



DRUM FILTER SEAL LUBRICATOR

PURPOSE:

The Automatic Drum Filter Seal Lubricator was developed to provide dependable dosing of dry powdered micro fine graphite to continuous v-ring type end seals found on rotary drum air filters.

The amount of powdered lubricant applied is determined by the length of time compressed air is sent through the reservoir. This time is controlled by a simple adjustable timer and a solenoid compressed air valve.

Note: The rubber V-ring type continuous seals will require a more frequent dosing during the initial ten (10) days of operation. After the “run in” period the dosing can be greatly reduced.

INSTALLATION & OPERATION:

Please refer to drawing below and also the equipment manual

1. Confirm that your voltage is the same as the ibis Graphite / Talcum Applicator (110 volt, 24vdc, 220 volt, etc.). This unit is a stand-alone type that uses utility voltage and does not require the drum filter control panel.
2. Be certain there is a source of compressed air that is clean, dry and 65 psi minimum.
3. If you have purchased a Drum Filter Seal Lubricator mounted on a base panel, disregard steps 3 & 4.
4. Mount the reservoir on the outside of the drum filter enclosure wall as near to the drum seal area as possible. The best point is near the clean/drive side access door..
5. Mount the applicator injector fitting in the plenum wall so that the fitting is under the v-ring seal on the dirty side. The injector and plastic tube will be in the drum drive chamber. (see included drawing)
6. Connect the plastic tubing from the injector fitting to the outlet of the reservoir (top). A bulkhead fitting is supplied for passing the tubing through the enclosure panel wall.
7. To complete your installation:
 - (A) Connect electrical power to the terminal strip.
 - (B) Connect your compressed air to the “inlet” of the control panel.
 - (C) Connect tubing from the compressed air “outlet” of the control panel to the air “inlet” (bottom) of the graphite tank.
8. Fill the reservoir with powdered graphite.

CAUTION – leave 2” [50 mm] clear at top. DO NOT OVERFILL!

9. Adjust your automatic timer for the proper “on time” and “off time”. You have an LED digital timer with time adjustments. New seals with require 5 to 10 seconds “on time” and 180 to 300 minutes “off time” after a ten (10) day \pm “run in” time or for existing seals the “on time” can be reduced and the “off time” increased.
10. **It is HIGHLY recommended that a heavy manual application of graphite be applied to new seals. Small bellows bottles are supplied for this initial dosing. Failure to do so, can result in drum filter reducer breakdown.**
11. A filter hole is located in the top of the graphite tank but you may find it easier to fill/load by removing the larger tube fitting located by the small filler hole.

Spare Parts

PART #	DESCRIPTION	QUANTITY ON HAND
08103	RESERVOIR - Air/Oil Reserve	1
38001	CAN GRAPHITE	1
38002	BOTTLE GRAPHITE	1
31019	Time Delay Relay	1
32228-1	Solenoid Valve 110 VAC	
32228	Solenoid Valve 24 VAC	

Series VX21/22/23

For Air /Single Unit

(Inert gas, Non-leak, Medium vacuum)

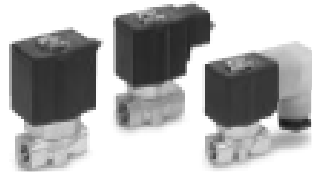
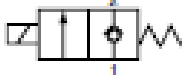
When the fluid is air.

Please select the VCA series when using air because it is specifically designed for it. (The VCA series is limited to air to improve its function and service life.)

Model/Valve Specifications

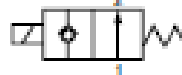
N.C.

Passage symbol



N.O.

Passage symbol



Normally Closed (N.C.)

Port size	Orifice size (mm)	Model	Max. operating pressure differential (MPa)		Flow characteristics			Max. operating pressure (MPa)	Flow Weight (g)	
			AC	DC	Q ₁ (l/min)	b	C _v			
1/4 (SA)	2	VX2110-01	2.0	1.5	0.59	0.48	0.18	300		
	3	VX2120-01	1.1	0.6	1.2	0.45	0.33			
	4.5	VX2130-01	0.45	0.2	2.4	0.44	0.61			
1/4 (SA)	2	VX2110-02	2.0	1.5	0.59	0.48	0.18	3.0	470	
	3	VX2220-02	1.1	0.6	1.2	0.45	0.33			520
		VX2320-02	3.0	3.0						300
		VX2130-02	0.45	0.2				470		
	4.5	VX2230-02	0.75	0.35	2.3	0.46	0.61	520		
		VX2330-02	1.0	0.9				620		
	6	VX2340-02	0.4	0.15	4.1	0.3	1.1	470		
		VX2340-02	0.5	0.35				520		
	8	VX2350-02	0.15	0.08	6.4	0.3	1.6	560		
		VX2350-02	0.2	0.2				700		
10	VX2360-02	0.08	0.03	8.8	0.3	2.0	560			
	VX2360-02	0.1	0.07				700			
1/2 (10A)	3	VX2220-03	2.0	1.5	1.2	0.45	0.33	3.0	470	
		VX2320-03	3.0	3.0					520	
		VX2330-03	0.75	0.35					470	
	4.5	VX2330-03	1.0	0.9	2.3	0.46	0.61	3.0	520	
		VX2340-03	0.4	0.15					470	
	6	VX2340-03	0.5	0.35	4.1	0.3	1.1	3.0	520	
		VX2350-03	0.15	0.08					560	
	8	VX2350-03	0.2	0.2	6.4	0.3	1.6	3.0	700	
		VX2360-03	0.08	0.03					560	
	10	VX2360-03	0.1	0.07	11	0.3	2.2	3.0	700	
VX2360-03		0.1	0.07	560						
1/2 (15A)	10	VX2360-04	0.08	0.03	11	0.3	2.2	3.0	560	
		VX2360-04	0.1	0.07					700	

Note) Weight of grommet type. Add 10 g for conduit type, 30 g for DIN terminal type, 60 g for conduit terminal type respectively.
 * Refer to "Glossary of Terms" on front matter 10 for details on the max. operating pressure differential and the max. system pressure.

Normally Open (N.O.)

Port size	Orifice size (mm)	Model	Max. operating pressure differential (MPa)	Flow characteristics			Max. operating pressure (MPa)	Flow Weight (g)	
				Q ₁ (l/min)	b	C _v			
1/4 (SA)	2	VX2110-01	1.5	0.59	0.48	0.18	320		
	3	VX2120-01	0.7	1.2	0.45	0.33			
	4.5	VX2130-01	0.3	2.3	0.45	0.61			
1/4 (SA)	2	VX2110-02	1.5	0.59	0.48	0.18	3.0	470	
	3	VX2220-02	0.7	1.2	0.45	0.33			520
		VX2320-02	1.0						300
		VX2130-02	0.3				470		
	4.5	VX2230-02	0.45	2.3	0.46	0.61	520		
		VX2330-02	0.6				620		
	6	VX2340-02	0.25	4.1	0.3	1.1	470		
		VX2340-02	0.45				520		
	8	VX2350-02	1.0	6.4	0.3	1.6	560		
		VX2350-02	1.6				700		
10	VX2360-02	0.45	8.8	0.3	2.0	560			
	VX2360-02	0.6				700			
1/2 (10)	3	VX2220-03	1.5	1.2	0.45	0.33	3.0	470	
		VX2320-03	1.6					520	
		VX2330-03	0.6					470	
4.5	VX2230-03	0.45	2.3	0.46	0.61	3.0	520		
	VX2330-03	0.6					620		
6	VX2340-03	0.25	4.1	0.3	1.1	3.0	520		
	VX2340-03	0.45					620		

Note) Weight of grommet type. Add 10 g for conduit type, 30 g for DIN terminal type, 60 g for conduit terminal type respectively.
 * Refer to "Glossary of Terms" on front matter 10 for details on the max. operating pressure differential and the max. system pressure.

Operating Fluid and Ambient Temperature

Power source	Operating fluid temperature (°C)		Ambient temperature (°C)
	Solenoid valve option (symbol)		
	N, C	V, M	
AC	-10 ^(N) to 80	-10 ^(M) to 80	-20 to 60
DC	-10 ^(N) to 60	-10 ^(M) to 40	-20 to 40

Note) Dew point temperature: -10°C or less

Tightness of Valve (Leakage Rate)

Seal material	Leakage rate	
	Air	^(N) Non-leak, Medium vacuum
NBR, FKM	1 cm ³ /min or less	10 ⁻⁴ Pa·m ³ /sec or less

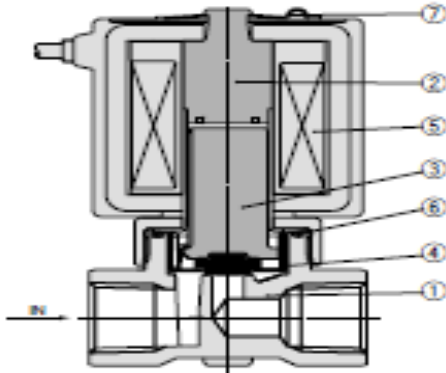
Note) Value on option 'V', 'M' (non-leak, medium vacuum)

Direct Operated 2 Port Solenoid Valve *Series VX21/22/23*

Construction: Single Unit

Normally closed (N.C.)

Body material: Brass, Stainless Steel



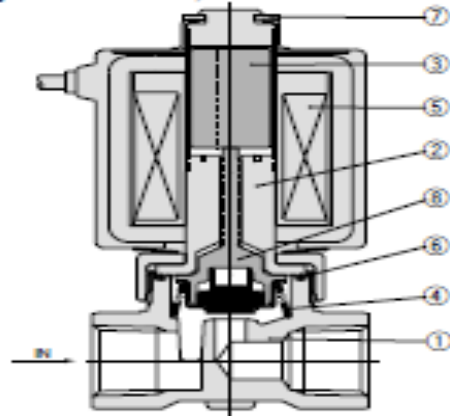
Component Parts

No.	Description	Material	
		Body material (Brass specification)	Body material (stainless steel specification)
1	Body	Brass	Stainless steel
2	Tube assembly	Stainless steel, Copper	Stainless steel, Silver
3	Armature assembly	(NBR, FKM, EPDM, PTFE); Stainless steel, PPS	
4	Return spring	Stainless steel	
5	Solenoid coil	Class B/H molded	
6	O-ring	(NBR, FKM, EPDM, PTFE)	
7	Clip	SK	

The materials in parentheses are the seal materials.

Normally open (N.O.)

Body material: Brass, Stainless Steel



Component Parts

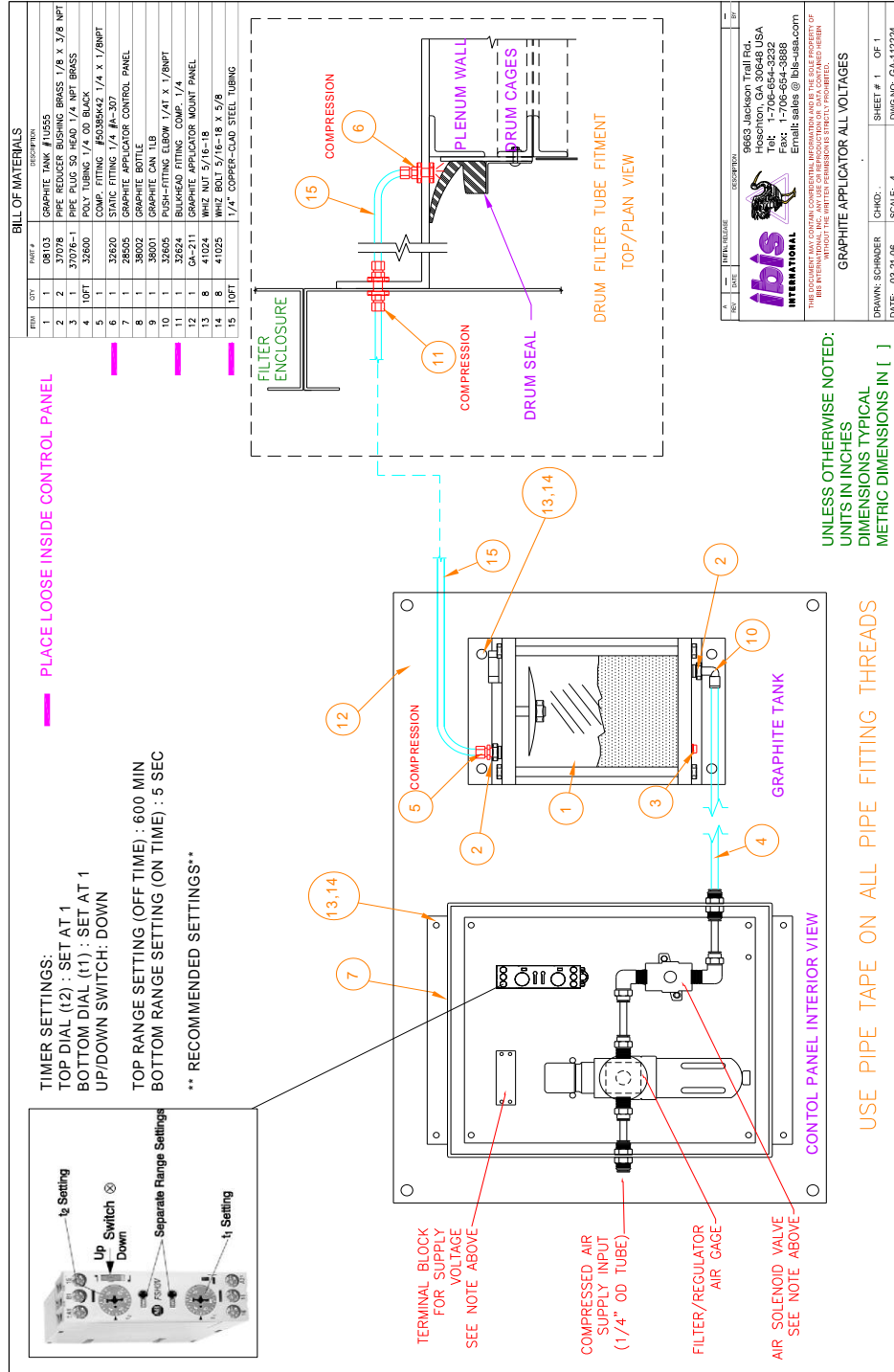
No.	Description	Material	
		Body material (Brass specification)	Body material (stainless steel specification)
1	Body	Brass	Stainless steel
2	Tube assembly	Stainless steel, Copper	Stainless steel, Silver
3	Armature assembly	Stainless steel	
4	Return spring	Stainless steel	
5	Solenoid coil	Class B/H molded	
6	O-ring	(NBR, FKM, EPDM, PTFE)	
7	Clip	SK	
8	Push rod assembly	(NBR, FKM, EPDM, PTFE); Stainless steel, PPS	

The materials in parentheses are the seal materials.

A-B Timer Information:

<http://www.ab.com/en/epub/catalogs/12768/229240/229266/229655/229713/index.html>

Figure 1



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GRAPHITE APPLICATOR ALL VOLTAGES

DRAWN: SCHMIDT
 DATE: 03-21-06
 SHEET # 1 OF 1
 DWG. NO. GA-11224