

## **Optimizer Software / Input Field Descriptions**

The following definitions are given for each of the input parameters for the Solutions Software System Optimizer (i.e. shown in the 'Optimizer' input screen). The inputs are used to refine the list of possible compressor combinations that are passed along to the optimization routines. The initial list includes all compressor combinations capable of meeting the required load at the given application requirements, as input in the 'Carwin' & 'Bin Analyzer' input screens. This list is further refined based on the optimizer input criteria discussed below. The output of the optimization routines is a ranked list of compressor combinations capable of meeting the application requirements.

### **Minimum / Maximum Compressor HP:**

Pair of inputs defining the minimum & maximum compressor HP to be considered for the application. Applicable for Semi-Hermetic (06D/E, 06CC & 06T) compressors only.

### **Minimum / Maximum No. of Compressor Allowed on the rack:**

Pair of inputs defining the Minimum and Maximum number of Compressors to be considered on the rack. The rack can have as little as 1 compressor and as many as 6 or any combination in-between.

### **Min / Max % the capacity of one compressor may be versus total required capacity:**

Pair of inputs defining the Minimum and Maximum % of total rack capacity that one compressor can represent. This input is useful for defining the relative size of each compressor on the rack (i.e. limiting the dependence on any one given compressor).

### **Min / Max Compressor Capacity Safety Factor (%):**

These inputs define the acceptable relationship between the compressor capacity and the required load at the design conditions (i.e. design SST & SDT). The minimum acceptable safety factor is 100% (i.e. selected compressors must be capable of meeting the load at the design point) and the maximum safety factor is 150%. Adjusting the safety factor criteria can help reduce the number of available combinations to a manageable number.

### **Allow all acceptable compressors for Optimization / Manually select acceptable compressors:**

The default for the optimizer input is to make all compressors capable of operating at the design conditions available to the optimization routines. This input (along with the dialog box discussed below) allows the user to limit the compressors considered for the optimization.

### **Minimum / Maximum no of Unloaders:**

This input allows the user to define the number of compressors on the rack to be considered with unloading. It is limited between 0-3. More than one bank of unloading per compressor can not be simulated. Unloading significantly increases the number of available combinations as all of the possible unloading combinations are considered.

### **Acceptable compressors for Optimization:**

By default this dialog box shows all of the compressors capable of meeting the design conditions. By selecting the 'Manually select acceptable compressors' (discussed above), a check box appears to the left of each compressor which can be used to designate whether the compressor will (checked) or will not be (unchecked) considered for optimization.

**Select Output Combinations:**

This input can be used to define the number of compressor combinations to be included in the output sheet. The default is to list the Top 100 combinations but can be modified to include the Top 200, 500 or All. Selecting more than the standard 'Top 100' combinations can be useful for extracting all of the available combinations for further analysis outside of this software.