



# ETC-SV OIL FREE COMPRESSED AIR



- › Guaranteed oil-free compressed air according to DIN ISO 8573 class 0.
- › Achieving class 1 even with hydrocarbon concentrations of up to 154 000 parts per billion at the ETC inlet.
- › Clean condensate with a hydrocarbon concentration downstream of the ETC <1.93 parts per billion and therefore allowed to drain without additional treatment or separation.
- › Compared to many oil-free compressors, the condensate is not acidic but neutral with a pH between 6 and 7.
- › Compared to oil-free compressors, independent of the ambient air quality.
- › The ETC catalytic process also minimizes bacteria, fungus and microbial content in the compressed air.

[www.dvsystems.ca](http://www.dvsystems.ca)



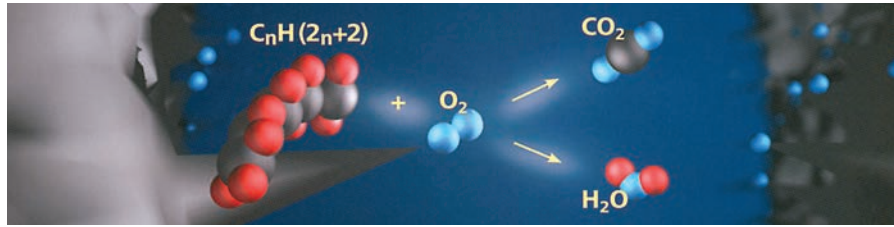
- › 20 000 working hours or 30 months warranty on the catalytic function.
- › The ETC is compatible with variable speed drive, compressors operating between 110% and 20% by using the VS module.
- › Converts silicone monomers to silica and absorbs the silica.
- › Compact design with improved insulation and reduced energy consumption.
- › Electronic control unit and reduced number of electrical wear parts.
- › Pressure drop over ETC system approx 5.8 psi at 100 psi.
- › Absolutely secure system with a protective shutdown unit that prevents oil-containing compressed air from entering the network in the event of malfunction.

100+ YEARS OF ENGINEERING & MANUFACTURING EXCELLENCE

**BUILT BETTER**

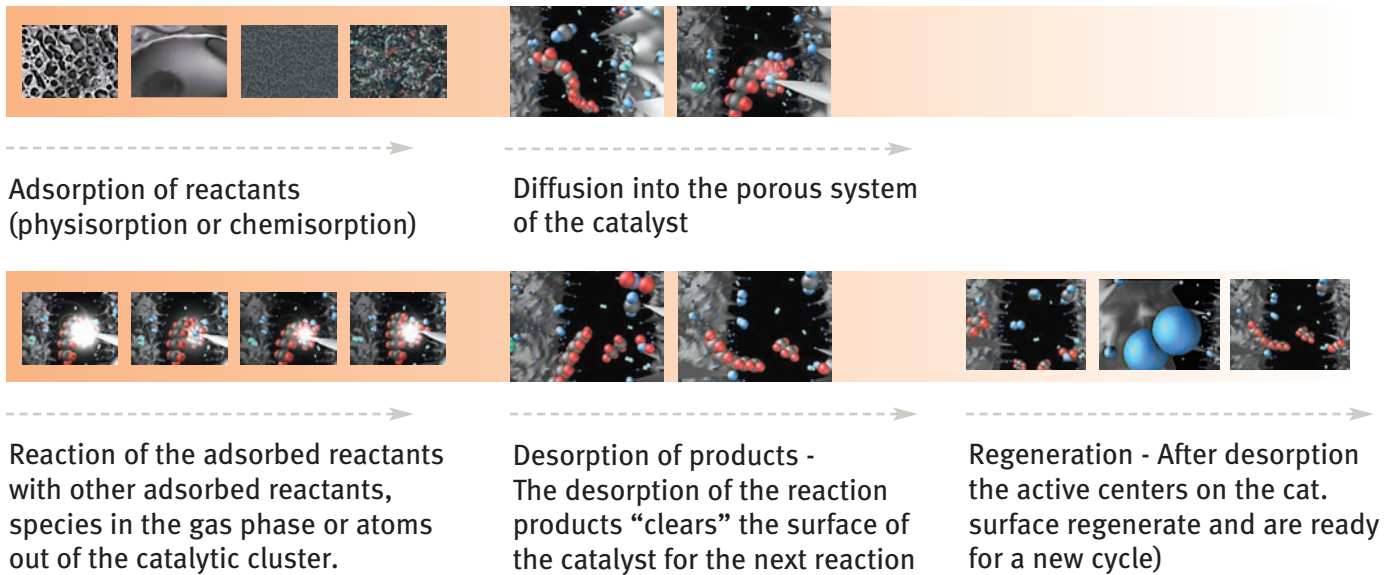
OIL FREE COMPRESSED AIR

**NEW**



**THE ECOTEC CONVERTER** concept uses a special catalyst to convert the oil and other hydrocarbons into water and other harmless air components in a physical-chemical process (see above). All oil molecules are burnt completely and effectively in the EcoTec Converter. The compressed air is absolutely oil free and can be used without restrictions in all applications that require guaranteed oil-free compressed air. The process is not only very ecological but also most economical.

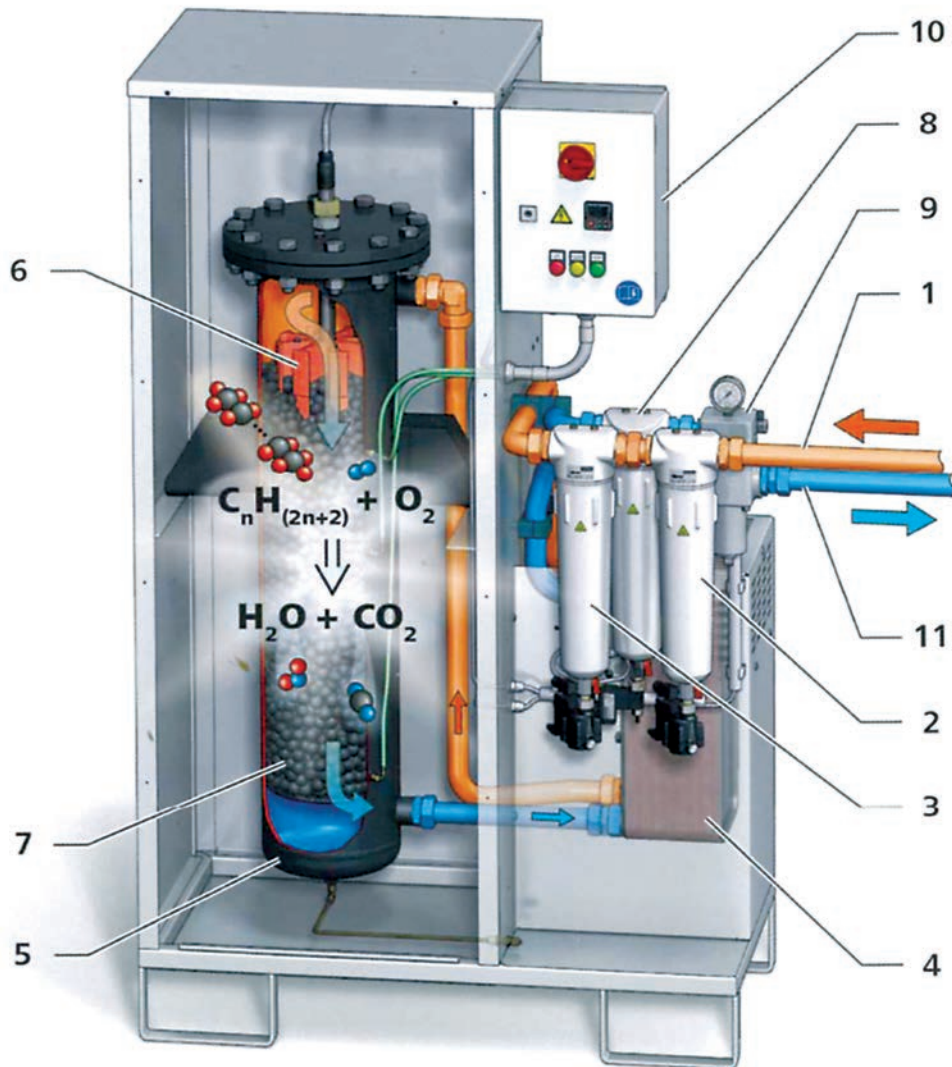
## CATALYST PRINCIPLE



## ISO 8573-1:2001 COMPRESSED AIR QUALITY STANDARD

The ISO8573.1:2001 table shows the recommended maximum levels for oil including vapour. The ISO 8573-1 compressed air standard was revised in 2001 to address the needs of critical applications where air purity is essential. Industries such as pharmaceuticals, food and beverages and electronics must exclude any risk of contamination and the severe consequences that could follow, such as spoiled or unsafe products, production downtime and damage to brand and reputation. And to the existing purity classes a new and more stringent class was added: ISO 8573-1 CLASS 0.

Class	Oil/air ratio in parts per billion	Applications
0	1.93	Pharmaceutical industry, food, biotechnology, paint with high quality demand, breweries, dental
1	7.73	Paint sprayers, measuring equipment, air bearings, pipeline purging
2	77.3	Chip production, weaving mills, photographic laboratories, breathing air
3	773	Instrument air, general factory air, sand spraying with quality demands
4	3865	Sand spraying without quality demands
5	19320	Propulsion air



- 1 AIR INLET
- 2 PRE-SEPARATOR
- 3 VS MODULE
- 4 HEAT EXCHANGER
- 5 CONVERTER VESSEL
- 6 ELECTRIC HEATER
- 7 CATALYST
- 8 PARTICLE FILTER
- 9 MINIMUM PRESSURE CLOSING VALVE
- 10 CONTROLS
- 11 AIR OUTLET

### THE ECOTEC CONVERTER

**The ETC is integrated into the compressed air network downstream of the compressor.**

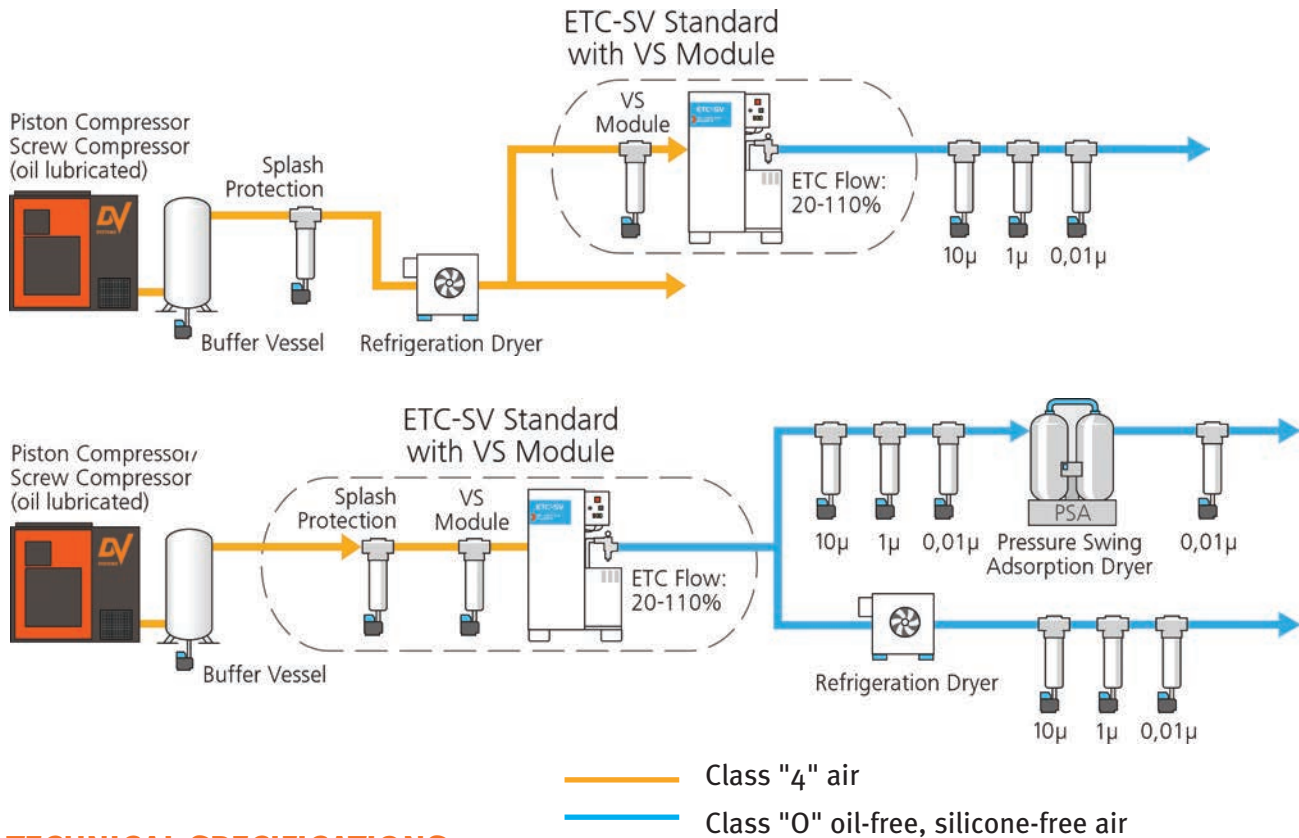
The compressed air (1) containing oil that is flowing from the compressor is conducted over a pre-separation unit (2) and a VS module (3) into a plate heat exchanger (4). The pre-separation unit protects the ETC against liquid oil and water. The VS module extends the maximum working range to between 20 to 110% of the nominal flow. The compressed air is pre-heated in the plate heat exchanger and then flows into the converter vessel (5) containing the catalyst (7).

By using an electric heater (6), the catalyst is held at a temperature that is necessary for the catalytic to take place. The oil-free compressed air leaves the converter and is cooled down again in a counter flow in the plate heat exchanger and is conducted through an optional particle filtration unit (8) and the minimum pressure closing valve (9) to the outlet.

# OIL FREE COMPRESSED AIR

## OPTIMIZED SYSTEM DESIGN

The quality of air required throughout a typical compressed air system can vary. The extensive range of purification equipment available from DV Systems allows the user to specify the quality of air for every application. DV Systems has a comprehensive range of purification equipment available to exactly match system requirements, ensuring both capital and operational costs are kept to a minimum. The following schematic show two configurations of ETC use.



## TECHNICAL SPECIFICATIONS

Model	CFM at 100psi	Max. pressure [psi]	Weight [lbs]	Length [inch]	Width [inch]	Height [inch]	Energy consumption at nominal flow [kWh]	Supply voltage [V]
ETC SV04	14	232	132	27.55	13.85	55.11	0.2	230
ETC SV1	35	232	221	33.85	17.91	57.28	0.5	230
ETC SV2	70	232	331	33.85	17.91	65.17	1.1	230
ETC SV5	178	232	760	46.25	24.20	74.40	2.1	400
ETC SV7	247	232	1256	46.25	24.20	74.40	2.5	400
ETC SV10	353	232	1477	64.17	32.08	82.67	3.0	400
ETC SV15	529	232	2601	64.17	34.64	82.67	4.5	400

**TO MAINTAIN WARRANTY USE ONLY ORIGINAL DV SERVICE PARTS**



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As we are continually trying to improve our products, specifications are subject to change without notice.

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