

MINE COOLING SYSTEMS

We offer a complete implementation of direct and indirect cooling of underground spaces, from project preparation to implementation work. As part of our services, we also provide operation or servicing of mining equipment.

Central air conditioning

This is an indirect method of cooling mine workplaces by means of water cooled to a temperature of up to 1.5 °C at the surface. This cooled water is fed through insulated pipes to the workplace into wind chillers, where the mining winds are cooled by means of fans. The operation of the plant is automatic, with periodic monitoring in accordance with European Standard EN 378.

Modern freecooling technology allows the use of low air temperatures in winter to pre-cool the water, resulting in electricity savings.

Another technical device applied is the three-chamber heat exchanger, which is used in the mine to reduce the high pressure of the water cycle fed through the pit from the surface to the required working pressure of the mine water cycle. At the same time, it serves the function of transporting the return water from the mine to the surface.

Segmental air conditioning

or cooling of mine workplaces in an indirect way is provided by water cooled in the mine to a temperature of about 5 °C, which is then fed through thermally insulated pipes to the workplace to wind coolers.

The heat transferred from the cooled workplace is discharged via the condensers of the cooling units through the next mine circuit to the reverse coolers and then to the mine exhaust fans.

As part of the turnkey delivery we provide:

- Expert advice
- Carrying out calculations
- Forecast of climatic conditions
- Design documentation
- Implementation of the work
- Operation and service

Mobile cooling equipment

This is a direct method of cooling the mine winds in the mine workings by means of an evaporator with a fan. The removed heat is transferred from the condensers of the cooling equipment by water to the reflux condensers and then to the exhaust fans.

TECHNICAL EQUIPMENT USED

cooling compressor

evaporative compressor

cooling towers

plate condenser

plate condenser

pump

mining wind coolers

wind tunnel coolers



GASCONTROL, společnost s r.o.
Dělnická 883/46
735 64 Havířov
Prostřední Suchá
Czechia
T: +420 596 496 411
E: gascontrol@gascontrol.cz
www.gascontrol.cz

Member of

