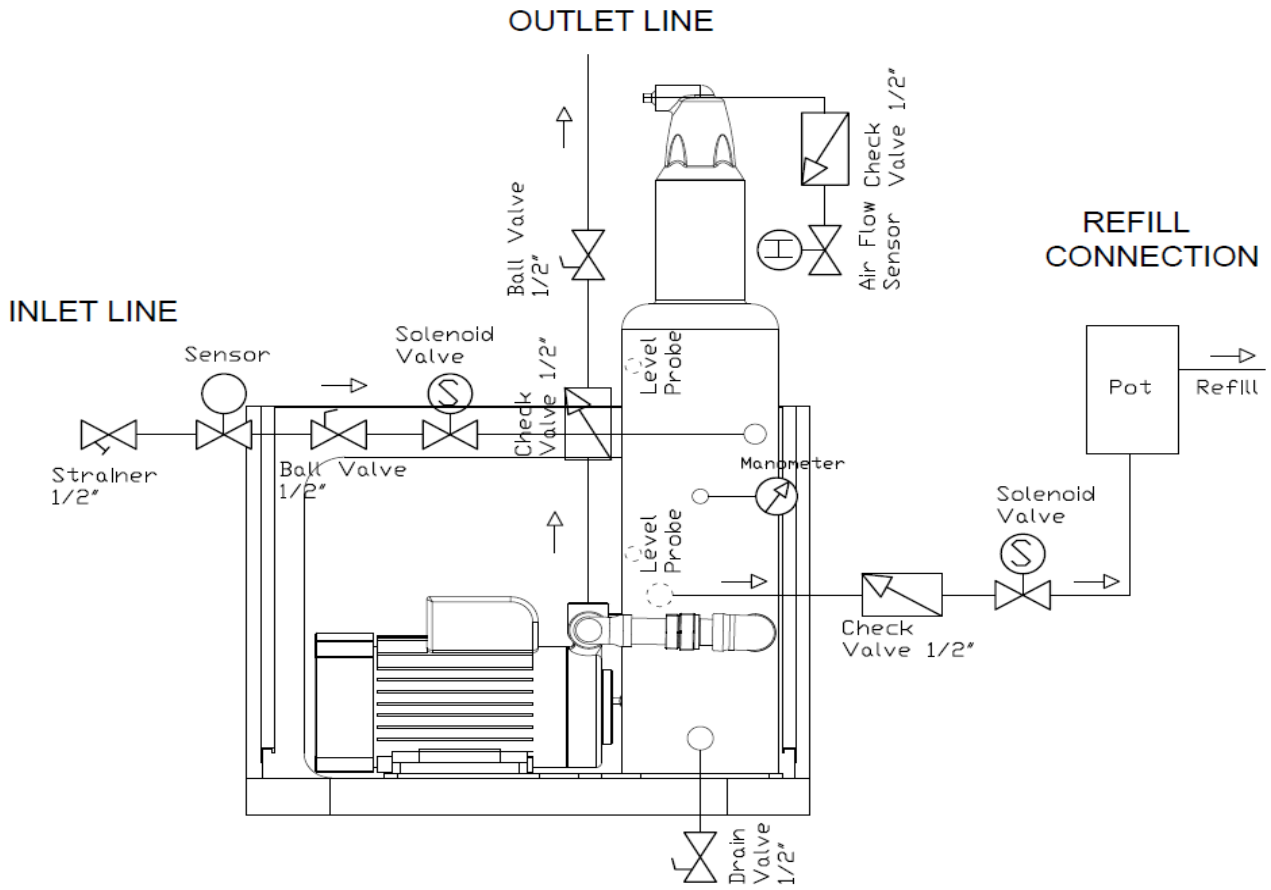
D	Flex Hose	**L**	Check Valve
E	Manometer	**M**	Pressure Sensor
F	Solenoid Valve	**N**	Level Probe
G	Strainer	**O**	Chasis
H	Ball Valve	**P**	Cover

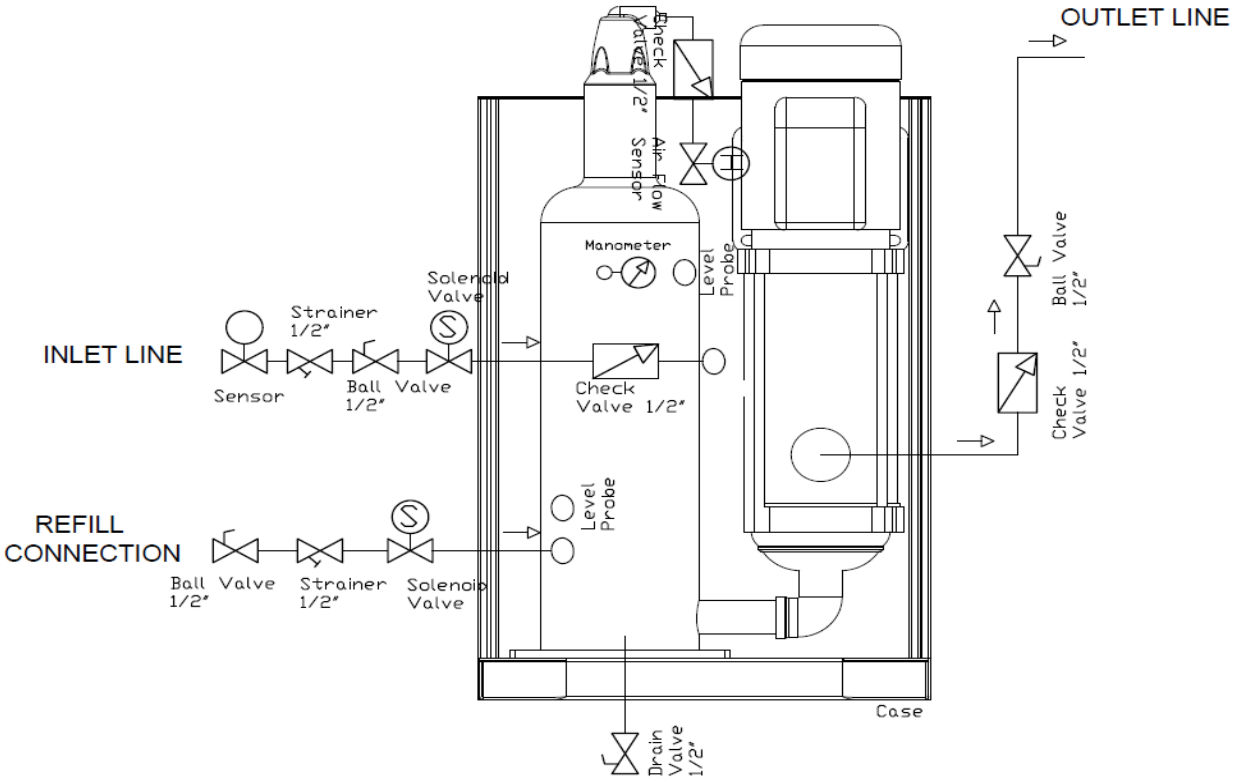
2.2) Operation

The figures below schematically show the operation of the unit. The drawings indications correspond with the main figure on the previous pages.

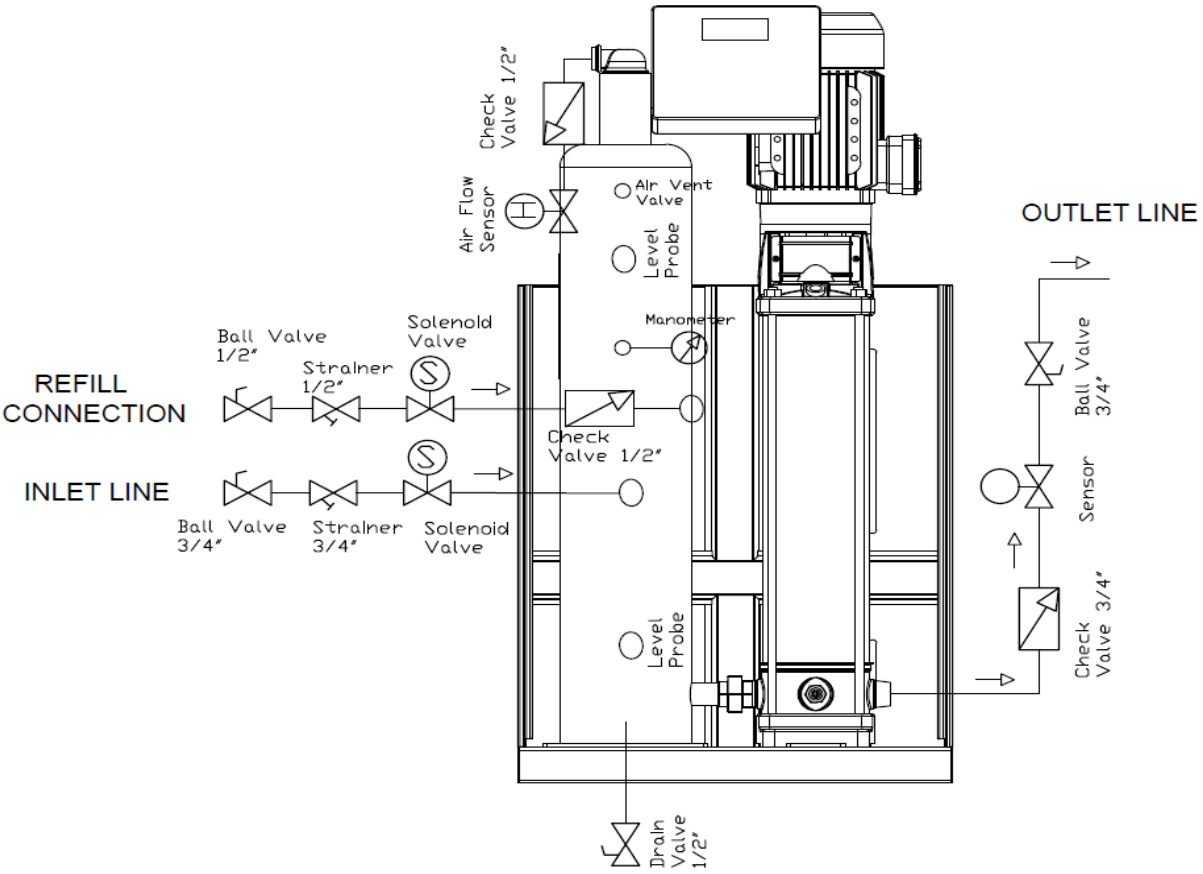
OPERATION OF V4 - R



OPERATION OF V6 - R



OPERATION OF V9 - R



2.2.1) Genaral

The ViraDeg is a fully automatic vacuum degasser for installations filled with fluid. Fluids contain dissolved and free gasses. The unit removes these gases from installation. Problems caused by gases in the installation are thus prevented.

The unit starts up a degassing process each day at a time set by the user. The process has two phases:

1- The rinsing phase : The fluid flows from the installation through the solenoid valve (S) into the vessel. The pump continuously pumps the fluid from the vessel into the installation.
Here the fluid absorbs gases present in the installation.

2-The vacuum phase : The solenoid valve (S) regulary closes, starting a vacuum phase.
The continuously running pump provides underpressure in the vessel. The underpressure causes the release of the gases dissolved in the fluid, which are collected at the top of the vessel.
The gases are removed from the installation through the automatic air vent. The SmartSwich at the automatic air vent makes sure that the stopped as soon as the content of dissolved gases has reached the minimum level.The solenoid valve (S) opens again,at the end of the vacuum phase.

2.2.2) Refilling

The ViraDeg-R models have an integrated refill function.

A unit with a refill function can control the pressure of the installation. To control the pressure, the unit inserts additional degassed fluid into the installation, if necessary.
The unit can also fill the entire installation with degassed fluid.

2.3) Operating Conditions

The unit is suitable for use in systems filled with clean water or mixtures of water with maximum of 40% glycol. Use in combination with other fluids may result in irreparable damage.

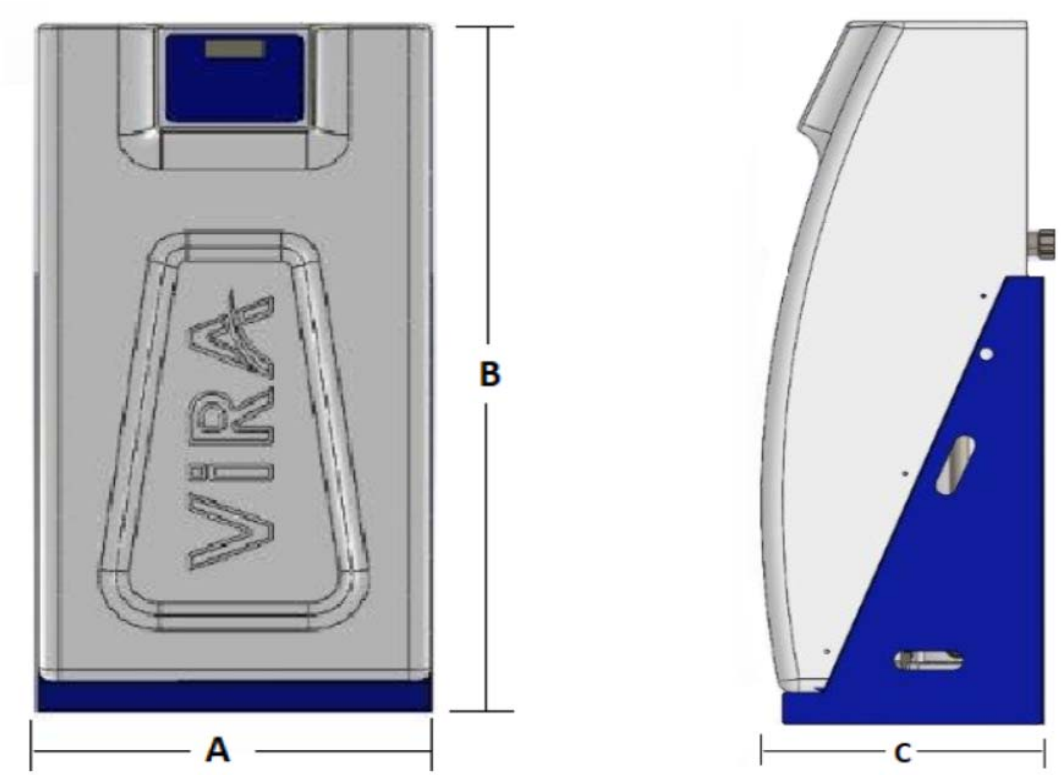
The unit should be used within the limits of the technical specifications as given in chapter 3.

Warning !

- In case of doubt, always contact the supplier
- In case of a heavily contaminated system fluid, install a dirt separator or filter in the main return line of installation

3) TECHNICAL SPECIFICATIONS

3.1) Dimensions



Model	A (mm)	B (mm)	C (mm)
V4	410	620	290
V4-R	410	620	290
V6	410	740	330
V6-R	410	740	330
V9	560	1080	380
V9-R	560	1080	380

3.2) General Specifications

		V4	V4-R	V6	V6-R	V9-R
Weight	kg	36	48	55	57	81
Noise level	dB(A)	65 (average)		60 (average)		
Volume of degassing vessel	L	3,5		6,6		16
Inlet/Outlet connection	inch	1/2"				3/4"
Re-fill connection	inch	1/2"				

Supply Voltage		230 V - 50 Hz		
Absorbed power	W	980	1180	2660
Nominal Current	A	4,9	5,1	11,9
Max. load of potential free contacts		230 V / 5 A		

System pressure	bar	1 - 4 bar		1 - 6 bar		1-9 bar
Ambient temperature	°C	0 - 40°C				
Fluid temperature	°C	0 - 90°C				
Max. compression pressure	bar	6		8		11
Refill flow	l/hr	-	260	-	380	1200
Refill pressure	bar	-	0 - 4	-	0 - 6	0 - 9
Refill fluid temperature	°C	0 - 90°C				

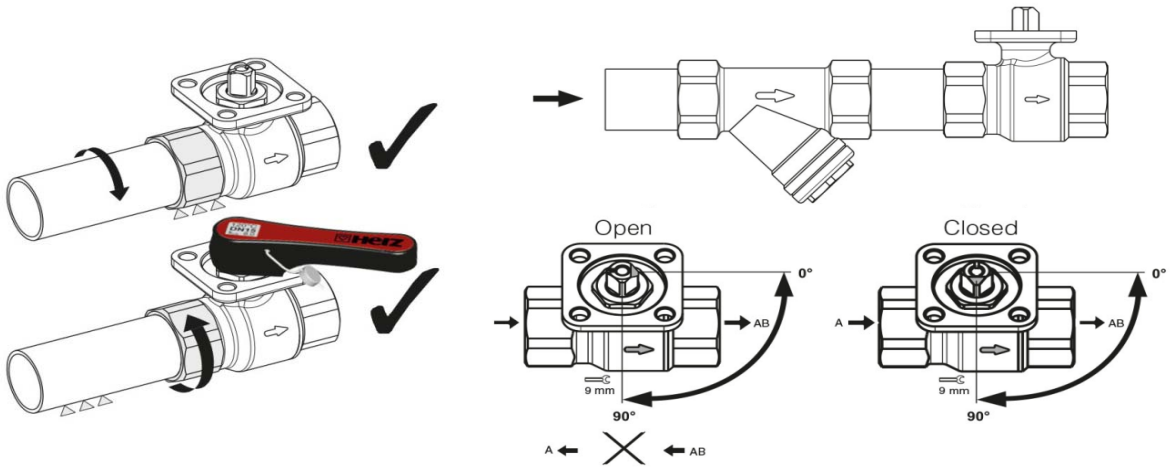
3.3) Sugesstions

- Strainer on the ViraDeg should be cleaned when needed. Min. 2 times in a year
- Interior of solenoid valve should be controlled every year.
- User should be ensure that each spare part of ViraDeg works properly.
- To be absolutely sure to have an efficient and reliable operation of ViraDeg and your system it is recommended to have skilled personnel to check the unit every 2. Year and have necessary service executed.

3.4) Ball Valve Features

Size	: 1/2" or 3/4"
Body	: Forged brass (CW602N)
Ball	: Pressed brass, V-shape bore, chrome plated
Ball Seat	: Teflon (PTFE) wit O-Ring (EPDM)
Sprindle Sealing	: O-ring double EPDM
Operating Temp.	: -10°C to 110°C
Nominal Pressure	: 40 Bar

3.4.1) Valve Montage



Recomended 10 second rule !

The pressure in the vessel during the flushing phase should increase from vacuum up to overpressure within 10 seconds. If it takes longer, turn the adjustment valve at inlet a bit more open, or close the outlet valve some more.

Recomended Valve Adjustments for High Efficiency :

Pressure	Model	Inlet Valve	Outlet Valve
1 bar	V4 / V4-R	5	2
2 bar	V4 / V4-R	8	3
3 bar	V4 / V4-R	10	4
4 bar	V4 / V4-R	5	4
1 bar	V6 / V6-R	10	2
2 bar	V6 / V6-R	6	3
3 bar	V6 / V6-R	6	4
4 bar	V6 / V6-R	10	6
5 bar	V6 / V6-R	7	6
6 bar	V6 / V6-R	5	6

4) SAFETY

4.1) General Precautions

Warning

- Installation and maintenance of the unit should only be carried out by qualified personnel.
- Remove the power and pressure from the unit before starting activities.
- There are hot parts under the cover. Let the unit cool down before starting the activities.

4.2) Type Plate

Sample label which located on the product.

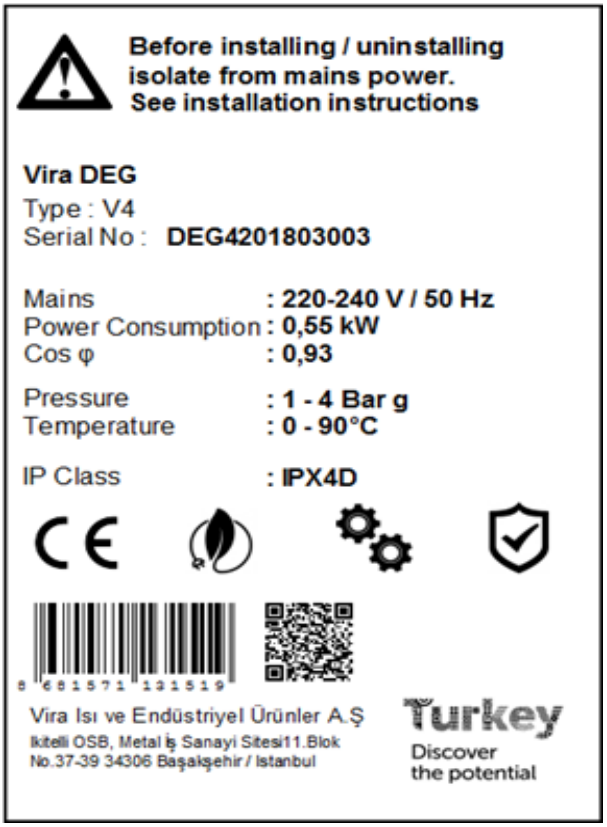


Plate Includes

- Product Type
- Serial Number (You may need this under warranty period)
- Electrical connections
- Energy consumption information
- Pressure and Temperature
- IP Class
- QR Code includes product manual You can use if you lost this guide book. (or visit our website)
- Manufacturer company details

5 INSTALLATION AND COMMISSIONING

5.1) Installation conditions

- Install the unit on a frost-free, well-ventilated place.
- Connect the unit to a 230 V / 50-60 Hz power supply.
  Make sure that the expansion system has the proper dimensions. The water displacement in the unit can be cause pressure variations in the installation.
  Take into account an extra net expansion volume of at least 8 litres.

5.2 Installation and mounting

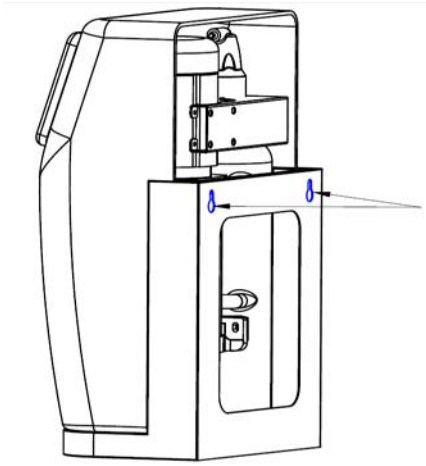
Caution

- Install the unit in accordance with the local guidelines and rules.
- Install the unit as bypass to a main line of installation
- Preferably install the unit as close as possible to the expansion system.

- Preferably install the unit at the point in the installation with the lowest temperature. Here the most dissolved gases are found in the fluid.
- Install the unit close to the expansion system to mininise pressure fluctuations caused by the intake of water by the system
- Make sure that the operating panel is always easily accessible.
- Make sure that you maintain at least the distance for service and repair as indicated.

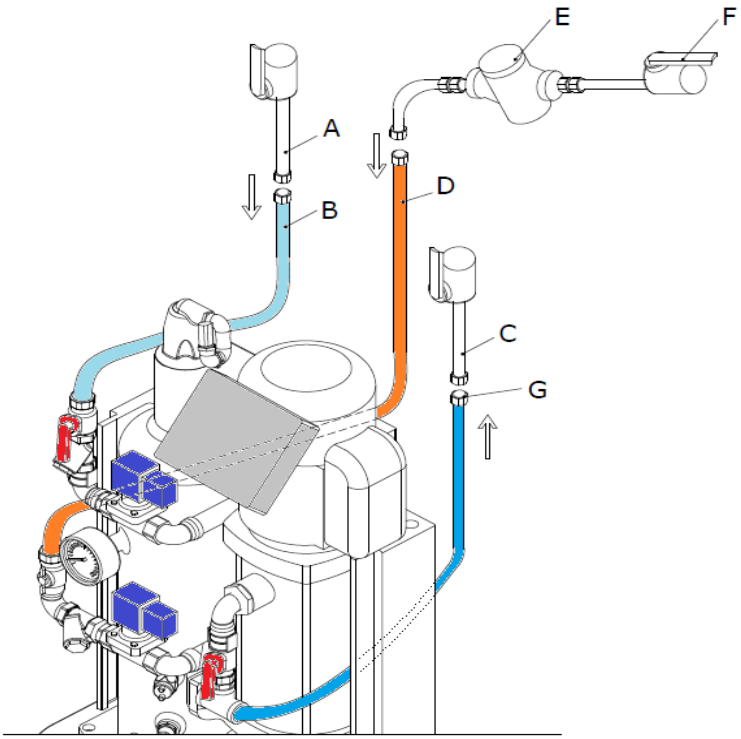
5.2.1) Wall mounting

Mount the unit on the wall by using the holes (A).
Make sure that the mounting can
support the filled unit.



(A)

5.3) Mechanical



1. Make two branch lines 3/4" (A) on the side of the main transport line.
   The distance pay attention to A and C connection distance should be at least 500 mm.

2. Insert a valve (A and C line) in each branch. With these valves the unit can be isolated

Caution

- Make sure that the valves are opened before putting the unit into operation
- As seen the direction of the volume flow, the first branch is the inlet of the unit.

3. Connect the line (A) to the flexible outlet line (B)
   Connect the line (C) to the flexible outlet line (G)

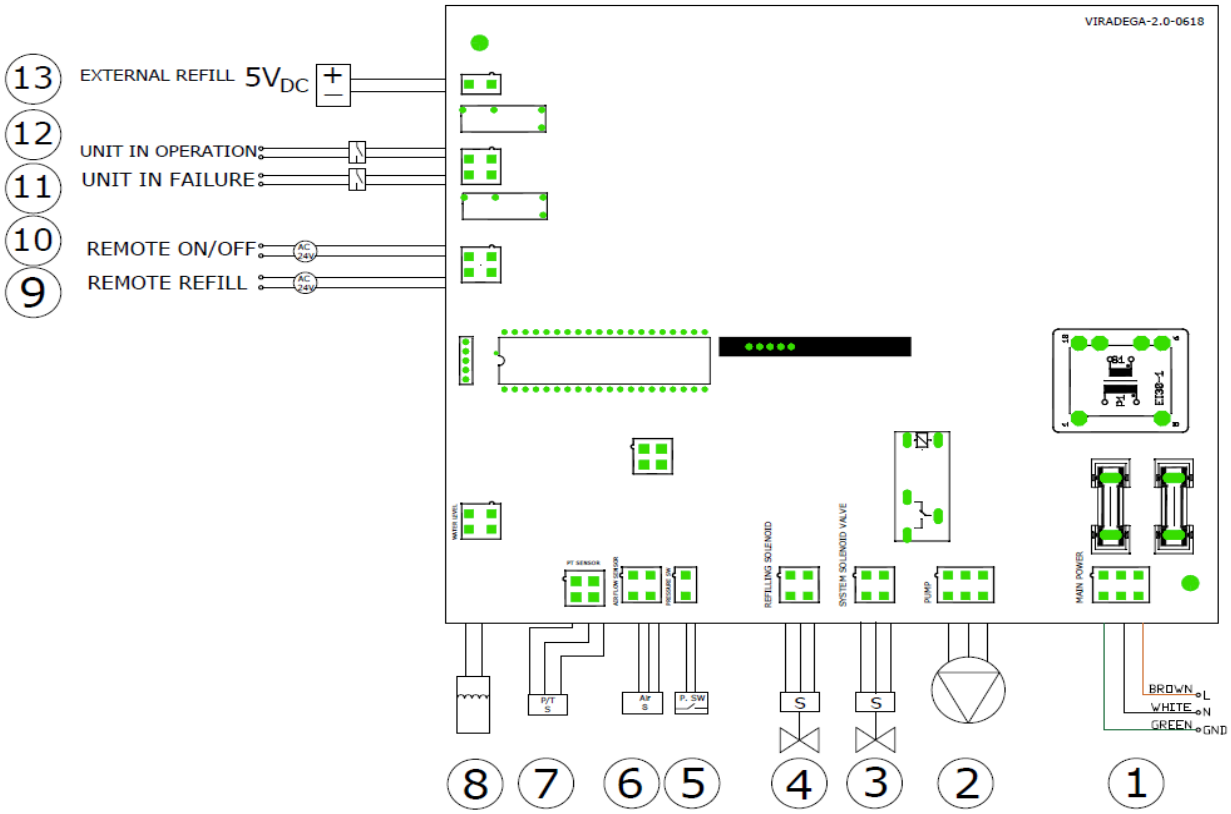
Only applicable to unites with the refill functionality ;

1. Insert a valve (F) and a backflow protection (E) in the refill fluid supply line.

Use locally approved backflow protection. A backflow protection can also be supplied as an option with the unit.
Make sure that the pressure of the feedwater is below the system pressure
Make sure that the lines leave the unit at the rear.

2. Connect the make up water to the refill connection (D) of the unit.

5.4) Electrical



1) Mains Electricity (230V/50Hz)
   L : Line , N : Neutral ,GND: Ground

2) Pump

3) System Solenoid Valve

4) Refill Solenoid Valve

5) P.SW : Pressure Switch

6) Air S : Airflow Switch

7) P/T S: Pressure and Temperature Sensor

8) Water Level Sensor

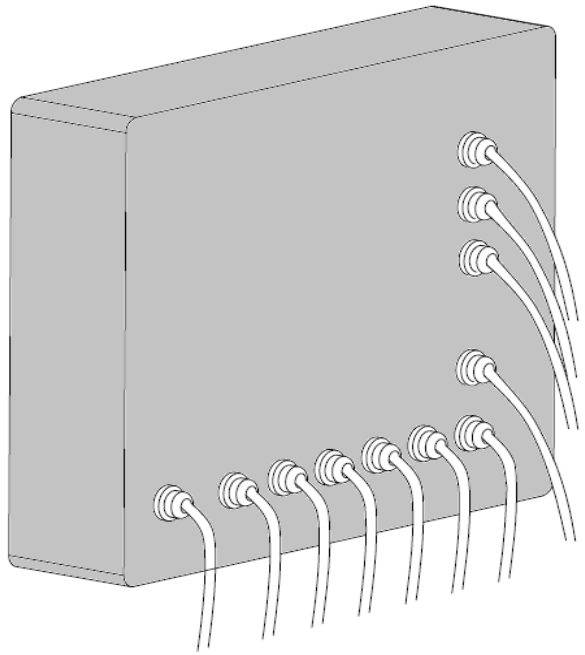
9) Refill Remote

10) On/Off Remote

11) Unit in Failure

12) Unit in Operation

13) External Refill



Caution

- There are cable connections on the control panel. These connection points are only used to fix the calbes.
- Please do not try to pull cable out.

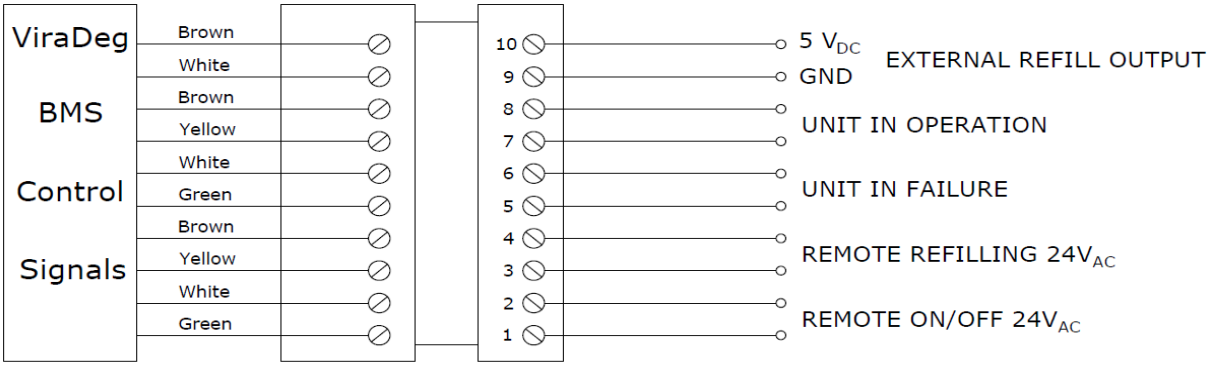
Please check chapter 8 to remove the controller.

5.4.1) Building Management System

(BMS Control Signals)

The unit is provided with auxiliary contacts for communication with a BMS or other external system. The BMS must offer a 24Vac voltage.

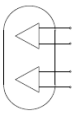
* The failure signal must not be used as a boiler interlock.



EXTERNAL REFILL — OUTPUT VOLTAGE $5V_{DC}$: REFILL ON; OUTPUT VOLTAGE $0V_{DC}$: REFILL OFF

UNIT IN OPERATION (Voltage Free Contact) — RELAY CONTACT ON : UNIT IS WORKING; RELAY CONTACT OFF : UNIT IS NOT WORKING

UNIT IN FAILURE (Voltage Free Contact) — RELAY CONTACT ON : UNIT IS FAILURE; RELAY CONTACT OFF : UNIT IS WORKING NORMALLY



REMOTE ON / OFF ($24V_{AC}$) — $24V_{AC}$: THE UNIT STOPS WORKING; $0V_{AC}$: THE UNIT STARTS WORKING

REMOTE REFILL ($24V_{AC}$) — $24V_{AC}$: REFILLING STARTS; $0V_{AC}$: REFILLING STOPS

6 Start-Up

- MENU • Menu / Cancel / Exit
- ▲ • Next / Up / Increase
- ▼ • Next / Down / Decrease
- E • Confirm / Enter

6.1) Button Functions

MENU Menu button is only used to enter the main menu and return the previous menu

▲ Button is used to pass to next function in the menu and to change numerical values.

▼ Button is used to pass to before function in the menu and to change numerical values.

E Button is used to enter the any menu, submenus and to confirm the values after change sets.

Caution

- The start-up routine starts automatically when the unit is switched on for the first time
- Press Menu to edit settings according to you.

6.2) Filling the unit

- Please make sure that the input and output valves are open in the system
- System will be off in first energy applied. At this time, user should edit the settings. (Time, Date, Working hours etc.)
- Turn the system on in the menu then ViraDeg will be started.
- When ViraDeg started first time, it check the vessel (tube) whether there is water (By level sensor). If there isn't water in the vessel, ViraDeg opens the solenoid valves to get water to the system. If ViraDeg can't fill the system by water, it stop the system and gives an error on the screen. There should be sufficient water to start the system.

6.3) Setting Parameters

MAIN MENU

SYSTEM ON/OFF>>		TO SELECT THE SYSTEM ON OR OFF
<SYS.ON/OFF SELECT>		SYSTEM ON/OFF SELECT
	(SYSTEM ON)	SYSTEM IS SWITCHED ON
	(SYSTEM OFF)	SYSTEM IS SWITCHED OFF
MANUEL OPR.>>		MANUEL OPERASYON
Manuel Run >		SYSTEM RUNS CONTINUOUSLY,
Manuel Refilling >		THE REFILLING IS CONTROLLED BY MANUALLY
SETTINGS>>		SET VALUES PROGRAMMABLE BY USER
Language >	ENGLISH	SET THE LANGUAGE(ENGLISH, NORWEGIAN)
Time Set >	--/--/--	SET THE CURRENT TIME
Date Set >	--:--	SET THE CURRENT DATE
Sun RunTime1>	--:-- / --:--	SET THE SYSTEM START TIME 1 AND STOP TIME 1 FOR SUNDAY
Sun RunTime2>	--:-- / --:--	SET THE SYSTEM START TIME 2 AND STOP TIME 2 FOR SUNDAY
Mon RunTime1>	--:-- / --:--	SET THE SYSTEM START TIME 1 AND STOP TIME 1 FOR MONDAY
Mon RunTime2>	--:-- / --:--	SET THE SYSTEM START TIME 2 AND STOP TIME 2 FOR MONDAY
Tue RunTime1>	--:-- / --:--	SET THE SYSTEM START TIME 1 AND STOP TIME 1 FOR TUESDAY
Tue RunTime2>	--:-- / --:--	SET THE SYSTEM START TIME 2 AND STOP TIME 2 FOR TUESDAY
Wed RunTime1>	--:-- / --:--	SET THE SYSTEM START TIME 1 AND STOP TIME 1 FOR WEDNESDAY
Wed RunTime2>	--:-- / --:--	SET THE SYSTEM START TIME 2 AND STOP TIME 2 FOR WEDNESDAY
Thu RunTime1>	--:-- / --:--	SET THE SYSTEM START TIME 1 AND STOP TIME 1 FOR THURSDAY
Thu RunTime2>	--:-- / --:--	SET THE SYSTEM START TIME 2 AND STOP TIME 2 FOR THURSDAY
Fri RunTime1>	--:-- / --:--	SET THE SYSTEM START TIME 1 AND STOP TIME 1 FOR FRIDAY
Fri RunTime2>	--:-- / --:--	SET THE SYSTEM START TIME 2 AND STOP TIME 2 FOR FRIDAY
Sat RunTime1>	--:-- / --:--	SET THE SYSTEM START TIME 1 AND STOP TIME 1 FOR SATURDAY
Sat RunTime2>	--:-- / --:--	SET THE SYSTEM START TIME 2 AND STOP TIME 2 FOR SATURDAY
Weekly RunTime1>	--:-- / --:--	SET THE SYSTEM START TIME 1 AND STOP TIME 1 FOR ALL DAYS OF THE WEEK
Weekly RunTime2>	--:-- / --:--	SET THE SYSTEM START TIME 2 AND STOP TIME 2 FOR ALL DAYS OF THE WEEK

PressureMaxSet>	9.0	MAXIMUM ALLOWABLE PRESSURE ON FLUID SYSTEM. THE DEVICE GIVES AN ALARM WHEN THE PRESSURE EXCEEDS THE PRESET VALUE
RefillingPr.HighSet>	6.5	IF AUTO-FILLING FUNCTION IS ACTIVE; AUTO REFILLING OPERATION STOPS AT THIS SETTING VALUE.
RefillingPr.LowSet>	6.0	IF AUTO-FILLING FUNCTION IS ACTIVE; AUTO REFILLING OPERATION STARTS AT THIS SETTING VALUE.
RefillingMaxNumber>	015	ALLOWED REFILLING NUMBER UP TO SET VALUE IN A TIME.
TemperatureHighSet>	80.0	MAXIMUM ALLOWABLE TEMPERATURE ON FLUID SYSTEM. THE DEVICE GIVES AN ALARM WHEN THE PRESSURE EXCEEDS THE PRESET VALUE
TemperatureLowSet>	05.0	MINIMUM ALLOWABLE TEMPERATURE ON FLUID SYSTEM.THE DEVICE GIVES AN ALARM WHEN THE TEMPERATURE DECREASES TO THE PRESET VALUE
Fault Log Reset >		ERROR MESSAGES ARE CLEARED ON MEMORY
TotRefillingNumRst>		TOTAL REFILLING NUMBER RESET TO 0
Standby Time Set>		DESIRED STANDBY TIME IF DEGASSING IS FINISHED
Refilling Time in 12 hr>		ALLOWED REFILL TIMES IN 12H
Factory Sets>		SYSTEM IS RESTORED TO ITS FACTORY SETS
RUNNING LOGS>>		**SYSTEM RUNNING TIMES**
Total Period:	1234	TOTAL RUNNING PERIOD NUMBER (1 CYCLE)
Total AirVent:	123	TOTAL AIRVENT NUMBER
Total SysRun Time:	1234 hrs	TOTAL SYSTEM RUN TIME
Tot.Pump Run Time:	123 hrs	TOTAL POMP RUN TIME
TotRefillingNumber:	113	TOTAL REFILLING NUMBER
FAULT LOGS>>		**ERROR MESSAGES ON MEMORY**
SYSTEM INFO>>		SYSTEM TYPE AND SOFTWARE VERSİON
Type >	Model	SYSTEM TYPE(VD4-R, VD6-R, VD10-R
Version >	4B0	SOFTWARE VERSION
SRVC. SETTINGS>>		SERVICE SET VALUES (FACTORY SETTINGS ACCORDING TO SYSTEM. END-USER CAN NOT USE THIS MENU.)
S.ValveOffTime(sec)	12	SELENOID VALVE OFF TIME. DURING THIS TIME PUMP CREATES VACUUM.
MaxWaterInTime(Sec)	45	TUBE FILLING MAXIMUM TIME THE DURATION OF THE TIME OF ONE CYCLE (IT WILL BE AN ALARM OCCURRED IF THIS TIME IS EXCEEDED)
TotalMemReset		ALL MEMORY LOGS RESET
Refilling ON/OFF	ON	AUTO-FILLING FUNCTION ENABLE/DISABLE
TESTS>>		**PUMP AND SELENOID VALVES TESTS (Manual test)**

ESC PUMP INT EXT
OFF OFF OFF

Pump : On/Off
Int : First solenoid on/off
Ext : Second solenoid on/off

7 Failures

Insufficient water :

If ViraDeg can't fill the vessel by water in max 45 second, it gives insufficient water error.

Sensor Error :

When pressure / temperature (RPS) sensor can't get any information or receive wrong information from system, it gives sensor error.

No water :

ViraDeg gives "no water" error if tube can't has water inside.

High Temperature :

When fluid temperature is higher than set value, ViraDeg gives error to alert the user.

Low Temperature :

When fluid temperature is lower than set value, ViraDeg gives error to alert the user.

High Pressure :

When system pressure is higher than set value, ViraDeg gives error to alert the user.

Max. Refilling Times :

ViraDeg gives error if system do re-filling more than your set. (ex. 30 times refilling)

Many Time Refilling :

ViraDeg gives error if system try to do re-filling again in 12 hours from previous refilling.

At beginning, ViraDeg will include factory setting values. Users can change and customise according to their installation.

These, error helps to pre-detect any reason (high pressure, leakage, high temp. sensor faulty, insufficient water etc) which may damage to ViraDeg or other components in the installation.

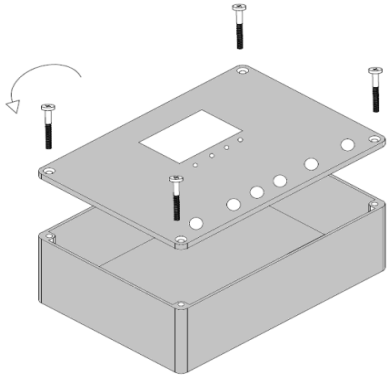
8 Removing Controller

This chapter explain "how to remove controller" against any failure to fix or change the controller with new unit. It helps to solve the problem very quickly and its handy against shipping back the product to manufacturer.

Caution

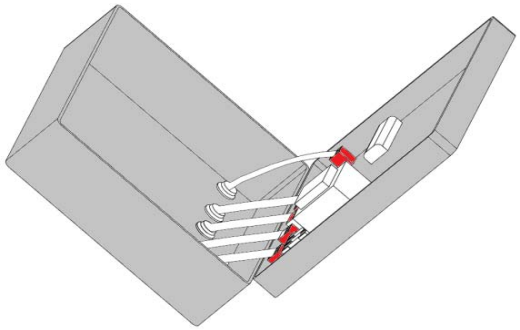
- If you live any problem, please contact with the company for service and do not open the controller inside to fix it your self.
- Opened box products without service permit, will be out of the product warranty.

- Please be sure that system switched off. (no electricity)



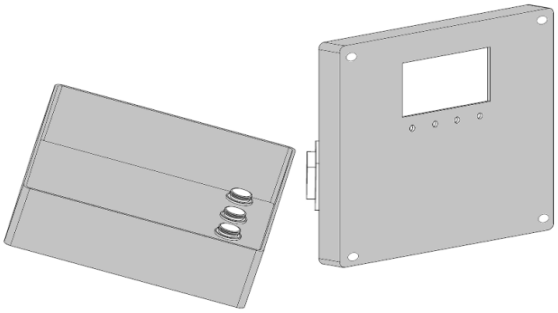
(Removing the 4 screws located in the box)

- Please do not pull mightily the surface of the box. It may damage the cables.



(Cable conenction removal)

- After open the box, please remove the connected cables from sockets.



- Forward the box surface which includes buttons and smart controller card to your supplier.

9 MODBUS Functions

Coils Regs.	Reg. Adr.			0	1
0	0	R/W	System ON/OFF	OFF	ON
1	1	R	Alarm/OK	OK	ALARM
2	2	R	Run/Off-Standby-Error	OFF/ STANDBY / ERROR	RUN
3	3	R/W	Refill ON/Refil OFF	Refill OFF	Refill ON
4	4		Reserved for future		
5	5		Reserved for future		
6	6		Reserved for future		
7	7		Reserved for future		

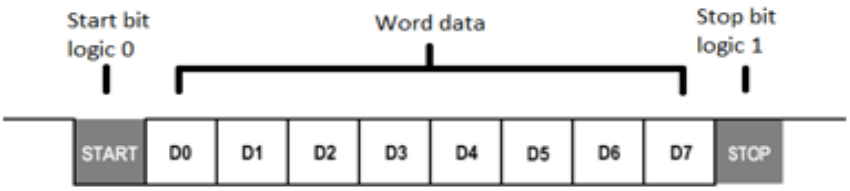
Holding Register	Reg. Adr.	Read & Write	Value	Examples	Explanations
40001	0	R	Temperature Value		
40002	1	R	Pressure Value	63 /10= **6,3**	The read value must be divided by 10.
40003	2	R	Error Code	1 to 10	
40004	3	R	Total Period	2x1000= **2000**	The read value must be multiplied by 1000
40005	4	R	Total Airvent	15x1000= **15000**	The read value must be multiplied by 1000
40006	5	R	Total System Run Time		
40007	6	R	Total Pump Run Time		
40008	7	R	Total Refilling Number		
. . .			N/A		
40020	19	R/W	Language Set	**0**:EN, **1**:NO	
40021	20	R/W	Time Set	1745 = **17:45**	
40022	21	R/W	the Day set	day of the month	
40023	22	R/W	the Month set	month of the year	
40024	23	R/W	Year set	year	
40025	24	R/W	Pressure Max Set	45/10= **4,5**	The read value must be divided by 10.
40026	25	R/W	Refill Pressure High Set	30/10= **3,0**	The read value must be divided by 10.
40027	26	R/W	Refill Pressure Low Set	7 /10= **0.7**	The read value must be divided by 10.
40028	27	R/W	Refill Max Number		
40029	28	R/W	Temperature High Set		
40030	29	R/W	Temperature Low Set		
40031	30	R/W	Standby Time Set		
40032	31	R/W	Refill Times in 12 Hrs.		

MODBUS system does not able to read any punctuation marks therefore the set value should be described like our examples.

MODBUS PROTOCOL

Modbus Protocol Formats:

Byte Format:



Master Request Frame:

Address	Function Code	Start address		Quantity of registers		CRC	
1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte

Answer Frame:

Address	Function Code	Byte count	Register data		CRC	
1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte

Each slave devices in a network is assigned a unique unit address from 1 to 247. (Selectable from menu)

Baud Rate Table: (Selectable from menu)

0	1200
1	2400
2	4800
3	9600
4	19200

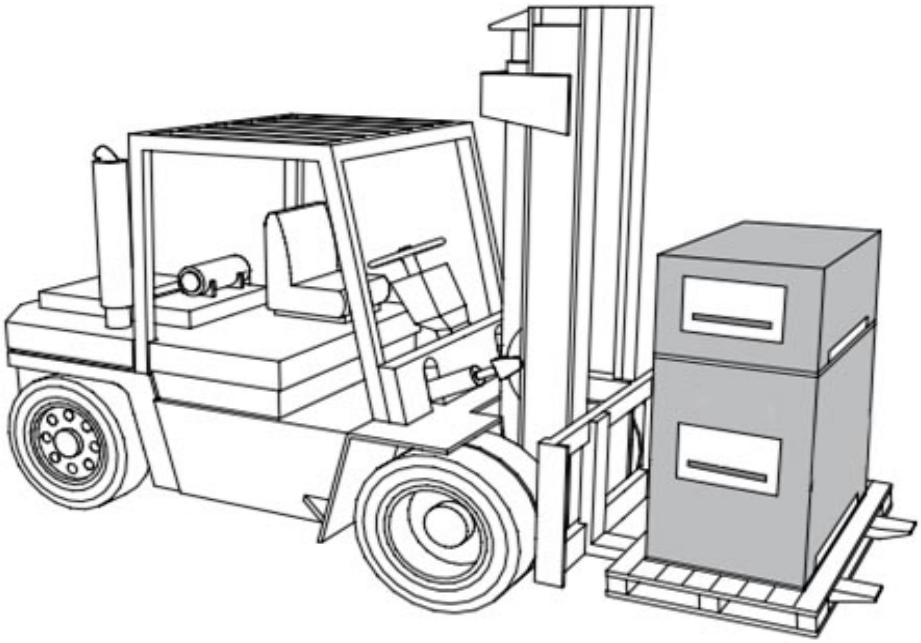
9 TRANSPORT

The shipping papers list all the items, such as equipment and documenttation. Ensure that the delivery is complete and not damaged. The automats are packed vertical on disposable pallets and are fully assembled.

Identify the items that are missing or nor correctly delivered. Read the general terms and conditions in the shipping papers.

- Transport the pallets vertically.
- Lift the automat just slightly.

Make sure that the lifting devlice can support the automat. For weight and dimensions, refer to chapter 3 : Technical Specifications.



Vira does not recommend stacking the products

10 Guarantee

- The guarantee for this product is valid until 2 years following the purchasing date.
- The guarantee lapses in cases of faulty installation, incompetent use and/or non authorised personnel trying to make repairs.
- **Consequential damage** is not covered by the guarantee
- Normal **tear and wear** is excluded by the guarantee.

11 CE Statement

11.1) Decleration of conformity

ORIGINAL

EC Decleration of Conformity

The manufacturer :

Vira Isı ve Endüstriyel Ürünler A.S.
İkitelli OSB, Metal İş Sanayi
11.Blok No.37-39 Basaksehir
34306 Istanbul / Türkiye
decleras that the vacuum degassers :

ViraDeg
Type : V4 / V4-R / V6 / V6-R / V9 / V9-R
are in compliance with all relevant demands of following European Directives :

- Machine Directive 2006 / 42 / EC

- Low Voltage Directive 2006 / 95 / EC

- EMC Directive 2004 / 108 / EC

Istanbul , Jan 24th , 2020

A.Mecit Cengiz
Founder

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The manufacturer reserves the right to make change without prior notification.

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