KeyKeg transport and storage recommendations

Beer

Background

An important issue to consider when transporting beer is the pressure necessary to keep the CO_2 in it dissolved, known as equilibrium pressure. It depends mainly on two aspects: the CO_2 content of the beer and its temperature. The CO_2 content differs for each type of beer. It can be low (approx. 2.5 grams per litre for English ales) or high (up to 7 grams per litre for German wheat beers) and everything in between. At an ambient temperature of 20°C (Celsius) or 68°F (Fahrenheit) this will lead to equilibrium pressures of between 1 and 3.2 bars respectively.

Transport risks

Since an increase in temperature increases the pressure inside the vessel, the temperature is another important factor. It is important to control the beer's temperature during transport, and not let it rise too much. Especially in steel sea containers without temperature conditioning or even insulation, temperatures can rise to 40°C /104°F and higher. The consequences of this are dependent on the CO_2 content. Beers with a lot of CO_2 can then reach pressures over 4 bars, which is above the design limits of KeyKeg and which can damage the KeyKeg. Brewers should be aware of this risk. If KeyKegs are to be used carbonation levels (CO_2 levels) should be restricted.

When kegged beer is meant to undergo the secondary fermentation in KeyKeg, special care should be taken to measure the proper amount of sugar to be added in order to prevent a too-high CO_2 content in the beer after the keg fermentation.

Another type of risk poses fully fermented beer with residual, fermentable sugars left in the beer. Special care should be taken with these beers to filter any remaining yeast from the beer or pasteurise it before kegging. Otherwise the yeast can lead to an unwanted, spontaneous secondary fermentation inside the keg resulting in an unacceptably high CO_2 content.

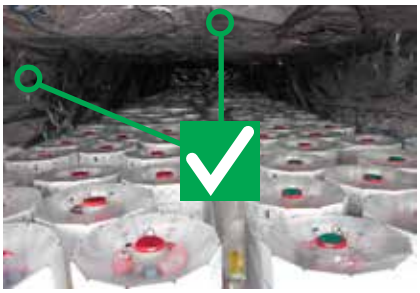
Recommendations

The pressure in a KeyKeg must never exceed 4 bar/ 58 PSI at or above 40°C/104°F. It is essential that long-term exposure to these conditions during summer periods and tropical conditions must be avoided. In hot countries, KeyKegs must be stored in temperature-controlled warehouses, preferably where temperatures are kept below 28°C/82.5°F. Also, KeyKegs should always be protected from direct sunlight!

We recommend the following measures for transporting KeyKegs in hot conditions, in order of preference:

1 Refrigerated transport with a reefer container

2 Below-deck transport combined with an insulating blanket. Suppliers of these blankets are www.ggori.com, www.protekcargo.com, www.ipcpack.com, www.krautz.org/deutschland.htm



3 Below-deck transport combined with insulation, using materials such as expanded polystyrene foam or multiple layers of cardboard (least effective option).

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