

Industrial Gas Cylinder Heating



Many laboratory and industrial processes require a constant flow of gas to be delivered from pressurised cylinders containing gas in liquid phase. If there is a high utilisation rate, frosting can occur on the surface of the cylinder, flow rates can be adversely affected, and the amount of gas recoverable from the bottle reduces. Our uniform and insulated heating solutions can prevent this phenomenon and restore stability to the flow rate. This is particularly important when using calibration gases where repeatability is vital. (Separate pressure monitoring systems should always be in place to meet health and safety requirements.)



LMK Thermosafe have been manufacturing robust and reliable industrial heaters for safe and hazardous area use for over 35 years. Our standard product range includes a selection of flexible heating jackets for pressurised gas cylinders. These have been designed with a variety of control options for both safe and hazardous "Ex" areas where there is risk of explosion. We manufacture to CE, ATEX/IECEx, CCC, JPEX, UL and CSA standards in our ISO9001 certified factories in the U.K.

As well as standard flexible heating jackets (detailed below) for the most popular cylinder sizes including small specialist/medical cylinders, we can also design jackets for other sizes in both safe and hazardous areas, right up to several thousand litre capacity horizontal cylinders and ISO tanks. These can be fitted with a variety of power and temperature control options, including our latest ATEX/IECEx patented "ProxATEX" digital controller, offering precise temperature measurement, multiple heating program adjustment options and user access control via secure NFC cards.

Product Specification for stock flexible heating jackets:

10-20L, Adjustable Circumference: 505-655mm | Height: 400mm | 240v (50/60Hz) | IP54

- HHGA (safe area): 200W, 0-90°C adjustable thermostat (-5 to 40°C range & digital options also available)

50L, Adjustable Circumference: 680-830mm | Height: 1050mm | 240v (50/60Hz) or 110v (HHG model only) | IP54

- HHG (safe area): 450W, 0-90°C adjustable thermostat (-5 to 40°C range & digital options also available)
- IHF/G/T4 (EX-zoned area): 100W, self-limiting to 30°C above ambient  II 2 G D Ex eb IIC T4 Gb Ex tb IIIC T135°C Db
- IHF-R/G/T4 (EX-zoned area): 100W, 0-50°C temperature regulator  II 2 G D Ex eb IIC T4 Gb Ex tb IIIC T135°C Db
- IHF-R/G/T3 (EX-zoned area): 285W, 0-85°C temperature regulator  II 2 G D Ex eb IIC T3 Gb Ex tb IIIC T200°C Db

47kg, Adjustable Circumference: 1140-1270mm | Height: 800mm | 240v (50/60Hz) | IP56

- HJWGB (safe area): 690W, 50°C fixed thermostat



Larger Customised Solution Examples

Example of a large “skid based” horizontal gas cylinder requiring surface area heating to stabilise flow rates when used on site.



Easily fitted, with adjustable thermostat (as shown) or fixed internal thermostat. Insulated end caps available as an option for severe ambient temperatures conditions, as well as secondary heavy-duty weatherproof PVC covers for outdoor use.



Outdoor Installation example in North America with C1Z1 heating jackets and controllers.

Cylinder itself is protected from weather by a canopy, giving sufficient protection to jackets as well. Outdoor site is rated as potentially explosive due to other processes.