High Speed Shaft Assembly System
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Customer Needs

The customer needs for the project are interpreted from the project description provided by the sponsor, Mohammed Ajalal, from Danfoss Turbocor. The design team met with Mohammed to discuss the expectations for this project. After meeting with our sponsor the expectations were interpreted by the design team as the customer needs outlined in the table.

Questions that our team asked our sponsor to clarify the project description include: Do you want us to design a press for assembling the shafts? Do you want us to perform analysis to determine the appropriate type of press to use for the shaft assembly process? Beyond pressing the sleeves onto the shafts, are there any other processes our assembly should be able to perform, such as moving the shafts to the next stage of the overall assembly system for the compressors? The sponsor's answers to these questions and his expectations are listed below as well as our interpretation of these needs.

Information Provided	**Verbalized Need from Sponsor**	**Interpreted Need**
"Design & Fabricate Fixtures & Methodology to yield repeatable high-speed shaft assemblies which consists of several critical sub-assemblies"	Create a work Station for shaft assembly	Design a shaft assembly workstation that fits into overall compressor assembly
	Contact the press manufacturer and provide them with needed information	Provide the press manufacturer with drawings and needed information of the shaft assembly. (Do not give any confidential information to outside parties)
	Select a Press with proper alignment	Determine the most appropriate press and develop alignment method between shaft and fittings
	Test	Quantify quality of the press-fit and stress-test the shaft assembly