HILLER
separation & process
Member of the ferrum Group

DECANTER CENTRIFUGES
& PLANTS FOR SOLID/LIQUID SEPARATION

DECANTER CENTRIFUGES FOR OPERATION IN THE ATEX INDUSTRY

For performance in accordance with RL 2014/34/EU requirements

HILLER decanters and equipment are used in many situations where protection from explosion is also necessary. For instance in many areas of industrial production where raw materials and environmental technology is used, and where products being processed may create a situation when an explosive atmosphere may be created.
The appropriate equipment is necessary in order to protect people and equipment from the danger.

As a German manufacturer, HILLER always uses ATEX (AT-mosphére EXplosive) as the basis for design.
However, a design according to country-specific requirements (e.g. according to NEC 500 or NEC 505) is also possible.

USAGE EXAMPLES
for explosion protection equipment

- during the classifying of colour pigments in a benzine suspension
- in the use of alcohol-soaked herbs and root extracts
- during the chemical separation of intermediate products of acetone
- during the separation of a methanol wash from a salt suspension
- during the processing of waste from the mineral oil industry

Explosion protected HILLER decanters and associated equipment are certified for RL 2014/34/EU requirements and are available for a variety of Ex-zones, gas groups and temperature classes.

EXPLOSION PROTECTION

In the design of the explosion protected equipment the following general requirements are decisive:

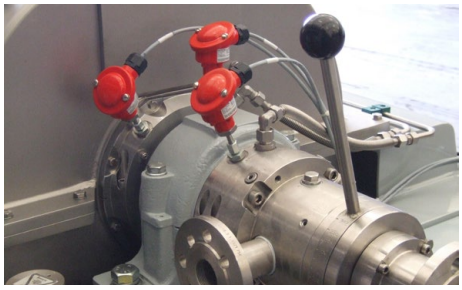
- **site environment**
  the level of liklihood of an explosion
- **product**
  whether the processing of the product can result in an explosive atmosphere (e.g. via outgassing, fine atomisation, etc.)

RELY ON OUR LONG YEARS OF EXPERIENCE

Depending on the application/ process, the concept „explosion-protection“ can include a wide range of measures. In the simplest cases the use of explosion-protected drive motors and instruments is sufficient. With the increasing potential for danger the demands are on design and construction up to a so-called gas-tight design in which exposure to inert gas is prevented.

The installation of switchgear within an explosion endangered area can be achieved through the use of pressurized control cabinets.

Additionally the HILLER decanters can be fitted out with full hydraulic drives to achieve full variability of bowl and differential speed without the need for a frequency inverter.



SCC-CERTIFICATED PERSONNEL

Regarding the security-relevant and complex topic of explosion protection HILLER can guarantee the quality of work from their internal personnel, who have years-long experience and competence, and are SCC certificated (SCC-Safety Certificate Contractors).

Explosion protected HILLER decanters and equipment are always designed and manufactured to the specific requirements of the intended operational use.

We support our customers during the whole process of designing and developing an optimal solution for the relevant demands.
You can rely on our extensive knowledge.

REQUIREMENTS FOR EXPLOSION PROTECTION

The hazards of a process are assessed by the operator.
Important criteria are, amongst others, the liklihood of explosion, which is stated by the term of Category, for example the zone, and would be written as follows:

- **Category 1** = Zone 0 resp. 20
  high or constant liklihood of explosion
- **Category 2** = Zone 1 resp. 21
  occasional danger of explosion
- **Category 3** = Zone 2 resp. 22
  seldom and short term danger of explosion

Further important parameters of a medium are:

- the flashpoint
- the ignition temperature
- the ignition energy
- upper explosion limit
- lower explosion limit

The temperature class of the equipment is derived from the ignition temperature.

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