

114344

HOECHST CELANESE CORPORATION  
PHARMACEUTICAL PRODUCTION DEPARTMENT  
INSTALLATION QUALIFICATION - NEW FACILITIES

| KETTLE 3106A                                    |                                                                                                                                                                                                   |                                               |                                           |                                                                                       |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------|
|                                                 | <i>vessel</i>                                                                                                                                                                                     | <i>jacket</i>                                 | <i>drive</i>                              | <i>agitator</i>                                                                       |
| Manufacturer                                    | Buchi GlasUster, Switzerland (41)1-905-5144<br>represented by:<br>Chemical Transfer Partnership Corporation<br>Felix Haufen<br>829 Lincoln Avenue, Suite 3<br>Bohemia, NY 11716<br>(516) 589-7990 |                                               | Reliance Motor Co.<br>Cleveland, OH 44117 | Buchi GlasUster                                                                       |
| Model                                           | 9153                                                                                                                                                                                              |                                               |                                           |                                                                                       |
| Serial                                          | 14297/5243                                                                                                                                                                                        |                                               | B56I2340MBY                               |                                                                                       |
| Capacity                                        | 250 liter, nominal<br>330 liter, max.                                                                                                                                                             | 30 liter                                      |                                           |                                                                                       |
| Description/dimensions                          | See-through reaction vessel with GLCS<br>top and bottom and glass mid-section                                                                                                                     | CS jacket with insulation and<br>SS sheathing | Manual variable drive                     | - 2-part impeller<br>- Baffle w/Tantalum tip<br>- Resistance thermometer 3 x Pt 100 A |
| year manufactured                               | 1996                                                                                                                                                                                              |                                               |                                           |                                                                                       |
| material of construction,<br>in product contact | Cylinder - Borosilicate glass<br>Cover & bottom - GLCS                                                                                                                                            |                                               |                                           | GLCS                                                                                  |
| Design Pressure (Bar)                           | -1 to 0.4                                                                                                                                                                                         | -1 to 10                                      |                                           |                                                                                       |
| Design Temperature (C)                          | -60 to 230                                                                                                                                                                                        | -60 to 200                                    |                                           |                                                                                       |
| horse power                                     | x                                                                                                                                                                                                 |                                               | 1.3                                       |                                                                                       |
| rpm                                             | x                                                                                                                                                                                                 |                                               | 3450                                      | 0-250                                                                                 |
| Seal                                            |                                                                                                                                                                                                   |                                               |                                           | mechanical seal unit w/single acting face seal<br>of oxide ceramic/Teflon             |
| lubricant                                       |                                                                                                                                                                                                   |                                               | glycerin                                  |                                                                                       |
| reference PSK                                   | 0390                                                                                                                                                                                              |                                               |                                           |                                                                                       |
| reference P & ID                                |                                                                                                                                                                                                   |                                               |                                           |                                                                                       |

HOECHST CELANESE CORPORATION  
PHARMACEUTICAL PRODUCTION DEPARTMENT  
EQUIPMENT SPECIFICATIONS - NEW FACILITIES

| KETTLE 3106A |               |               |              |                 |
|--------------|---------------|---------------|--------------|-----------------|
|              | <i>vessel</i> | <i>jacket</i> | <i>drive</i> | <i>agitator</i> |

|                                      |                                                    |  |  |  |
|--------------------------------------|----------------------------------------------------|--|--|--|
| National Board #                     | N/A                                                |  |  |  |
| RI state ID #                        | N/A                                                |  |  |  |
| Hydrostatic test pressure            | N/A                                                |  |  |  |
| Spark testing                        | DIN ISO 2746                                       |  |  |  |
| reference drawing<br>(vendor)        | Glasaufbau 9711                                    |  |  |  |
| HCC reference drawing                |                                                    |  |  |  |
| installation / maintenance<br>manual | Buchi Chemreactor                                  |  |  |  |
| purchase order                       | C105381                                            |  |  |  |
| purchase order date                  | 2/96                                               |  |  |  |
| cost                                 | <del>\$424,170</del>                               |  |  |  |
| Project name                         | <del>Covance Pharmaceutical Facility Upgrade</del> |  |  |  |
| Project number                       | T5016                                              |  |  |  |
| project item number                  | A200                                               |  |  |  |
| weight, empty, kg                    | 1200                                               |  |  |  |
| Major maintenance<br>activities      |                                                    |  |  |  |

HOECHST CELANESE CORPORATION  
PHARMACEUTICAL PRODUCTION DEPARTMENT  
INSTALLATION QUALIFICATION - NEW FACILITIES

**RECEIVER 3106B**

|                                                 |                                                                                                                                                                                                   |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Manufacturer                                    | Buchi GlasUster, Switzerland (41)1-905-5144<br>represented by:<br>Chemical Transfer Partnership Corporation<br>Felix Haufen<br>829 Lincoln Avenue, Suite 3<br>Bohemia, NY 11716<br>(516) 589-7990 |
| Model                                           | 15.12040.DN1                                                                                                                                                                                      |
| Serial                                          |                                                                                                                                                                                                   |
| Capacity (gallons)<br>Rated / Full/detailed     | 100 liter<br>Graduated in liters                                                                                                                                                                  |
| Description/dimensions                          | round bottom flask                                                                                                                                                                                |
| year manufactured                               | 1996                                                                                                                                                                                              |
| material of construction-<br>in product contact | Borosilicate glass                                                                                                                                                                                |
| Design Pressure (bar)                           | -1/+0.4                                                                                                                                                                                           |
| Design Temperature (C)                          | 200                                                                                                                                                                                               |
| reference PSK                                   | 0390                                                                                                                                                                                              |

|                                      |                                                      |
|--------------------------------------|------------------------------------------------------|
| National Board #                     | N/A                                                  |
| RI state ID #                        | N/A                                                  |
| Hydrostatic test pressure            | N/A                                                  |
| reference drawing (vendor)           | 9711                                                 |
| HCC reference drawings               |                                                      |
| installation / maintenance<br>manual | Buchi Chemreactor                                    |
| purchase order                       | C105381                                              |
| purchase order date                  | 2/96                                                 |
| cost                                 | <del>12,118</del>                                    |
| Project name                         | <del>Genentech Pharmaceutical Facility Upgrade</del> |
| Project number                       | T5016                                                |
| project item number                  | A200                                                 |
| weight, empty, kg                    |                                                      |

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HOECHST CELANESE CORPORATION  
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INSTALLATION QUALIFICATION - NEW FACILITIES

**RECEIVER 3106C**

|                                                 |                                                                                                                                                                                                   |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Manufacturer                                    | Buchi GlasUster, Switzerland (41)1-905-5144<br>represented by:<br>Chemical Transfer Partnership Corporation<br>Felix Haufen<br>829 Lincoln Avenue, Suite 3<br>Bohemia, NY 11716<br>(516) 589-7990 |
| Model                                           | 15.12040.DN1                                                                                                                                                                                      |
| Serial                                          |                                                                                                                                                                                                   |
| Capacity (gallons)<br>Rated / Full/detailed     | 100 liter<br>Graduated in liters                                                                                                                                                                  |
| Description/dimensions                          | round bottom flask                                                                                                                                                                                |
| year manufactured                               | 1996                                                                                                                                                                                              |
| material of construction-<br>in product contact | Borosilicate glass                                                                                                                                                                                |
| Design Pressure (bar)                           | -1/+0.4                                                                                                                                                                                           |
| Design Temperature (C)                          | 200                                                                                                                                                                                               |
| reference PSK                                   | 0390                                                                                                                                                                                              |

|                                      |                                           |
|--------------------------------------|-------------------------------------------|
| National Board #                     | N/A                                       |
| RI state ID #                        | N/A                                       |
| Hydrostatic test pressure            | N/A                                       |
| reference drawing (vendor)           | 9711                                      |
| HCC reference drawings               |                                           |
| installation / maintenance<br>manual | Buchi Chemreactor                         |
| purchase order                       | C105381                                   |
| purchase order date                  | 2/96                                      |
| cost                                 | \$121,176                                 |
| Project name                         | Chemistry Pharmaceutical Facility Upgrade |
| Project number                       | T5016                                     |
| project item number                  | A200                                      |
| weight, empty, kg                    |                                           |

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HOECHST CELANESE CORPORATION  
PHARMACEUTICAL PRODUCTION DEPARTMENT  
INSTALLATION QUALIFICATION - NEW FACILITIES

**CONDENSER 3106 D**

|                            |                                                                                                                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Manufacturer               | Buchi GlasUster, Switzerland (41)1-905-5144<br>represented by:<br>Chemical Transfer Partnership Corporation<br>Felix Haufen<br>829 Lincoln Avenue, Suite 3<br>Bohemia, NY 11716<br>(516) 589-7990 |
| Model                      | 20.01110.0000                                                                                                                                                                                     |
| Serial                     |                                                                                                                                                                                                   |
| Condenser Surface Area     | 1.6 m2                                                                                                                                                                                            |
| Description/dimensions     | vertical condenser                                                                                                                                                                                |
| Volume of spirals          | 3.6 dm3                                                                                                                                                                                           |
| Volume of jacket           | 11.8 dm3                                                                                                                                                                                          |
| year manufactured          | 1996                                                                                                                                                                                              |
| material of construction-  | Borosilicate glass                                                                                                                                                                                |
| Design Pressure (bar)      | -1/+1; in spiral +0.3 bar                                                                                                                                                                         |
| Design Temperature (C)     | -50 to +200; permissible shock=100 C                                                                                                                                                              |
| Heat Transfer co-efficient | 450-620 W/m2 K for condensation                                                                                                                                                                   |
| reference PSK              | 0390                                                                                                                                                                                              |

|                                   |                                           |
|-----------------------------------|-------------------------------------------|
| National Board #                  | N/A                                       |
| RI state ID #                     | N/A                                       |
| Hydrostatic test pressure         | N/A                                       |
| reference drawing (vendor)        | 9711                                      |
| HCC reference drawings            |                                           |
| installation / maintenance manual | Buchi Chemreactor                         |
| purchase order                    | C105381                                   |
| purchase order date               | 2/96                                      |
| cost                              | \$12,176                                  |
| Project name                      | Chemistry Pharmaceutical Facility Upgrade |
| Project number                    | T5016                                     |
| project item number               | A200                                      |
| weight, empty, kg                 | 11.5                                      |

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INSTALLATION QUALIFICATION - NEW FACILITIES

**CONDENSER 3106 E**

|                            |                                                                                                                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Manufacturer               | Buchi GlasUster, Switzerland (41)1-905-5144<br>represented by:<br>Chemical Transfer Partnership Corporation<br>Felix Haufen<br>829 Lincoln Avenue, Suite 3<br>Bohemia, NY 11716<br>(516) 589-7990 |
| Model                      | 20.01110.0000                                                                                                                                                                                     |
| Serial                     |                                                                                                                                                                                                   |
| Condenser Surface Area     | 1.6 m2                                                                                                                                                                                            |
| Description/dimensions     | vertical condenser                                                                                                                                                                                |
| Volume of spirals          | 3.6 dm3                                                                                                                                                                                           |
| Volume of jacket           | 11.8 dm3                                                                                                                                                                                          |
| year manufactured          | 1996                                                                                                                                                                                              |
| material of construction-  | Borosilicate glass                                                                                                                                                                                |
| Design Pressure (bar)      | -1/+1; in spiral +0.3 bar                                                                                                                                                                         |
| Design Temperature (C)     | -50 to +200; permissible shock=100 C                                                                                                                                                              |
| Heat Transfer co-efficient | 450-620 W/m2 K for condensation                                                                                                                                                                   |
| reference PSK              | 0390                                                                                                                                                                                              |

|                                   |                                                     |
|-----------------------------------|-----------------------------------------------------|
| National Board #                  | N/A                                                 |
| RI state ID #                     | N/A                                                 |
| Hydrostatic test pressure         | N/A                                                 |
| reference drawing (vendor)        | 9711                                                |
| HCC reference drawings            |                                                     |
| installation / maintenance manual | Buchi Chemreactor                                   |
| purchase order                    | C105381                                             |
| purchase order date               | 2/96                                                |
| cost                              | <del>14,450</del>                                   |
| Project name                      | <del>Chemical Pharmaceutical Facility Upgrade</del> |
| Project number                    | T5016                                               |
| project item number               | A200                                                |
| weight, empty, kg                 | 11.5                                                |

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HOECHST CELANESE CORPORATION  
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INSTALLATION QUALIFICATION - NEW FACILITIES

**CONDENSER 3106 F**

|                            |                                                                                                                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Manufacturer               | Buchi GlasUster, Switzerland (41)1-905-5144<br>represented by:<br>Chemical Transfer Partnership Corporation<br>Felix Haufen<br>829 Lincoln Avenue, Suite 3<br>Bohemia, NY 11716<br>(516) 589-7990 |
| Model                      | 20.01090.0000                                                                                                                                                                                     |
| Serial                     |                                                                                                                                                                                                   |
| Condenser Surface Area     | 1.3 m2                                                                                                                                                                                            |
| Description/dimensions     | vertical condenser                                                                                                                                                                                |
| Volume of spirals          | 2.8 dm3                                                                                                                                                                                           |
| Volume of jacket           | 10.0 dm3                                                                                                                                                                                          |
| year manufactured          | 1996                                                                                                                                                                                              |
| material of construction-  | Borosilicate glass                                                                                                                                                                                |
| Design Pressure (bar)      | -1/+1; in spiral +0.3 bar                                                                                                                                                                         |
| Design Temperature (C)     | -50 to +200; permissible shock=100 C                                                                                                                                                              |
| Heat Transfer co-efficient | 450-620 W/m2 K for condensation                                                                                                                                                                   |
| reference PSK              | 0390                                                                                                                                                                                              |

|                                   |                                          |
|-----------------------------------|------------------------------------------|
| National Board #                  | N/A                                      |
| RI state ID #                     | N/A                                      |
| Hydrostatic test pressure         | N/A                                      |
| reference drawing (vendor)        | 9711                                     |
| HCC reference drawings            |                                          |
| installation / maintenance manual | Buchi Chemreactor                        |
| purchase order                    | C105381                                  |
| purchase order date               | 2/96                                     |
| cost                              | \$424,176                                |
| Project name                      | Coventry Pharmaceutical Facility Upgrade |
| Project number                    | T5016                                    |
| project item number               | A200                                     |
| weight, empty, kg                 | 9.0                                      |

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HOECHST CELANESE CORPORATION  
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**CONDENSER 3106 G**

|                            |                                                                                                                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Manufacturer               | Buchi GlasUster, Switzerland (41)1-905-5144<br>represented by:<br>Chemical Transfer Partnership Corporation<br>Felix Haufen<br>829 Lincoln Avenue, Suite 3<br>Bohemia, NY 11716<br>(516) 589-7990 |
| Model                      | 20.01110.0000                                                                                                                                                                                     |
| Serial                     |                                                                                                                                                                                                   |
| Condenser Surface Area     | 1.6 m2                                                                                                                                                                                            |
| Description/dimensions     | vertical condenser                                                                                                                                                                                |
| Volume of spirals          | 3.6 dm3                                                                                                                                                                                           |
| Volume of jacket           | 11.8 dm3                                                                                                                                                                                          |
| year manufactured          | 1996                                                                                                                                                                                              |
| material of construction-  | Borosilicate glass                                                                                                                                                                                |
| Design Pressure (bar)      | -1/+1; in spiral +0.3 bar                                                                                                                                                                         |
| Design Temperature (C)     | -50 to +200; permissible shock=100 C                                                                                                                                                              |
| Heat Transfer co-efficient | 450-620 W/m2 K for condensation                                                                                                                                                                   |
| reference PSK              | 0390                                                                                                                                                                                              |

|                                   |                                       |
|-----------------------------------|---------------------------------------|
| National Board #                  | N/A                                   |
| RI state ID #                     | N/A                                   |
| Hydrostatic test pressure         | N/A                                   |
| reference drawing (vendor)        | 9711                                  |
| HCC reference drawings            |                                       |
| installation / maintenance manual | Buchi Chemreactor                     |
| purchase order                    | C105381                               |
| purchase order date               | 2/96                                  |
| cost                              | 4,211,176                             |
| Project name                      | Glaxo Pharmaceutical Building Upgrade |
| Project number                    | T5016                                 |
| project item number               | A200                                  |
| weight, empty, kg                 | 11.5                                  |

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