

Preparing for extreme conditions

Whether you are a believer or non-believer, the weather does appear to get more extreme every year and this can have an impact on your existing compressed air system.

In the UK we have seen extensive storms, floods and previously unseen highs and lows in temperature.



It is into this potentially inhospitable arena that compressed air systems are installed. It is typical to site air receivers and coolers in the great outdoors, albeit usually in locations of shade or cover to assist in cooling and protection. The network of pipes, joints and valves feeding into the buildings will also be similarly exposed. Even inside the conditions may still be harsh, as buildings can be unheated or continuously open to the outside air.

As the UK climate throws up ever more challenging conditions, particularly in respect of high and low temperatures, our understanding of system design practices and the extended range of required tolerances is changing too. It is usual to find that modern air receivers have a minimum temperature characteristic of -10 degrees; but as we know, temperatures are now regularly falling

well below this wherever you live in the UK. The characteristic of older receivers may even be as 'high' as 0 degrees. Clearly a great deal of thought and consideration has to be given to the operating conditions of compressed air equipment and how this can be mitigated either by design, maintenance or a combination of both.

For an existing system the competent person responsible for your Written Scheme of Examination should be your first port of call. The scheme should always be written with due consideration to the known operating conditions of the 'total system' and the service and maintenance activities subsequently determined on that basis. It should not be a case that the entire system is replaced with something built for a Siberian winter, but rather with careful planning, consideration and perhaps a few

modifications 'climate tolerance' could be achieved. This would ensure that your system is ready and able to withstand the vagaries of our 'New Age' weather.

For new systems the time to get this right is during the specification and design stage, but this requires a comprehensive and honest assessment of the potential operating conditions, particularly in respect of high and low temperatures. This is an issue that may not have been given sufficient consideration before, but the unarguable climate changes, whatever the cause, are a strong driver to assign this aspect of the design process much more importance.

So, in summary it may be very cold, very hot or very windy outside, but with appropriate design, planning and maintenance your compressed air system should still function safely and efficiently.