SCARA Application Check list

| Background Information | | | | | | |
|--|--------------------------------|--|--|-----------------------|----------|----------|
| EPSON Robots The Power of Choice | Gripper or tool weight (kg) | Additional tooling weight such as adapter plates, tubing and cabling. (kg) | Part weight (kg) | Total Payload (kg) | | |
| | | | | | | |
| | Horizontal stroke | Verical -Z stroke | Are the required moves within the SCARA's circular work envelope? Yes or No | | - | |
| Reach (expressed in mm) | | | | | | |
| | Smallest tolorance of | Required Robot | | • | | |
| Repeatablitiy (not accuracy) | parts | Repeatability | | | | |
| Repeatability & Accuracy Accuracy | X | 0 | , <u>, , , , , , , , , , , , , , , , , , </u> | | | |
| | Standard-Table Top | Ceiling | Wall | Multi-Mount | | |
| Mounting (check) | 2B4 (Stondard) | 584 | 1014 | | 1 | |
| Cabling (check) | Sivi (Standard) | SIVI | TOM | | | |
| | | | | | 1 | |
| Robot - | | | | | | |
| | G Series | LS Series | RS Series | 1 | | |
| Robot Series- Enter size | | | |] | | |
| Environment | 6 | | | | | |
| | Standard | Clean | ESD | IP 54 | IP65 | RoboSuit |
| ENVIRONMENTAL OPERATING CONDITIONS (check) | | | | <u> </u> | <u> </u> | |
| ISO 3: Complies with ISO Class 3 (ISO14644-1) (less than 1000 particles greater than or equal to 0.1µm in size in 1 cubic meter) | | | | | | |
| ISO 4: Complies with ISO Class 3 (ISO14644-1) (less than 10000 particles greater than or equal to 0.1µm in size in 1 cubic meter) cleanroom standards (LS robots are Clean are ONLY ISO 4) | | | | | | |
| IP54 (Dust) - Dust shall not ingress in a quantity to interfere with satisfactory operation of the robot IP54 (Water) - Water splashing against the enclosure from any direction shall have no harmful effect | 1 | | | | | |

IP65 (Dust) - No ingress of dust IP65 (Water) - Water projected by a nozzle against enclosure from any direction shall have no harmful effects

ESD compliant.-*1 This makes them ideal for ESD sensitive applications where electro-static discharge can create defective parts such as the hard drive industry.

Additional Suggestion: Robot Bellows or bagging- If you are in an enviornment where you need protection from heat, cold, solvents, vapor, aseptic and etc. Consider www.roboworld.com. They manufacture Robosuits to protect robots from the enviornment as well as protect the enviornment from the robot

| Approvals | | |
|-------------------|-----------------|-------------------------|
| | Standard- CE,KC | Optional:UL Approval |
| Approvals (check) | | |

| Studies - | | | | | |
|---------------------------|-------------|------------|--------|---------|-----------|
| | Feasibility | Cycle test | Vision | Mock-up | Live Demo |
| Studies requested (check) | | | | | |

CAD Documentation *Required prior to Application Department submital

| Yes (DXF OR STEP)- Please place file name in box. | No (If no, please resubmit once CAD files have been generated) |
|---|---|
| 0 | • |
| | |
| | \cdot |
| | Yes (DXF OR STEP)- Please place file name in box. |

| | Yes (if yes, please specify samples or drawings | No (If no, please resubmit once parts have been identified) |
|---------------------------|---|--|
| Are all parts identified? | | |

Part Presentation / Handling/Vision

| | Yes | No |
|---|-------|---------------|
| Are parts fixtured? | | |
| Are parts moving? | | |
| | Speed | Belt Material |
| If part are moving, what is the belt speed ? | | |
| | Yes | No |
| Is conveyor tracking going be used? | | |
| Is Vision going to be used? | | |
| Is Vision tracking going to be used? | | |
| Are the parts all the same color? | | |
| Are the parts clean? | | |
| Are good and bad parts available? | | |
| Will the parts be presented in a radom pattern? | | |
| | | |

Motion Profile- Define process/ order of operation/ moves

Description:

| | Yes | No, If No Please redefine in Motion Profile |
|---|-----|---|
| Is the cycle time defined? | | |
| Are moves and distances defined? | | |
| Are all dwell times for gripper, vacuum or process defined? | | |

| Options: | | |
|--|--------------|----|
| | Yes | |
| Software Options Available for RC/00-A (check Yes -if required) | | |
| Vision Guide 7.0 | | |
| RC+API 7.0 | | |
| ECP | | |
| GUI BUILDER 7.0 | | |
| SECURITY | x (Standard) | |
| Force sensing | | |
| OCR | | |
| Controller Option for RC700-A (check Yes- if required) | | |
| TP1 | | |
| TP2 | | |
| TP3 | | |
| Conveyor Tracking | | U. |
| PG Card (Pulse generation) | | |
| RS-232C card | | |
| I/O expansion card | | |
| Fieldbus I/O (slave) | | |
| Fieldbus I/O (master) | | |
| I/O Premade Cable kit | | |
| RC700 DU-A (drive unit) | | |
| | | |
| Software Options, Available, for RC90 (check Yes -if required) | Yes | |
| Vision Guide 7 0 | | |
| RC+API 7 0 | | |
| FCP | | |
| GUI BUILDER 7.0 | | |
| SECURITY | x (Standard) | |
| Force sensing | x (otandara) | |
| OCR | | |
| Controller Ontion for RC90 (check Yes- if required) | | |
| TP1 | | |
| TP2 | | |
| Conveyor Tracking | | |
| PG Card (Pulse generation) | | |
| RS-232C card | | |
| I/O expansion card | | |
| Fieldbus I/O (slave) | | |
| Fieldbus I/O (master) | | |
| I/O Premade Cable kit | | |
| | | |
| | Yes | |
| Software Options Available for RC180 (check Yes -if required) | | |
| Vision Guide 5.0 | | |

| VB Guide 5.0 | |
|--|--|
| ECP | |
| GUI BUILDER 5.0 | |
| Controller Option for RC180 (check Yes- if required) | |
| TP1 | |
| TP2 | |
| Operator panel | |
| RS-232C card | |
| I/O expansion card | |
| Fieldbus I/O (slave) | |
| I/O Premade Cable kit | |
| | |

| Integration | | | | |
|---|---------------------|------------|------------|------------|
| | End User | Integrator | | |
| Who is doing the Integration? | | | | |
| | | | | |
| | Programming | Mechanical | Electrical | Automation |
| If an End User is doing the integration, do they have the following | | | | |
| engineering resources? (Check all that apply) | | | | |
| | Yes, (If yes-please | No | | |
| | specify) | | | |
| Does the End User Currently have robots? | | | | |

Customer Information

Please provide Customer Name, address and Contact Info (email and telephone number):

Air-Oil Systems Contact: