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Atex 100a Directive

Directive on Equipment and Protective
systems intended for use in
potentially explosive atmospheres.

94/9/EC

The Directive is commonly referred to
as the 'ATEX' Directive



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For the purposes of the regulations equipment is divided into two groups :-

- Group 1 - equipment intended for use in underground parts of mines, and surface installations, liable to be endangered by firedamp and/or combustible dust.
- Group 2 - equipment intended for use in other places liable to be endangered by explosive atmospheres.



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Within these two groups, equipment is classified in three categories :-

- Category 1 :- equipment ensuring a **very high** level of protection even in the event of rare incidents. Two means of protection are required in the event of two faults occurring independently of each other, or in the event of one means failing. Explosive atmospheres are present continuously.
- Category 2 :- equipment ensuring a **high level** of protection in the event of frequently occurring faults. Explosive atmospheres are likely to occur.
- Category 3 :- equipment ensuring a **normal level** of protection. Explosive atmospheres are unlikely to occur.



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Group I (Mines, mine gas & dust)		Group II (Other explosive atmospheres, gas & dust)					
Category M		Category 1		Category 2		Category 3	
1	2	G (gas) (Zone 0)	D (dust) (Zone20)	G (gas) (Zone 1)	D (dust) (Zone21)	G (gas) (Zone 2)	D (dust) (Zone22)
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.	

Blagdon have no product offering for these groups/categories.



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Temperature Classifications :-

Temperature Class	Maximum Permitted Surface Temp °C
T6	85
T5	100
T4	135
T3	200
T2	300
T1	450

If the equipment reaches 150° C during normal operation, it would normally be classified as T3, meaning it's safe for use with gas groups T3 & above. It cannot be used in T4, T5 or T6 area's as it will potentially ignite any explosive atmosphere. Blagdon pumps can be trimmed with elastomers capable of handling fluids upto 180° C. For this reason T4, T3 etc classifications are not used. The nameplate is stamped to indicate the pump maximum temperature depending on the elastomers used.

(see slide 8)



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Models to be offered :- Group II, Category 2

All metallic models are certified to the above classification. This includes all standard pumps, all high pressure pumps and all hygienic pumps. Flanged models are also included.

The only models not certified to this level are pumps fitted with steam jackets.

Elastomers :- Buna-N, EPDM, Neoprene, Viton, PTFE,
Hytrel & Santoprene



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All other models :- Group II, Category 3

This is the lowest risk category, with the Declaration of Conformity supplied by Blagdon Pump.

All other pumps within the range can be supplied to this category. Where possible all pumps must be fitted with earthing connections to prevent static build-up.



Note ! Blagdon moulded plastic pumps can be supplied certified to this level, but are not conductive and so will not be supplied with a grounding lead.



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Pump Marking :- Category 2

 BLAGDON PUMP 2005	 II 2 GD c
	TRL DIF 058
	FLUID TEMPERATURE
	0°C + 80°C <input checked="" type="checkbox"/>
	0°C + 100°C <input type="checkbox"/>
	0°C + 180°C <input type="checkbox"/>
Lambert Road, Armstrong, Washington, Tyne & Wear, NE37 1QP	

Atex nameplate will be hard stamped to indicate temperature limit of pump.

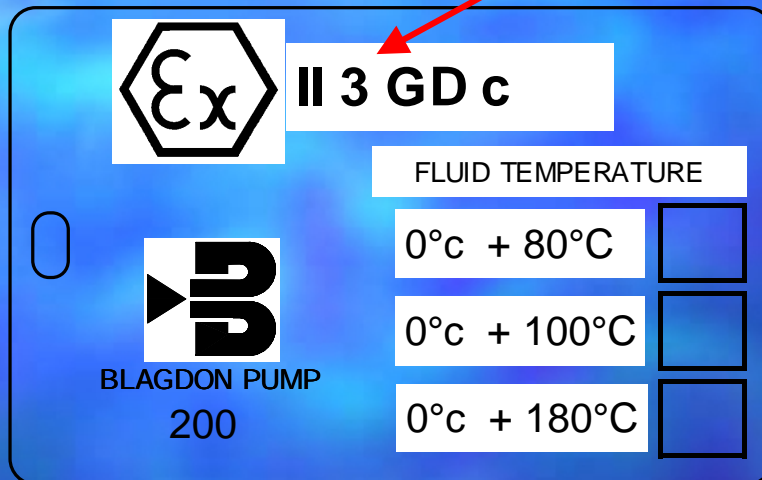
In all cases where liquid temperature is going to exceed 80°C this must be clearly specified at time of quotation.



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Pump Marking :- Category 3



Atex nameplate will be hard stamped similar to category 2 marking. Any high temperature requirements must be noted.



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Atex Checklist :-

- Ensure the classification for the pump has been properly defined.
- Is the zone/category compatible with the pump.
- Check the liquid pumped temperature is compatible with the temp. class
- Check the requested diaphragm/elastomer materials are within the range offered.
- Is any additional equipment quoted certified to the appropriate level.
- Mandatory documents are :-
 - EC Declaration of Conformity
 - ATEX Users Instructions