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Tableau tube cuivre frigorifique

Tca gibraltar boilers. Froid tableau diametre tube cuivre frigorifique. Tca gi. Tableau diamètre tube cuivre frigorifique. Tca gib.

Pour un système frigorifique efficace, il est essentiel de créer une liste de commande détaillée. Le choix du type souhaité et le nom unique de la liste sont primordiaux. Ensuite, sélectionnez les produits nécessaires et créez ou choisissez une liste de commandes existante. Avant toute installation frigorifique, il est crucial de concevoir soigneusement la tuyauterie. Lors du découpage des tubes de cuivre pour la climatisation ou le froid commercial, il est vital d'utiliser un coupe-tube plutôt qu'une lame de scie pour éviter les bavures. Après avoir coupé le tube, ébavurez-le en supprimant les bavures intérieures et extérieures, veillez à orienter toujours la conduite vers le bas durant cette opération pour ne pas contaminer le circuit frigorifique. Pour effectuer un raccord à visser, réalisez un dudgeon. Vous pouvez également relier deux longueurs de cuivre par manchon soudé ou par évasement, qui consiste à augmenter le diamètre intérieur du tube jusqu'à celui extérieur. Le manchon doit être suffisamment profond (environ 10 mm). Dans la manipulation du cuivre, changements de direction peuvent être exécutés grâce à des coudes soudés ou au cintrage manuel avec des ressorts pour éviter les déformations du tube. Les pertes de charge doivent être minimisées dans tout le réseau car elles influencent non seulement la fonctionnalité mais aussi la puissance de l'installation frigorifique. Pour réduire ces pertes, il est nécessaire de calculer leur équivalent en chute de température et d'utiliser des abaques spécifiques. Il faut tenir compte des pertes totales incluant celles des tuyaux, accessoires tels que vannes solénoïdes et filtre déshydrateur, ainsi que la présence éventuelle de coudes à 90° avec rayon trop faible. Préférez les coudes à 45° ou ceux à grand rayon pour minimiser les turbulences. Enfin, lors du raccordage de plusieurs tubes sur une même conduite, prévoyez une longueur droite et éloignez chaque tube d'une distance correspondant à dix fois la dimension du tube. A poor piping dimension can lead to flash gas phenomena (predictable), which means partial vaporization in the liquid line causing a sub-alimentation of the condenser. Aspiration piping: In the aspiration conduit, it's mainly about problems with oil return that need to be taken into account. Installing the aspiration piping with a slope of 2 cm per meter allows for easy oil return to the compressor. Avoid counter-slopes where oil may accumulate. If the gas velocity is too low due to an incorrect dimensioning of the piping, oil training will become difficult, and the oil will either coat the inner walls of the tubes or get stuck in certain portions of the network. Calculating the dimensioning of the piping must allow for oil training during operation at minimum load, for example with a compressor operating at reduced power or multiple compressors. Refueling conduit: Here too, we must respect a minimum velocity to ensure that oil returns, especially in ascending columns. Pipe support: Piping must be properly maintained, supports must withstand the weight of pipes and accessories. Corners and ends must be far enough from any obstacle to allow for movements caused by thermal expansion. When passing through walls and floors, piping will be protected with casings. Insulation: Liquid piping will only be insulated if ambient temperature is lower than that of the tube. Aspiration piping must be insulated to prevent condensation phenomena, and the insulation thickness must allow for an external tube temperature higher than the dew point of the ambient air. There should be no gap between the pipe and insulation to prevent the tube from condensing inside the insulation, and accessories too must be perfectly isolated. Main insulators for copper: Foam-like rubber-elastic isolator with black color, length or plate form. Expanded polyethylene isolator with white color. Polyurethane or elastic-coated aluminum shells. Related article: Leaks In air conditioning, as in refrigeration, tube fittings have several particularities: Their diameter is expressed in imperial measure, and not in metric measure. That means we will give a value in inches rather than mm. Anglophones say "inch". This value is noted in the form of a fraction followed by two apostrophes or two open English quotation marks. So, a copper tube with a diameter of 1/4" means that this diameter is one-quarter of an inch. Thread pitch (filetage) is to SAE standard. This standard is an old American standard used in the automotive industry. SAE comes from Society of Automotive Engineer, the organization that designed it. Termination shape is tapered. Typical of this type of connection is the flare, which in English means a slight taper or narrowing. According to the SAE J512 standard, it's a 45-degree taper. So, to summarize, a 1/4" adapter for connecting your air conditioning system is actually a 1/4" Flare SAE connector. When you know the tube diameters, you might be faced with choosing the right nuts or identifying them. How can you recognize the suitable nuts that will fit copper tubes? It's not an issue when you have the nuts and tubes in front of you... You just put a nut on the tube and see if it fits perfectly, meaning there's barely any space left between the entrance hole and the tube's outer surface. If the tube doesn't fit, you know you need a larger nut. If the tube floats inside the hole, the nut is too big and you'll need a smaller one. The problem arises when you need one but only have a caliper to measure... Copper tubes are measured by their external diameter. Their thickness varies depending on quality, ranging from 0.8 mm to 1 mm. Fridge-grade copper tubes typically have a thickness of 1 mm. If you need to measure a male connector to determine the nut size, take the measurement of the hole, which roughly corresponds to the inner tube diameter. To estimate the female connector size needed, add 2 mm to your measurement. For example, if you get 5 mm, adding 2 mm gives you 7 mm. You're likely looking at a 1/4" male adapter that requires a 1/4" Flare SAE nut.