GEM Equipments Limited

GEM

Since 1984

Compressed Air & Cooling Systems

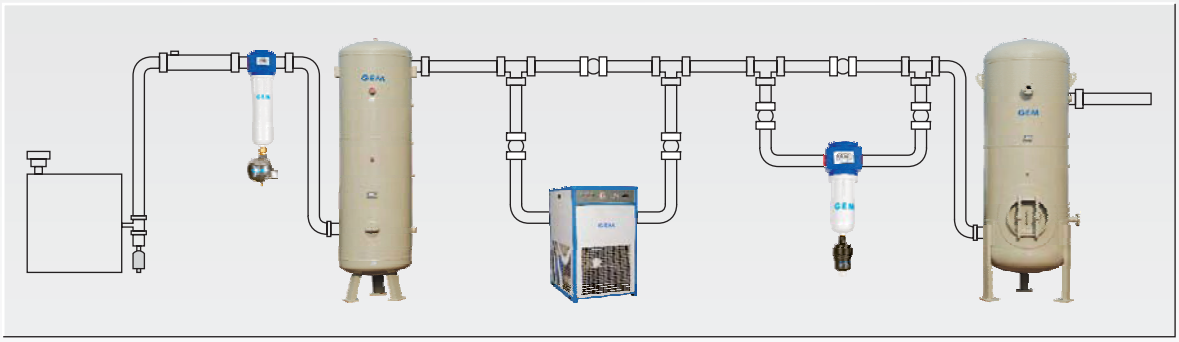
Vortex Separator

VWS Series

WORLD CLASS
COMPRESSED AIR DRYERS AND ACCESSORIES

DNV

Typical Installation



Capacity: 100 CFM to 900 CFM • Working Pressure: 12.5 bar g

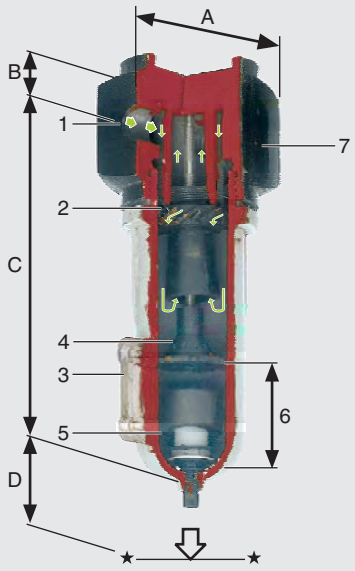
Vortex Separator

Specifications

Model	Pipe Size	Flow Rates		Dimensions mm				Weight	
		cfm	m³/hr	A	B	C	D	Kg	lbs
VWS 010	G ½"	100	170	94	42	204	130	1.75	3.85
VWS 012	G ¾"	125	212	94	39	206	130	1.75	3.85
VWS 015	G 1"	150	255	94	37	212	130	1.75	3.85
VWS 025	G 1½"	350	580	120	44	372	220	4.5	9.9
VWS 040	G 2"	600	1000	173	63	468	340	7.5	16.5
VWS 090	G 2½"	1000	1700	173	60	471	340	9.5	20.9

Line Pressure	bar g	1	3	5	7	9	11	13	15	16
	psi g	15	44	73	100	131	160	189	218	232
Correction factor		0.5	0.71	0.87	1.0	1.12	1.22	1.32	1.41	1.56

1 Moisture Air Inlet
2 Fixed Vortex Generator
3 Sight Glass
4 Arrestor
5 Float Type Auto Drain Valve
6 Dead Zone
7 Moisture Free Air Outlet



Problems in Compressed Air Circuit

All air contains moisture in the form of water vapour. This water vapour begins to condense into condensate in the compressed air system when the air cools to the saturation point. When this compressed air is used in the manufacturing plant, the moisture causes problems such as washing away of lubricants, increasing wear and tear, rust formation, corrosion etc. These may adversely damage the system components, cause shut down of machine or increase maintenance of machinery.

What is the solution?

The Easiest and the Permanent solution for the moisture removal problem is the provision of a **VORTEX SEPARATOR,** an innovative technology product from GEM EQUIPMENTS, which is also very effective.

If you have moisture problem in the compressed air line, *"Just get a Vortex Separator, fit it & forget the problem".*

How does it work?

The moist air after entering the Vortex Separator hits the shell and then passes through the Vortex generator, which generates the vortex motion of compressed air. The Vortex generator is a fixed one and has a number of vanes. These vanes separate the moisture droplets by impingement separation method. Due to the density, the moisture droplets settle down into the Dead Zone below the Arrestor. The moisture free air is let out through the inner shell of the separator. The arrestor will not allow the compressed air to carry the removed moisture. An Automatic Drain Valve (float type) is fitted to the dead zone, which drains the moisture condensate. A sight glass is provided for visually checking the level of moisture collected in the dead zone.

GEM Vortex Separator is designed for 99% effective moisture separation with the least possible pressure drop.

WORKING CONDITIONS :

Maximum Operating Pressure	:	12.5 Bar
Maximum Recommended Operating Temperature	:	70° C
Pressure Drop at Rated Flow	:	0.1 Kg/cm²

* Specifications Subject to change due to Constant upgradation of products.

ACCESSORIES (Optional)

i. Mounting Bracket
ii. Manual Drain
iii. Electronic Drain

WHY VORTEX SEPARATOR INSTEAD OF OTHER SEPARATOR?

- GEM Vortex Separator is constructed of Non-corrosive Aluminium instead of corrosive mild steel, as in other separators.
- It is lighter in weight and hence can be mounted easily mounted in the pipeline itself without any support.
- It is very easy to operate
- It operates with the most effective moisture separation possible
- It is fitted with float type automatic drain
- It is maintenance free

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