

## Jacketed Reactors and Tanks

### Introduction

Selecting the best reactor jacket is a crucial aspect of reactor design that impacts the process's efficiency, productivity, and safety. Different types of reactor jackets are available in the market, including half-pipe coil, dimple, and conventional jackets. Roben MFG offers a range of high-quality reactor jackets to suit different process requirements.

### Half Pipe Coil Jacket



The half-pipe coil jacket is the best option for liquid heating/cooling media due to its efficient heat transfer and positive drainage. The half-pipe coil design creates a continuous flow pattern allowing uniform heat distribution throughout the reactor. Additionally, the positive drainage feature ensures no liquid accumulation, reducing the risk of contamination and corrosion. Another advantage of the half-pipe coil jacket is that it allows for multiple zoning options, allowing flexibility in controlling the process parameters.

### Dimple Jacket



The dimple jacket is an excellent choice for steam heating and utilizing smaller units. The dimple design allows for efficient heat transfer between the reactor and the steam, leading to faster heating and cooling times. The small size of the dimples also makes it ideal for use on smaller reactors, where space may be a constraint. The dimple jacket is also relatively easy to install and maintain, making it a cost-effective solution for many processes.

### Conventional Jacket



The conventional jacket is the best option for high-pressure reactors and is more economical than other jacket designs. The conventional jacket consists of a single or double-walled jacket that encases the reactor. The jacket is designed to withstand high pressure and temperature, making it suitable for processes that require high operating conditions. Additionally, the conventional jacket is easy to install and maintain, reducing downtime and maintenance costs.

### Conclusion

Selecting the best reactor jacket depends on the specific process requirements, including the heating and cooling media, pressure and temperature requirements, and space constraints. Roben MFG offers a range of high-quality reactor jackets, including half-pipe coil jackets, dimple jackets, and conventional jackets, to meet the diverse needs of different processes. With our expertise and experience in reactor design and manufacturing, we can manufacture any type of reactor jacket for your process, ensuring efficient and safe operation.