

YTS Diaphragm Pumps ATEX Overview

An Overview of YTS Manufactured Air Operated Double Diaphragm Pumps (AODD Pumps) for Use in Potentially Explosive Atmospheres.

In accordance with European guidelines, equipment to be used within potential explosive atmospheres must be safe for use in the following environments.

Table 1 – Equipment groups and categories.

Equipment groups (Annex I of the EC-Directive 94/9/EC)							
Group I (mines, mine gas and dust)		Group II (other explosive atmospheres gas/dust)					
Category M		Category 1		Category 2		Category 3	
1	2	G (gas) (Zone 0)	D (dust) (Zone 20)	G (gas) (Zone 1)	D (dust) (Zone 21)	G (gas) (Zone 2)	D (dust) (Zone 22)
For equipment providing a very high level of protection when endangered by an explosive atmosphere	For equipment providing a high level of protection when likely to be endangered by an explosive atmosphere	For equipment providing a very high level of protection when used in areas where an explosive atmosphere is very likely to occur		For equipment providing a high level of protection when used in areas where an explosive atmosphere is likely to occur		For equipment providing a normal level of protection when used in areas where an explosive atmosphere is less likely to occur	


The following YTS pumps comply with Category 2 “For equipment, proving a high level of protection when used in areas where an explosive atmosphere is likely to occur”, and Category 3 “For equipment providing a normal level of protection when used in areas where an explosive atmosphere is less likely to occur.” and so are deemed SAFE for use in the following potentially explosive environments.

- i.e. Group II Category 2, Zone 1 for Gas & Zone 21 for Dust
Group II Category 3, Zone 2 for Gas & Zone 22 for Dust.

Table 2 – YTS ATEX Certified Air Operated Double Diaphragm Pumps.

(1)	Pump Series	Manufactured From The Following Materials
	D030 Series	PVDF
	D050 Series	AL, SUS, PVDF, POM, CFPP
	D101 Series	AL, SUS
	D150 Series	POM
	D151 Series	AL, SUS, PVDF, POM
	D152-PC Series	CFPP, AL, SUS, PVDF, POM * With CFPP Air Motor
	D202-PC Series	PVDF * With CFPP Air Motor
	D203-PC Series	AL, SUS * With CFPP Air Motor
	D203-MT Series	AL, SUS * With Metallic Air Motor
	D252-PC Series	CFPP, PVDF * With CFPP Air Motor
	D253-PC Series	AL, SUS, FE * With CFPP Air Motor
	D253-MT Series	AL, SUS, FE * With Metallic Air Motor
	D400 Series	PVDF
	D500 Series	AL, SUS, FE, PVDF *Except T, S & H Diaphragms.
	D500-HB	AL, SUS, FE, PVDF *PTFE Fitted 500 Series Pumps with Conductive TPEE back up.
	D800 Series	AL, SUS, FE *Except T, S & H Diaphragms.
	D800-HB	AL, SUS, FE *PTFE Fitted 800 Series Pumps with Conductive TPEE back up.
	DFC Series	CFPTFE

Table 3 – ATEX Basic Pump Technical Requirements

(1)	The wetted material of construction must be conductive to dissipate static build-up.	
(2)	Non Wetted materials of construction must be conductive to dissipate static build-up. Therefore the pump is fully groundable so that any electro-static discharges are dissipated in a continual circuit throughout the pump to a natural ground point.	
(3)	An earth point is to be provided and identified on the pump.	
(4)	A ground wire must be connected to the pump as well as any piping or other peripheral equipment by the operator prior to using the pump.	

Note; Physical material properties effecting ATEX suitability such as surface dimensions and electrical conductivity requirements are listed within the relevant documentation.

For more information about ATEX Pumps or ATEX guidelines please contact YTS or your local distributor.

