

## TECHNICAL SPEC FOR Vertical furnace

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|--------------------------------------------|-------------------------------------------------------------------------|--------------------|
| System Model:                              | WAVES 153.11                                                            | TEL Alpha 8 series |
| Specific model:                            | Model ALPHA-8SE-C Vintage 2007.01                                       |                    |
| Process (Poly, TEOS, Nitride, Pyro, etc.): | TEOS                                                                    |                    |
| APCVD or LPCVD:                            | LPCVD                                                                   |                    |
| HDD and SW included or not:                | SW installed, tool version with HDD                                     |                    |
| Main controller type:                      | WAVES                                                                   |                    |
| SiC/quartz included or not:                | Separated                                                               |                    |
| Substrate size:                            | Configured for 6 inch, 8 inch compatible                                |                    |
| SMIF:                                      | No                                                                      |                    |
| Gas config:                                | For TEOS process, WAVES                                                 |                    |
| Leak detection:                            | Yes                                                                     |                    |
| Wafer notch aligner:                       | 6" Jeida flat                                                           |                    |
| Handler type:                              | TBAWL                                                                   |                    |
| Indexer:                                   | With wafer counter for 6"                                               |                    |
| Carrier type, FOUP:                        | 6" black carriers, No FOUP                                              |                    |
| Buffer Capacity:                           | 2X 6 prod carriers,<br>and 9 carriers for mon, extraDummies,<br>dummies |                    |
| Boat type:                                 | 170 slots, 150 prod wafers                                              |                    |
| Boat rotation:                             | Yes                                                                     |                    |
| Heater type:                               | 5Zone                                                                   |                    |
| Carrier ID reader:                         | No                                                                      |                    |

|                                            |                                         |
|--------------------------------------------|-----------------------------------------|
| <b>MFC:</b>                                | <b>6X N2 and 1X TEOS, 1X O2</b>         |
| <b>Pressure transducer:</b>                | <b>1X 1Torr, 1X 10Torr, 1X 1000Torr</b> |
| <b>CKD-VEC Vacuum pressure controller:</b> | <b>FCV controller</b>                   |
| <b>CDA:</b>                                | <b>Yes</b>                              |
| <b>Temperature controller:</b>             | <b>M-560A</b>                           |
| <b>Exhaust controller:</b>                 | <b>Yes</b>                              |
| <b>Power Box:</b>                          | <b>No</b>                               |
| <b>Missing parts:</b>                      | <b>No</b>                               |
| <b>Defected parts:</b>                     | <b>No</b>                               |
| <b>Operating system:</b>                   | <b>Waves</b>                            |
| <b>Serial plate</b>                        |                                         |

TEOS4

|                                                                                                                           |              |                      |         |      |               |
|---------------------------------------------------------------------------------------------------------------------------|--------------|----------------------|---------|------|---------------|
| TYPE                                                                                                                      | ALPHA-8SE-C  |                      |         |      |               |
| SERIAL NO.                                                                                                                | M00000715001 |                      |         |      |               |
| PHASE                                                                                                                     | 3            | TYPE OF DISTRIBUTION | 3       | WIRE |               |
| POWER                                                                                                                     | 400          | Vac                  | 50/60Hz | 40.6 | kVA           |
| FULL-LOAD CURRENT                                                                                                         |              |                      |         |      | 73.6 A        |
| AMPERE RATING OF THE LARGEST LOAD                                                                                         |              |                      |         |      | 61.1 A        |
| MACHINE MAIN BREAKER AMPERE                                                                                               |              |                      |         |      | 80 A          |
| SHORT-CIRCUIT INTERRUPTING CAPACITY                                                                                       |              |                      |         |      | 36 kA         |
| OVERCURRENT PROTECTION PROVIDED AT MACHINE<br>SUPPLY TERMINALS                                                            |              |                      |         |      |               |
| ELECTRICAL DIAGRAM NO.                                                                                                    | 2192-160097  |                      |         |      |               |
| DATE OF MANUFACTURE                                                                                                       | 2007.1       |                      |         |      |               |
| MANUFACTURED BY TOKYO ELECTRON TOHOKU LIMITED.<br>52 MATSUNAGANE, IWAYADO,<br>ESASHI-KU, OSHU CITY, IWATE 023-1101, JAPAN |              |                      |         |      |               |
| TOKYO ELECTRON LIMITED                                                                                                    |              |                      |         |      | MADE IN JAPAN |