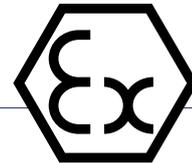


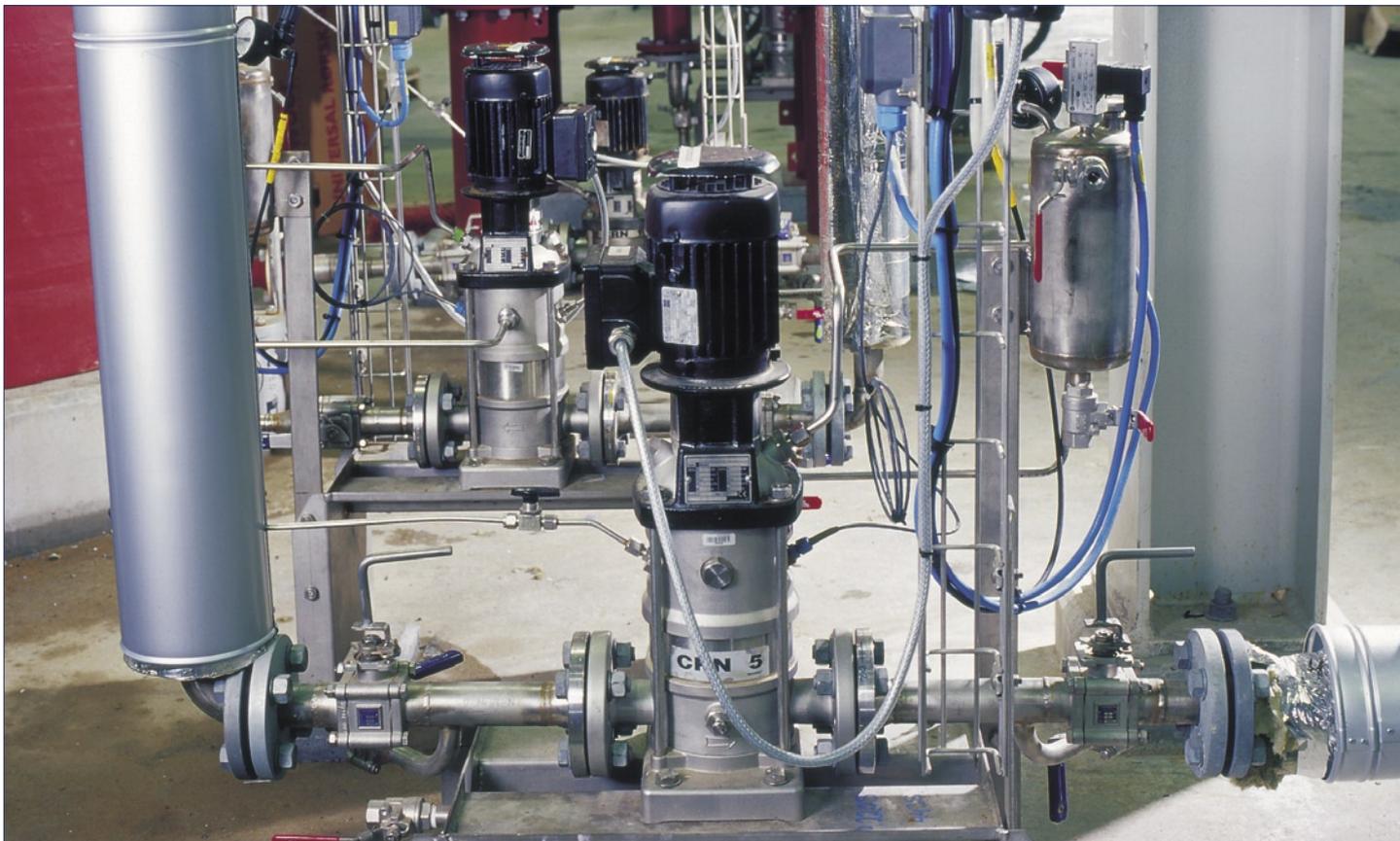
# ATEX approved CR pumps



## Grundfos CR in hazardous areas

A new European directive, called the ATEX directive, comes into effect July 2003. The directive, (94/9/EC), deals with electrical, mechanical, hydraulic or pneumatic equipment in areas exposed to explosive atmosphere. Explosive atmosphere consists of air and some sort of combustible material such as gas, dust or vapour. So, to prevent explosions from occurring, and thereby higher the standard of safety in the risk areas, manufacturers of this type of equipment have to comply with the basic safety requirements stated in the new directive.

The safety requirements in the ATEX directive implies that pumps have to carry a clear indication of which equipment group and category, they belong to, and in what areas they can be used. All the pumps in the Grundfos CR ATEX range comply with the requirements in the directive. The ATEX directive affects a wide range of industries, dealing with the handling of cereals, animal feed, paper and wood industries that generate combustible dust. Likewise the directive affects industries that deal with the handling of chemicals, plastics and petrol, that is industries that generates explosive gasses.





## CR in hazardous areas

The ATEX approved CR pumps and motors carry a mark that shows which explosion category the pumps are designed for, and thus, in what kind of areas they can be used. The directive distinguishes between two explosion groups; group I and II. Whether it is a group I or II pump, depends on the level of danger of explosion in the area in which the CR pump is installed.

Group 1	
	Category M2
Underground installations in mines with danger of explosive gasses or combustible dust.	Pumps made of materials that do not create sparks and thereby do not make any danger of explosion.
CR pumps	CR/CRI/CRN
Motors	None

Group 2				
	Category 2		Category 3	
Installation in areas with risk of explosion because of presence of explosive atmosphere.	Pumps made for areas where explosive atmosphere is likely.		Pumps made for areas where explosive atmosphere is rare.	
	G (gas)	D (dust)	G (gas)	D (dust)
CR pumps	CR/CRI/CRN*	CR/CRI/CRN/CRT	CR/CRI/CRN/CRT	CR/CRI/CRN/CRT
Motors	VEM 2G EEx e IICT3 CEMP 2G EEx d IIB T4	VEM 2D 125 C	VEM 2G EEx e IICT3 CEMP 2G EEx d IIB T4	VEM 3D 125 C
* Magnetic drive, Double shaft seal – Back to back or Tandem				

### Custom-built solutions

The comprehensive standard Grundfos CR programme covers a wide range of pumps, for a wide range of different industrial applications. Besides, Grundfos designs custom-built pump solutions; acknowledging that sometimes it does not take more, than a little extra effort, to come up with the right solution. With a custom-built pump solution from Grundfos, your pump is capable of handling even higher pressures, more aggressive liquids, excessive liquid temperatures etc.

### Worldwide pump supplier

Being a worldwide pump supplier, Grundfos has committed itself to provide its clients with a global, reliable and efficient service network. Our experienced team of service technicians are always ready to serve you wherever in the world you are and – of course – at a short notice – whenever you need it.