

Faircast Foundry

Job Scope & Evaluation

We have evaluated the existing molding equipment AMC and DMM to determine if the provided dry cooler will dissipate enough heat to provide proper operation of the molding equipment. Per the manufacturers specs the max entering water temp allowable is 86 F and we thought this would be a concern in using a dry cooler. We then reached out to DISA and they had stated that only a dry cooler is needed for this type of application, so we originally moved forward in that direction. Once we had calculated the heat dissipation/gpm and looked further into the dry cooler performance, we found that the overall performance resulted in a higher than 86 degree entering water temp. We contacted DISA again and they came back to say we can't be above that max entering water temp of 86F. Since we are at the top temperature the molding equipment could initiate a high oil temp alarm and possibly shutdown. We would also be operating at the highest gpm flows which results in a very high pressure drop thru the exchangers. Based on these finding we are looking into options using mechanical cooling and placing an air-cooled chiller to operate during higher outside ambient conditions. We will also review the option to still include the dry cooler for times where mechanical cooling would not be needed. We are currently in the process of selecting a chiller to meet these requirements. We will also look at the gpm flow figures to determine what pumps/controls would be needed to achieve proper flow. We are also checking some of the lead times on the chiller itself along with other components as currently some of the equipment has long lead times still due to the Covid pandemic. We should have these lead times back to us sometime next week so we can move forward with the design and making final equipment selections. I will follow up with Doug Six next week regarding the equipment lead times.

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