



Collins Youldon Breather Vent

EN14595 compliant

Installation and Maintenance Manual

(Technical Manual No SDM07)

Index

			Page
Section	1.0	Declaration of Conformity	2
Section	2.0	Specification	3
Section	3.0	Installation	6
Section	4.0	Inspection and Testing	7
Figures			
	1	Breather Vent Valve exploded view	5
	2	Warning label 7114.00.P	6
Tables			
	1	Operating limits	3
	2	Venting capacity for 9132.7004.A	3
	3	Venting capacity for 9132.7020.A	3
	4	Vent Overturn Leak Tightness	3

Section 1.0

Model No of Vent:	9132.7004.A or 9132.7020.A	(delete as appropriate)
Nominal pressure setting:	8.75 kPa	or 9.95 kPa (delete as appropriate)
Maximum vacuum setting	0.4 kPa	or 2.0 kPa (delete as appropriate)

Declaration of Conformity – Breather Vents

This valve has been designed & manufactured to meet the requirements of the above directive and also complies with **EN14595:2005** 'Pressure & Vacuum Breather Vents' within the settings shown above.

These products are manufactured under the certified Quality Management System of Supply Plus Ltd which is monitored by NQA, Warwick House, Houghton Hall Park, Houghton Regis, Dunstable, LU5 5ZX, under the Certificate number 25536 in accordance with BS EN ISO 9001:2008.

This declaration relates only to the valve being supplied. When this is incorporated into other parts or assemblies the customer is required to assure himself that the completed assembly meets the requirements of the directive.

Signatory



Title: Chief Engineer
For and on behalf of Supply Plus Limited

2.0 Specification

There are three models of this breather vent, please ensure the correct model is selected.

9132.7004.A	For top loading 8.75 kPa nominal pressure setting, 0.4 kPa maximum vacuum setting
9132.7020.A	For bottom loading / vapour recovery 8.75 kPa nominal pressure setting, 2.0 kPa maximum vacuum setting

Note 1: Breather vents will hold pressure at 7.0 kPa (70mbar) and open at a maximum pressure of 10.5 kPa (105mbar), giving a nominal opening pressure of 8.75 kPa (87.5 mbar).

or Breather vents will hold pressure at 7.0 kPa (70mbar) and open at a maximum pressure of 11.9 kPa (119mbar), giving a nominal opening pressure of 9.95 kPa (99.5 mbar)

Note 2: In the overturn positions the vents should be leak tight at a minimum of 1.66 kPa (166.0 mbar) at 180° and 1.17k Pa (117.0 mbar) at 90° & 270°.

or In the overturn positions the vents should be leak tight at a minimum of 1.84 kPa (184.0 mbar) at 180° and 1.24 kPa (124.0 mbar) at 90° & 270°.

Caution: Tank builders need to ensure these values are suitable for the tank size to which they will be fitted and the contents to be contained.

Table 1: Operating Limits

	Leak Tight Pressure	Relieving Pressure	Leak Tight Vacuum	Relieving Vacuum
9132.7004.A	7 kPa	8 kPa to 10.5 kPa		0.4 kPa
9132.7020.A	7 kPa	8 kPa to 10.5 kPa	1 kPa	1.2 kPa to 2.0 kPa

Table 2: Venting Capacity for 9132.7004.A – 4mbar vent for top loading

	Pressure		Vacuum	
Flow rate of air	23 m ³ /hr	42 m ³ /hr	26 m ³ /hr	69 m ³ /hr
At differential pressures of	21 kPa	30 kPa	3 kPa	7 kPa

Table 3: Venting Capacity for 9132.7020.A – 20mbar vent for bottom loading/vapour recovery

	Pressure		Vacuum	
Flow rate of air .20 / .20E	23 / 20 m ³ /hr	42 / 40 m ³ /hr	26 / 15 m ³ /hr	69 / 62 m ³ /hr
At differential pressures of	21 kPa	30 kPa	3 kPa	7 kPa

Table 4 Overturn Leak Tightness to EN14595 (at Rate 'F' of EN12266)

	90 degrees & 270 degrees	180 degrees
9132.7004.A	22.2 kPa	27.1 kPa
9132.7020.A	22.2 kPa	27.1 kPa

A parts list and material specifications is shown at section 2.1 overleaf and an exploded view diagram is shown at figure 1.

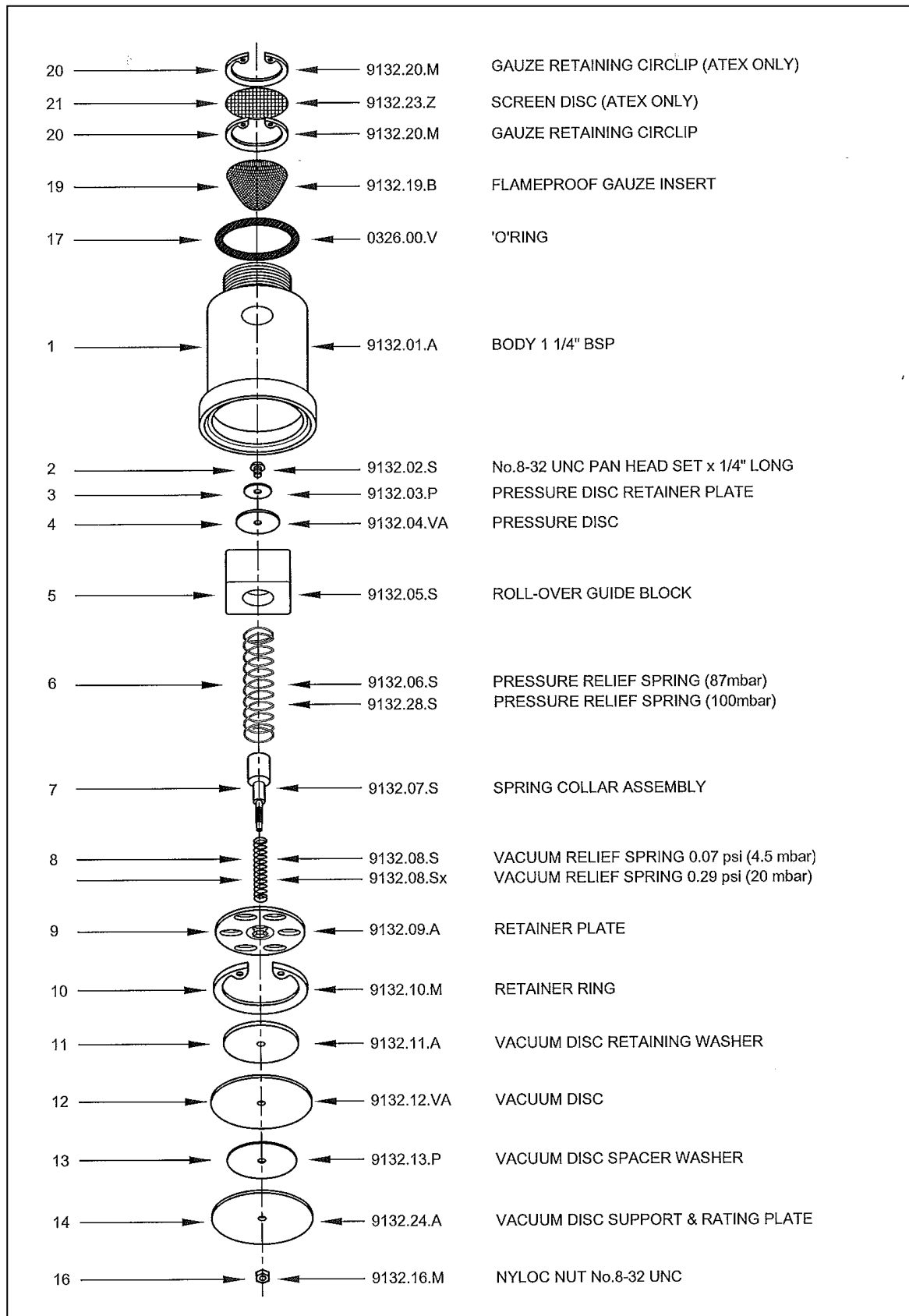
2.1 Parts list and materials specification

Item	Part No	Description	Material
1	9132.01.A	Body	Aluminium
2	9132.02.S	Screw	Stainless steel
3	9132.03.P	Pressure disc retainer	Nylon
4 *	9132.04.VA or 9132.04.T	Pressure disc	Viton 70 to 75 DURO Buna-N 60 DURO
5	9132.05.S	Roll-over guide block	Stainless steel 303L
6	9132.06.S 9132.28.S	Pressure relief spring 87mbar Pressure relief spring 100mbar	Stainless steel Stainless steel
7	9132.07.S	Spring collar assembly	Stainless steel 304 & 316
8	9132.08.S 9132.08.SX	Vacuum spring	Stainless steel
9	9132.09.A	Retainer plate	Aluminium ASTM B209: 5052-H32
10	9132.10.M	Retainer ring	Mild steel, zinc plated & passivated
11	9132.11.A	Vac. disc retaining washer	Aluminium ASTM B209: 5052-H32
12 *	9132.12.VA or 9132.12.T	Vacuum disc	Viton 70 to 75 DURO Buna-N 60 DURO
13	9132.13.P	Vac. disc spacer washer	Nylon
14	9132.24.A	Vac. disc support/rating plate	Aluminium BS EN 485: 5251-H22
15	this item is no longer fitted		
16	9132.16.M	Nyloc nut	Mild steel, zinc plated & passivated
17	0326.00.V	O-ring	Viton 75 DURO
18	this item is no longer fitted		

19	9132.19.B	Gauze insert	Brass
20	9132.20.M	Retaining circlip	Mild steel, zinc plated & passivated (2 off fitted on ATEX version)
21	9132.23.Z	Screen disc	Stainless steel 304 (only fitted on ATEX)

* Items 4 and 12 will be supplied in either one of these materials. The functionality of the equipment will not be affected.

Figure 1 – Breather Vent exploded view



3.0 Installation

Caution

DO NOT use stillsons as this likely to damage the valve beyond repair. If there is a requirement for tightening/loosening use a rod through the vent hole.

The Breather vent is generally supplied for fitting to the Collins Youldon Style 50A manhole cover. The vent is supplied separately and must be fitted according to the following instructions.

3.1 The following items will be required:

1 off	9132.7004.A	Breather vent with o-ring 0.4 kPa (4mbar) or
1 off	9132.7020.A	Breather vent with o-ring 2.0 kPa (20mbar) or
small quantity		Permabond thread sealant A131 (not supplied)

3.2 Check the new vent has the correct vacuum setting and that the specification of the vent is suitable for the application

3.3 Wipe clean the threads on the new vent and the mating threads in the emergency pressure relief valve plate.

3.4 Apply 6 drops of Permabond A131 thread sealant to the Breather vent thread and screw it into the emergency pressure relief valve plate. Tighten hand-tight onto the o-ring.

3.5 If this is not a new installation and an existing vent is being replaced it is also necessary to follow 3.6 to 3.8 below in addition to all other procedures set out in the manhole cover maintenance manual or vehicle maintenance schedule.

3.6 If a diptube cap is fitted check that it incorporates a venting cap. If not, a new cap should be fitted.

3.7 Check the condition of the 10" emergency pressure relief valve seal.

3.8 Fit a warning label, see figure 2, ensuring that it is clearly visible to all operators.

WARNING

DEPRESS THE DIP CAP TO RELIEVE

TANK PRESSURE

BEFORE REMOVING THE CAP OR OPENING THE MANLID

Collins Youldon Warning Label 7114.00.P

4.0 Inspection and Testing

4.1 Clause 34 of the "Approved Tank Requirements" (document L93) states the following:

Testing of pressure vacuum relief valves

Pressure vacuum vent valves shall be tested at intervals not exceeding 24 months to ensure the following:

- (a) *the maximum leakage rate of the valve when it is in any orientation shall be not more than 15 ml in 30 minutes;*
- (b) *the valve will commence to open when the pressure or vacuum in the tank is within $\pm 20\%$ of the appropriate nominal set pressure of the valve.*

4.2 In addition to this 24 month test interval a periodic visual inspection for damage or wear should be carried out as follows:

Note: This 'in-situ' inspection procedure is recommended for use by tank operators to assist in locating obvious signs of damage to Breather vent. It does not include an inspection of the pressure seat and does not guarantee that the Breather vent will not leak in the event of a vehicle upset or overturn. An air test is required to check the integrity of the valve.

CAUTIONS

- 1** ***DO NOT dismantle the valve. It is not possible to make adjustments to this product, if performance is not as specified replace the complete valve.***
- 2** ***Do not open the valve by inserting a screwdriver or similar instrument between the vacuum disc and the valve seat (section 4.2.6 below refers).***

- 4.2.1 If the manhole cover is closed, release all tank pressure, open the 10" emergency pressure relief valve and carry out the following inspection procedure, see figure 1.
- 4.2.2 Check that the vent valve is screwed in tight and that the seal (figure 1, item 17) between the vent and the emergency pressure relief valve plate is in good condition,
- 4.2.3 Check for visual signs of damage to the valve body
- 4.2.4 Check that the vacuum disc support plate (figure 1, item 14) is held tight by the nyloc nut (figure 1, item 16) and that the plate is not bent or damaged
- 4.2.5 Check that the valve is clean
- 4.2.6 See caution 2 above. Hold the lock nut (figure 1, item 16) with fingers or a pair of pliers, pull open the vacuum valve and inspect the vacuum disc.
- 4.2.7 If the valve is removed from the manhole cover for any reason, it should be re-fitted according to the instructions in section 3.0.