Cambridge Reactor Design
Unit D2
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## System Specifications

| | *Standard* | *Options available* |
|---|---|---|
| **Zebrafish - Automated Corrosion Test Station** | | |
| Commodity Code (Trade Tariff) | 9027809900 | |
| **Part Number** | **37270** | |
| *Includes CRDs Conventional Three Electrode Cell in Glass construction suitable for Corrosion Coupons, , without computer control.* | | |
| Operating pressure | Ambient | |
| Operating Temperature | Ambient to 80C | |
| Seals | FKM | FFKM |
| Electricity Supply | 230V, 4A [FUSE 5A] | 115V, 8A [FUSE 10A] |
| Frequency | 50Hz | |
| Physical dimensions, mm (width, depth, height) | 350x390x430 | |
| Weight, kg | 15 | |
| **Components** | | |
| ***Reservoir*** | | |
| Materials of construction | Borosilicate glass | |
| Lid | PEEK | |
| Capacity (ml) | 250 | |
| Heater/Stirrer | Polar Bear Plus (heating only) | |
| Reservoir volume probe 1 and 2 (alarm) | 2 wire PT100 | |
| Filter in Reservoir | None | |
| Glass connection | Impermeable, FEP coated with PVDF, 1/8" | |
| Tube fitting (316 Stainless Steel) | 1/8" Feed, 1/8" Return | |
| Nitrogen bubbler (316 Stainless Steel) | 1/8" | |
| Reflux condenser | Not included | Included with B19 fitting |
| Filling point | B19 | |
| Drain valve | Borosillicate, 10mm barb | |
| ***Gear Pump**** | | |
| Materials of construction | Peek, 316 Stainless Steel | Peek, Hastelloy C276 |
| Tube material | 316 Stainless steel | |
| Fittings | Swagelok 1/8" NPT | |
| Flow rate (ml/min) | 50 - 300 | |
| ***Corrosion Flow Cell Options*** | | |
| *Conventional Three Electrode in Glass (Standard)* | Part Number 57270 | |
| *Conventional Three Electrode in PEEK (Optional)* | Part Number 12830 | |
| *Three in one Electrode Cell in Glass (Optional)* | | Part Number 57280 |
| *Three in one Electrode Cell in PEEK (Optional)* | | Part Number 12610 |
| Cell volume (ml) | 20 | 20 |
| O rings | FKM | FKM |
| Temperature probe | 2 wire PT100 | 2 wire PT100 |
| Connections (mm) | 1/4" | 1/4" |
| Working electrode token diameter (mm) | 25.5 | N/A |
| Working electrode token thickness (mm) | 0.5 | N/A |
| Working electrode area (cm2) | 2 | User determined |
| Counter electrode diameter (mm) | 22.4 | N/A |
| Counter electrode token thickness (mm) | 0.5 | N/A |
| Counter electrode (cm2) | 2 | User determined |
| Reference electrode | Ag\|AgCl | |
| Reference electrode diameter (mm) | 6.35mm (1/4") | User determined |
| **Labview Software** | **Standard** | **Avanced** |
| **Part Number** | **46110** | **52640** |
| **Software features** | | |
| *Log in with multilevel access* | included | included |
| *Independent temperature and flow control of multiple stations* | included | included |
| *Graphical representation of all system and process variables* | included | included |
| *Data logging with Excel compatible output files for reporting* | included | included |
| *Selectable temperature profiles* | 2 | 16 |
| **Performance Data** | | |
| Oxygen levels during experiment (ppb) | <5 | |
| Residual cell volume after draining (ml) | 0.50±0.2 | |
| Contamination after cleaning (ppb) | 1 | |
| Temperature Accuracy at a Set Point of 40 C and Flow of 50mL/min | ±1 | |
| Temperature Accuracy at a Set Point of 60 C and Flow of 50mL/min | ±1 | |
| Temperature Accuracy at a Set Point of 80 C and Flow of 100mL/min | ±1 | |