

To place equipment and protective systems intended for use in potentially explosive atmospheres on the market or into service in all EU member states, the equipment must carry an 'ATEX' certificate required by the EU directive 94/9EC. This new directive is more commonly known as the ATEX directive

(from the French: **AT**mospheres **EX**plosibles).



ATEX ATMOSPHERES EXPLOSIBLES EUROPE

HYDRA-PERM-GD LTD

Assessment for Group II



EU Symbol

Zone Definition - GAS

A Place in which an explosive atmosphere is not likely to occur in normal operation, but if it does, only for short period of time

ATEX Category - NON MINING

Equipment suitable for Zone 1
Equipment suitable for Zone 21
GAS & DUST

Non-Electrical (Concepts)

- c - Constructional Safety
- k - Liquid Immersion
- b - Control of Ignition Source

Temperature

100 °c Maximum Surface Temperature

European Directive Mark

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Assessment for Group I



EU Symbol

Zone Definition - GAS

A Place in which an explosive atmosphere is likely to occur in normal operation occasionally

ATEX Category - MINING

Equipment suitable for Zone 1
Equipment suitable for Zone 21
GAS & DUST

Non-Electrical (Concepts)

- c - Constructional Safety
- k - Liquid Immersion
- b - Control of Ignition Source

Temperature

100°C Maximum Surface Temperature

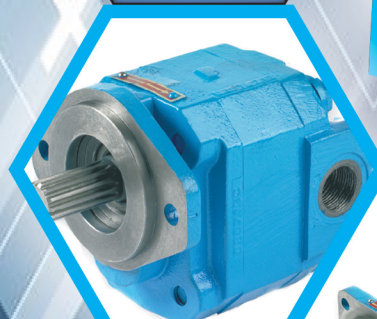
European Directive Mark

PERMCO

**OIL & GAS
Industries**



**MINING
Industries**



Gear Motors



Gear Pumps



Flow Dividers

Temperature Class

Any equipment for use in the hazardous area is given a temperature or 'T' rating. This relates to the maximum surface temperature of the equipment that is likely to come in contact with the gas

Equipment group I:

Equipment intended for use in underground parts of mines, and to those parts of surface installations of mines, liable to be endangered by firedamp and / or combustible dust

Equipment Group II:

Equipment intended for use in places, other than those specified for Equipment Group I, liable to be endangered by explosive atmospheres

Product

ATEX does not only concern electrical equipment, but all equipment and protection systems for use in potentially explosive atmospheres.

Classification of equipment

The ATEX directive contains classification into groups and categories which are defined by the marking on the equipment.

Scope

In the ATEX directive, conformity of products is compulsory. The ATEX directive also covers explosive dust/air mixtures as well as gases.

WHAT IS ATEX?

User Environment

ATEX concerns all products to be used in places where explosive atmospheres may arise, such as mixtures of air and flammable materials such as gases, vapours, mists and dusts.

Non-mining equipment

- Group II, category 1: Equipment suitable for Zones 0, 20
- Group II, category 2: Equipment suitable for Zones 1, 21
- Group II, category 3: Equipment suitable for Zones 2, 22

Mining equipment

- Group I, category M1: Very high level of protection; equipment may continue to operate in the presence of explosive atmosphere
- Group I, category M2: High level of protection; equipment to be de-energised in presence of explosive atmosphere

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