

# Chemical Equipment Report

|                     |        |
|---------------------|--------|
| Total Equipment     | 510    |
| Average Flowrate    | 119.8  |
| Average Pressure    | 6.11   |
| Average Temperature | 117.47 |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |



| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |



| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |

| Name            | Type          | Temperature (°C) | Pressure (bar) | Flowrate (m³/hr) |
|-----------------|---------------|------------------|----------------|------------------|
| Pump-1          | Pump          | 110.0            | 5.2            | 120.0            |
| Compressor-1    | Compressor    | 95.0             | 8.4            | 95.0             |
| Valve-1         | Valve         | 105.0            | 4.1            | 60.0             |
| HeatExchanger-1 | HeatExchanger | 130.0            | 6.2            | 150.0            |
| Pump-2          | Pump          | 118.0            | 5.6            | 132.0            |
| Valve-2         | Valve         | 102.0            | 4.0            | 58.0             |
| Reactor-1       | Reactor       | 140.0            | 7.5            | 140.0            |
| Pump-3          | Pump          | 115.0            | 5.3            | 125.0            |
| Condenser-1     | Condenser     | 125.0            | 6.8            | 160.0            |
| Compressor-2    | Compressor    | 98.0             | 8.0            | 100.0            |
| HeatExchanger-2 | HeatExchanger | 132.0            | 6.3            | 155.0            |
| Valve-3         | Valve         | 107.0            | 4.2            | 62.0             |
| Pump-4          | Pump          | 119.0            | 5.9            | 130.0            |
| Reactor-2       | Reactor       | 138.0            | 7.2            | 145.0            |
| Condenser-2     | Condenser     | 128.0            | 6.9            | 165.0            |