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R.E.A. MI 729991 - IMPORT - EXPORT MI 142410 - REG. IMPR. 132146/3344/46 TRIB. MI



INSTALLATION, OPERATION AND MAINTENANCE GUIDE

AIR BREATHERS VEL SERIES

STORAGE AND SHELF LIFE

Handle with care. Max storage period before putting the instrument into service is 5 years (temperature -20 +40 °C – air humidity 75%) as long as the instrument is kept in its envelope and in a clean place. Before use, visual check that no damages happened to any parts.

UNPACKING

Unpack breather from its box, pull it out from the plastic bag and remove the plastic plugs (18) as explained below. Make a correct disposal of packaging according local regulations.

MOUNTING POSITION

The breather is mounted on the end of the connecting pipe coming from top of conservator. All models come with a special flange that allows for two fixation options:

- DN25/PN10 4 holes flange
- DIN42562 3 holes flange

Special flange adaptors to fit in between pipe's flange and breather flange are available to allow easy adaptation to a DN40/PN10 flange or DN25/PN6 flange –view drawing no.3538 for dimensional details and assembly scheme.

SETTING TO WORK

Single module (capacity 1 kg)

- Fill up the breather with a charge of silicagel
To do this operate according following steps:
 - Take out the plastic plug (18)
 - Unscrew the metal filter plug by hand (13)
 - Pour in the charge of silicagel through the bore top of flange
 - Reassemble the filter plug by hand
- Activate the oil guard
To do so operate according to following steps:
 - Unscrew the the knurled ferrules (12) that lock the protection of oil guard to bottom cover and remove it together with oil cup.
 - Remove the plastic plug that closes the fishing out cylindrical end
 - Fill up the oil cup with mineral oil till half of inspection window (11)
 - Reassemble the oil cup protection and lock it with the knurled ferrules.
- Connect the breather to pipe's flange
 - Fit the o-ring gasket 6200 inside the seat top breather of flange
 - Lock the breather to pipe flange by means of 4 screws M12, nuts and washers.

The breather is now ready to work.

Modular assembly (capacity 2 to 5 kg)

- Fill up of the module VEL"00"
 - Take out the plastic plug
 - Unscrew the filter plug by hand
 - Pour in the charge of silicagel through the bore top of flange helping yourself with a funnel (view pag.2)
 - Reassemble the filter plug by hand
- Fill up of module VEL"01"
 - Take out the plastic plug
 - Unscrew the filter plug by hand
 - Pour in the charge of silicagel through the bore top of flange helping yourself with a funnel (view pag.2)
 - Reassemble the filter plug by hand
- Activate the oil guard
To do so operate according to following steps:
 - Unscrew the the knurled ferrules that lock the protection of oil guard to bottom cover and remove it together with oil cup.
 - Remove the plastic plug that closes the fishing out cylindrical end
 - Fill up the oil cup with mineral oil till half of inspection window)
 - Reassemble the oil cup protection and lock it with the knurled ferrules.
- Connect modular assembly to pipe's flange

- Fit o-ring gasket inside the seat top of module VEL"01" of flange
- Fit module VEL"01" on the M12 studs underneath VEL"00" bottom cover
- Lock the module by means of 4 nuts M12 and washers.
- Fit the o-ring gasket 6200 inside the seat top breather of flange
- Lock the modular breather to pipe flange by means of 4 screws M12, nuts and washers.

The modular breather is now ready to work.

FILLING UP OPERATION



MAINTENANCE

During transformer maintenance is a good practice to check condition of breather.

First of all clean outside surfaces and perform the following visual tests:

- Integrity of breather,
Breather should not have visible external damages and glass gel container (3.7) must be free of damages/cracks as well. Usually oil guard has no damages because is heavily protected,
- Saturation of silicagel,
Check colour of silicagel through inspection windows: if colour has changed from orange to white you have to change the silicagel, to do so read dedicated paragraph on this operation below,
- Level of oil inside oil guard,
Check level of oil inside oil guard through inspection window,
Oil level should reach approx half of inspection window and in case the level is found lower then this point please refill the cup (see paragraph below).

CHANGE OF SILICAGEL CHARGE

If the charge of silicagel has to be changed operate as below:

Single module (capacity 1 kg)

- Unlock module VEL"01" by unscrewing the 4 screws M12 and take it off,
- Unscrew the the knurled ferrules that lock the protection of oil guard to bottom cover and remove it together with oil cup (make sure to do this operation before emptying the container to avoid oil spilling out off cup),
- Remove the exhausted silicagel by pouring it out off the container,
- Pour in the fresh charge of silicagel,
- Reassemble the oil guard protection (before doing so check the level of mineral oil inside the cup),
- Reassemble the filter plug and lock it by hand,
- Fit the o-ring gasket 6200 inside the seat top breather of flange,
- Lock the breather to pipe flange by means of 4 screws M12, nuts and washers,

Modular assembly (capacity 2 to 5 kg)

- Unlock module VEL"00" by unscrewing the 4 screws M12 and take it off,



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- Unlock module VEL"01" by unscrewing the 4 nuts M12,
- Unscrew the the knurled ferrules (12) that lock the protection of oil guard to VEL"01" bottom cover and remove it together with oil cup (make sure to do this operation before emptying the container to avoid oil spilling out off cup),
- Unscrew the filter plugs, on both modules, by hand and empty out the gel off the two containers.
- Pour in the fresh charge of silicagel in module VEL"01" and VEL"00" and lock filter plugs by hand,
- To complete assembly of module VE"01" refit oil guard protection (before doing so check the level of mineral oil inside the cup),
- Fit module VEL"01" on the M12 studs underneath VEL"00" bottom cover,
- Lock the module by means of 4 nuts M12 and washers,
- Fit the o-ring gasket 6200 inside the seat top breather of flange,
- Lock the modular breather to pipe's flange by means of 4 screws M12, nuts and washers.

Saturated silicagel can be regenerated or disposed; in case of disposal please operate according local regulations for waste management.

Refer also to up to date version of silica gel MSDS available from our technical stuff and silica gel manufacturer.

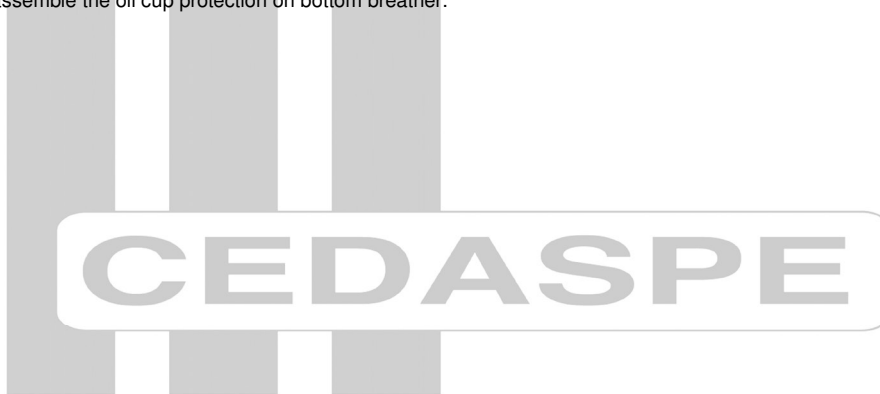
SILICAGEL REGENERATION

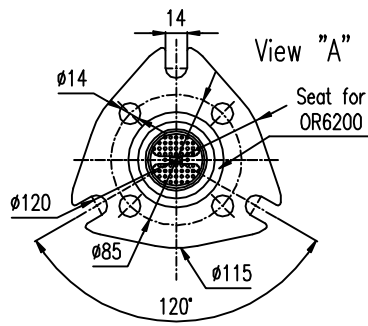
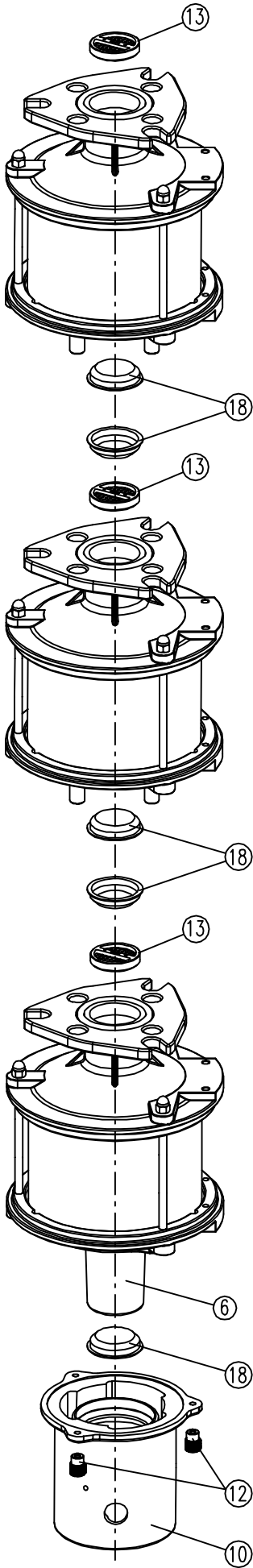
The silicagel that absorbed humidity can be regenerated by drying it into a oven at a temperature between 130 to 140 °C until every bean changes its colour to original orange colouration.

REFILLING OF OIL INSIDE THE OIL GUARD

If there is not enough oil inside oil cup operate as follows:

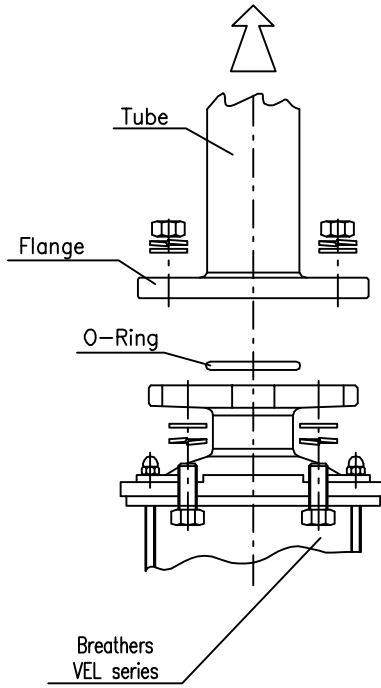
- Remove the oil guard the protection together with oil cup by unscrewing the knurled ferrules that lock the protection of oil guard to bottom cover,
- Fill up the oil cup with mineral oil until half of inspection window,
- Reassemble the oil cup protection on bottom breather.



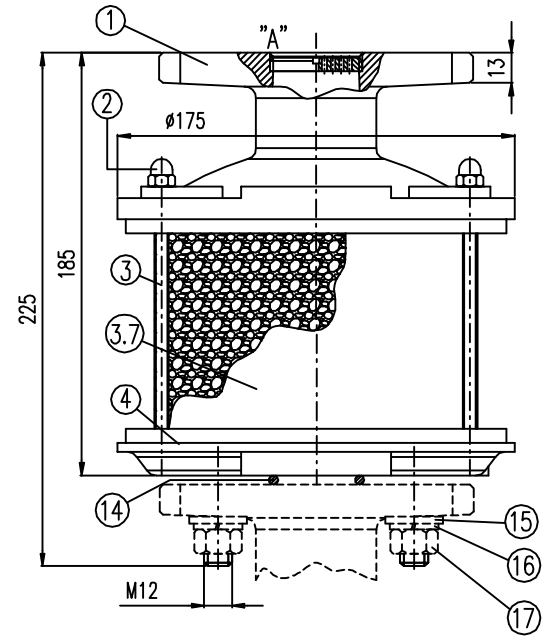


Double fixation:
 - DN25/PN10 4 holes flange
 or
 - DIN42562 3 holes flange

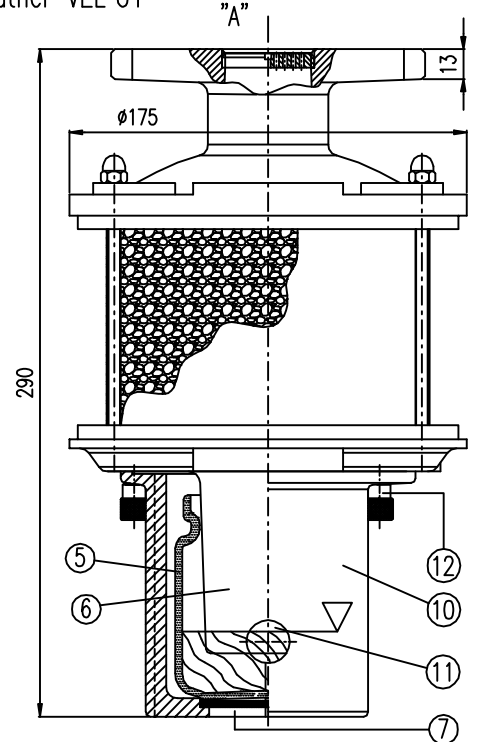
To Conservator



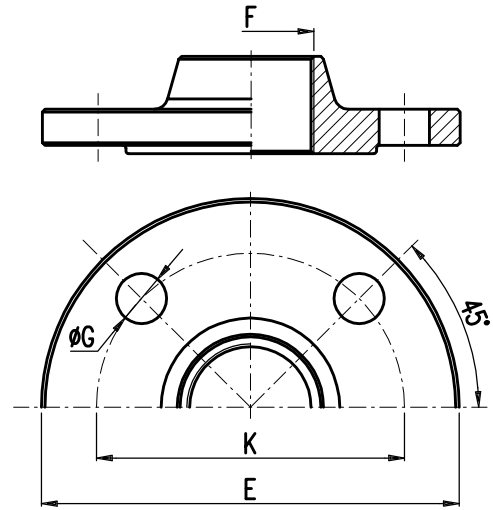
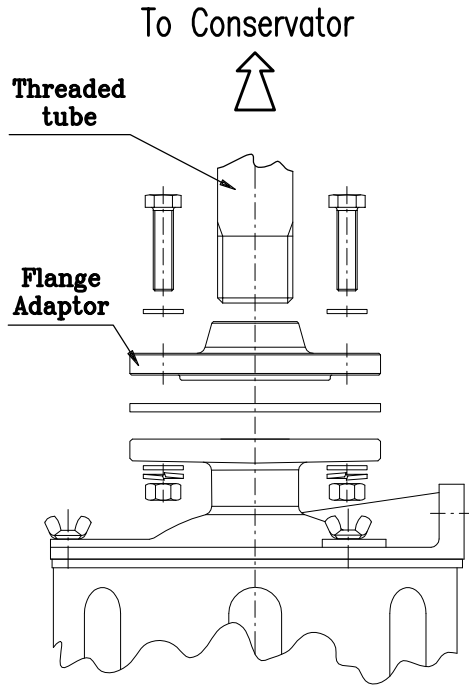
Module VEL"00"



Breather VEL"01"

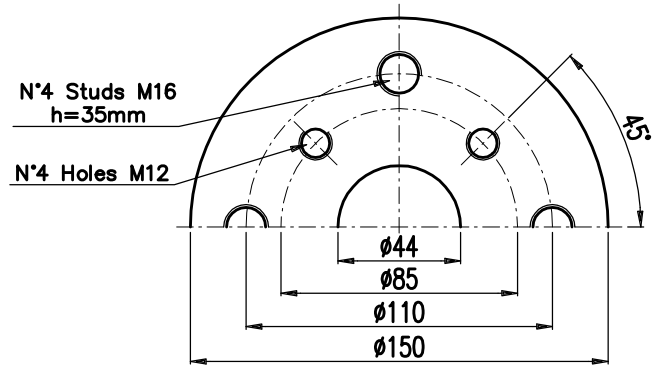
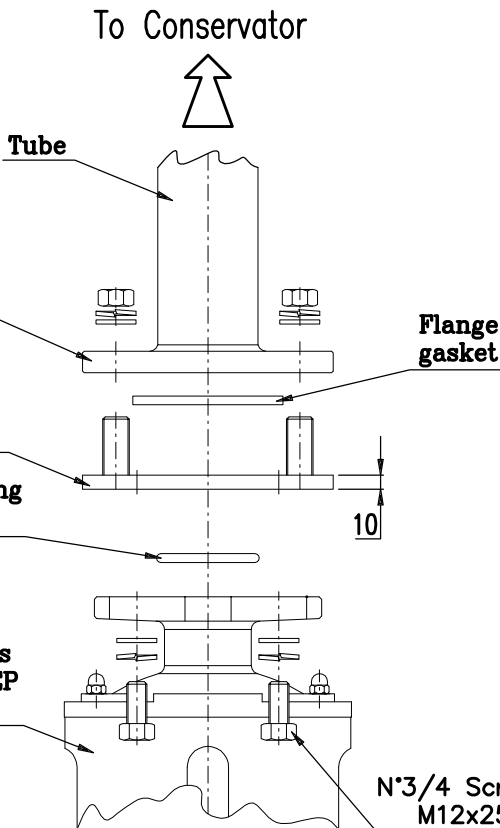


Pos.	Description
1	Top cap
2	Domed nuts M6 DIN1587
3	M6 rod
3.7	Gel container (glass)
4	Bottom cap
5	Oil cup (transparent glass)
6	Fishing out cylinder
7	Drain hole
10	Oil cup protection
11	Inspection window
12	knurled ferrule
13	Filter plug
14	OR6200
15	Stainless steel washer M12 DIN125
16	Spring washer M12 DIN127
17	Stainless steel nuts M12 DIN934
18	Plastic Plug

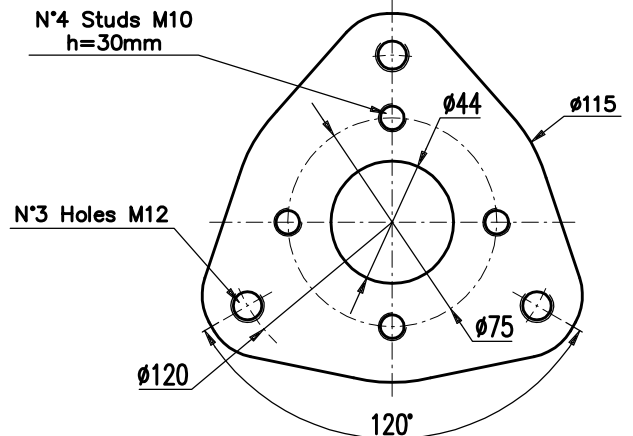


3	115	85	1"1/2 G	14	VEP27-29-37-37	Ex VE30/VE4-EL	Flange adaptor to 1"1/2 BSP pipe
2	115	85	1"G	14	VEP01 ÷ VEP07	Ex VE10	Flange adaptor to 1" BSP pipe
1	150	110	1"1/2 G	18	VE50 ÷ VE150	Ex VE50...150-A1	Flange adaptor to 1"1/2 BSP pipe
Pos.	E	K	F	øG	Type of breathers	Ex breathers	Note

Pos. 4 for breathers VEP27-29-37-39
Flange adaptor DN25 to DN40/PN10 (Ex VE30/VE4-EL)



Pos. 5 for breathers VEP01 ÷ VEP07
Flange adaptor to DN25/PN6 (Ex VE10)



Ex PAG.5.50.C



Titolo
**Special flange adaptor
for breathers**

30/09/11
Scala ==
Dis.
Visto

Dis. Nr
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