

FAQ

(Q) What are the typical values of compressed air pressure normally generated by your system?
And its capacity?

(A) **In our experimental fields, we have used four air compressors which are able to reach a maximum pressure of 10000psi/14 bar, if it is necessary to reach higher or lower pressure values, our system does not impose technical limitations.**

(Q) What is the maximum height value that your system is able to contrast?

(A) **Up to now, we have tested our system with hydraulic load of 8bar (about 80 metres) and a capacity of 200 lt/min, but we think there are no problems due to heavier loads since more specifically it aims to contrast a pressurized fluid by pressing the fluid outward, so in theory it would be possible to contrast hundreds of water cubic meters.**

(Q) What are the typical system diameters?

(A) **Since the pipe must be large enough to easily fit the drill rods inside it, its diameters can vary from 168 to 250 mm, but where different diameters are required, the system does not impose technical limitations.**

(Q) How residual materials resulting from the drilling process are removed?

(A) **Our system includes drain pipe which allow to evacuate residual materials (figure 2) and a preventer closure system for closing the blow out preventer units both in the case of mishaps and at the end of the workshift.**

Then, it is possible to put a pvc casing on the head of the preventer to try to reduce air consumption and, at the same time, to allow the passage of drilling tools down the pipe.

(Q) How can be monitored the water pressure inside the preventer during drilling?

(A) **The water pressure do not need to be monitored since the system will be supplied with the air quantity necessary to allow the drill cutting and water layer to flow out through drain pipes. But, if necessary, a monometer can be installed.**

(Q) Could pressurized air provoke unexpected movements on the surface?

(A) **Yes, of course it could happen, but adjusting the air pressure and its quantity will be enough to make water flow into the drain pipe and to prevent it from escaping from the wellbore.**

Higher pressures, could stop residual drilling products from coming out and cause damage to soils thickening.

Therefore, we advise to contrast water flow with minimum pressures (M_p) equal to:

$M_p = (\gamma_w \times Z_w) - 1 \text{ Bar}$ (if Z is Known) but however with $M_p \geq 4 \text{ bar}$

Otherwise, we adjust air pressures so that water and residual drilling products are not allowed to escape from the wellbore.