



Member of the **envea** group  
**MERCURY INSTRUMENTS**  
Analytical Technologies

## Mercury Monitoring Systems for Natural Gas Ex-certified housings **Customized solutions**

Mercury Instruments offers various mercury monitoring systems according to different needs. In addition to customized solutions regarding the choice of multi-channel systems, calibration units etc. we can provide **Ex-certified housings** for our systems to be installed in hazardous zones 1 or 2

These housings comply with ATEX or IEC-Ex regulations.

Basically we offer **two types** of Ex-certified housings:

- ⇒ **Exd**: flameproof enclosure;  
propagation of an explosion inside to the outside is excluded
- ⇒ **Exp**: pressurization;  
an explosive atmosphere outside is kept away from the the ignition source

Both types are suited for hazardous zones 1 and 2.

The zones are classified according to the temporary behaviour of explosive atmosphere as follows:

- ⇒ **Zone 1**: arises in normal operation occasionally
- ⇒ **Zone 2**: is not likely to arise in normal operation, or if it does, will persist for a short time only

## Exd

The flame and explosion proof cabinet is made of steel. The thickness of the walls and torque of the bolts is calculated to withstand maximum pressure in case of an explosion taking into account the maximum volume of flammable gas. Subsequent pressure release is achieved by using a special vacuum grease, that will allow a very slow depressurization after cooling.



## Exp

The steel cabinet is constantly fed with pressurized air (inlet pressure range: 3.5 to 14 bar) from a source free of flammable gas. A pressure regulator maintains an inside overpressure of approx. 10 mbar. Entering of potentially explosive atmosphere from the surroundings is thus effectively prevented.



## Gas alarm

In addition an optional gas alarm can be provided to shut down the instrument in case of the presence of flammable gas well below ignitable concentrations.