

OACIS

Open Architecture Control Integrated System

Maintenance Instruction

Version 02.05



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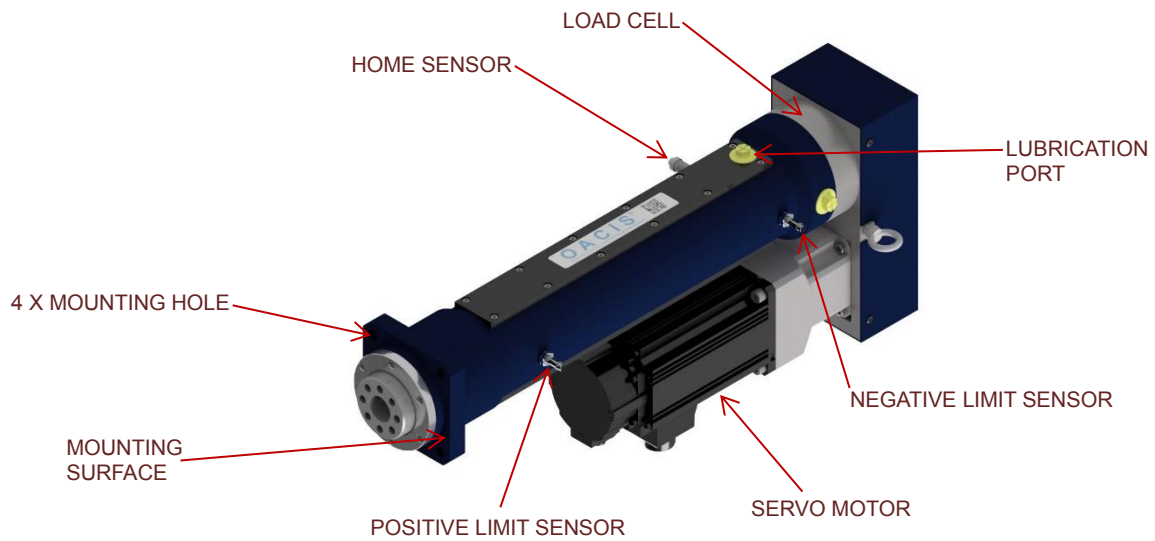
WARRANTY

ATA's exclusive warranty is one year from date of sale by ATA.

ATA shall not be responsible for warranty, repair or other claims regarding the products that are not properly handled, stored, installed, operated and maintained per ATA's instructions.

I. OACIS-P (SERVO PRESS)

A. Overview

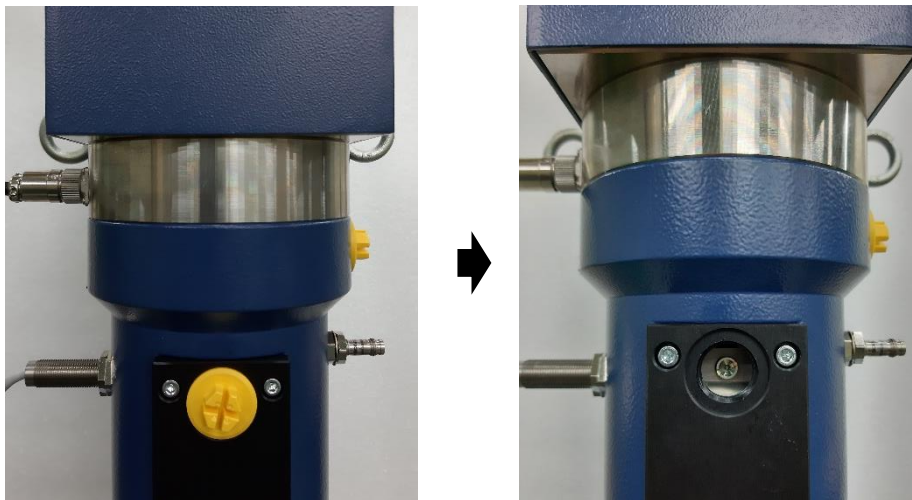


B. Installation

- You can find each model's dimensional drawings at the below link.
 - <http://atainc.com/en/Support/Download03.html>

C. Lubrication

- It is generally necessary to replenish grease on a regular basis.
- Lubrication Management
 - Grease Type: NLGI(National Lubricating Grease Institute) 2
 - Injection Volume: Max 1cc per month
 - Nozzle Type: Within 1mm in diameter





Lubrication Port #1

- Replenish grease while pushing the grease nipple center ball.
- Lack of lubrication will shorten the life of the system, increase tolerance and etc.
- Contaminated lubrication is as bad as no lubrication.
- It is strongly recommended to cycle the system regularly even there is no production to keep lubrication in the system.

D. Operating Environment

- Operating the System outside of the following ranges may result in malfunction of the Servomotor.
 - Ambient operating temperature: 0 to 40°C (the temperature at a point 5cm from the Servomotor)
 - Ambient operating humidity: 85% RH max. (with no condensation)
 - Atmosphere: No corrosive gases.

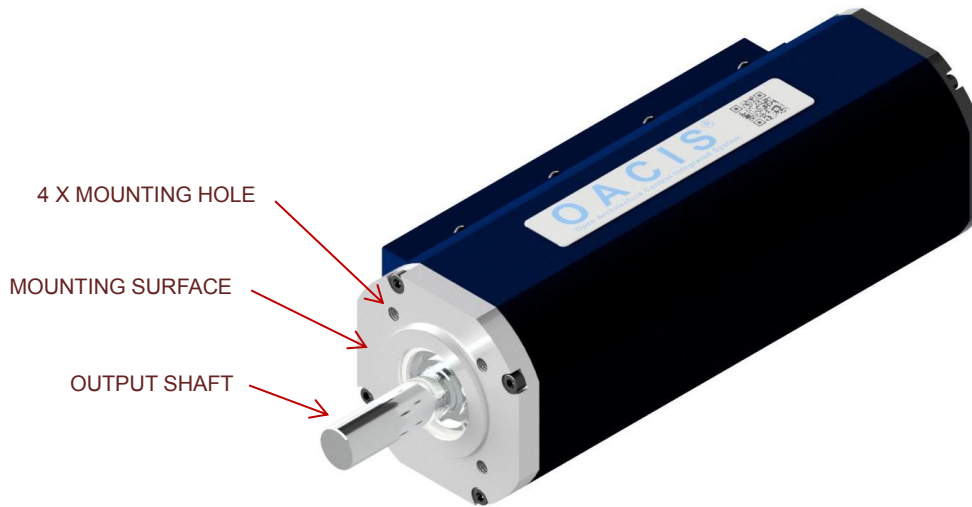


WARNING

1. Do not apply commercial power directly to the Servomotor. It may result in fire.
2. Do not dismantle or repair the product. It may result in electric shock or injury.
3. Do not assemble the sensors into a servopress with OACIS power on.

II. OACIS-T (NUT RUNNER)

A. Overview



B. Installation

- You can find each model's dimensional drawings at the below link.
 - <http://atainc.com/en/Support/Download03.html>
- **Four Mounting Bolts need to be tightened equally with proper torque.**

C. Operating Environment

- Operating the System outside of the following ranges may result in malfunction of the Servomotor.
 - Ambient operating temperature: 0 to 40°C (the temperature at a point 5cm from the Servomotor)
 - Ambient operating humidity: 85% RH max. (with no condensation)
 - Atmosphere: No corrosive gases.



WARNING

1. **Do not apply commercial power directly to the Servomotor. It may result in fire.**
2. **Do not dismantle or repair the product. It may result in electric shock or injury.**

APPENDIX #1 / ERROR CODE DESCRIPTION & TROUBLE SHOOTING

Error Code #	Description	Cause	Solution
000	Fail to initialize OACIS	No Program in OACIS	Reset -> Download a Program
300	Flash Memory Full	OACIS Flash Memory is full	OACIScom -> VIEW -> Data -> Erase Data of OACIS (you may need to backup first)
310	Flash Memory Error	Flash Memory Error	Consult ATA
401	E-Stop Error (PC-Command)		Reset by PC Command
402	Incorrect Program Start Signal Off	Program Start Signal turned off while Running	Verify wiring and External Device (like PLC) logic
410	E-Stop Input Error	E-Stop Input Error	Reset E-Stop
411	Fail to initialize for Homing		Reset
421	Fail to be ready		Reset
422	Incorrect Program Set In with Strobe on		Verify Program Set In Signals
423	Program Start Input without Home Ok condition	Ready On with "Home Ok" and "Program Home Ok" Off	Reset -> Homing
424	Program Start Input without Ready condition		Reset -> Homing
425	E-Stop during PC Jog Command	Double Commands (PC Command and Remote Command) come into OACIS	Reset -> Homing
426	Program Start Input during PC State is Error		Reset
427	Program Start Input during DI Jog Control		Reset -> Homing
430	E-Stop while Program Running		Eliminate Root Cause of E-Stop -> Reset -> Homing
435	PC Command while OACIS running		Reset -> Homing
440	E-Stop to the OACIS with Error		Eliminate Root Cause of E-Stop -> Reset -> Homing
480	Fail to initialize OACIS due to Incorrect Program Name Length		Re-Download Program with Proper Program Name
500	Fail to call the selected Program from Flash Memory		Re-Download Program or Use Different Program Number
501	Fail to read proper Program Step in Run Time		Re-Download Program or Use Different Program Number
505	Fail to update Program (GV Name)		Re-Download Program or Use Different Program Number
506	Fail to read Program (Step)		Re-Download Program or Use Different Program Number
511	Wait to DI Time Over		Input Longer Waiting Time

INSTALLATION AND MAINTENANCE INSTRUCTION

520	Fail to update Program (Incorrect Program Number 000)		Download a Program
600	Axis #1 Servo Drive Alarm		1. See the Servo Drive Manual 2. Consult ATA
601	Axis #1 Position Control Limit	Out of Position Control Limit	1. Set Position Control Limit (in Admin Window) 2. Reduce Speed and Acc 3. Consult ATA
602	Axis #1 Positive Limit	Positive Limit Sensor On	Verify Positive Limit Sensor
603	Axis #1 Negative Limit	Negative Limit Sensor On	Verify Negative Limit Sensor
604	Axis #1 Homing Load Limit	Over Loaded while Homing	1. Eliminate Cause that makes abnormal Load while Homing 2. Increase "Move to Home Load Limit" in System Configuration (Keep in mind that the number should be safe enough)
605	Axis #1 Position Min Limit		Verify Negative Position Limit in System Configuration
606	Axis #1 Position Max Limit		Verify Positive Position Limit in System Configuration
607	Axis #1 Load Min Limit		1. Eliminate Cause that makes abnormal Load 2. Verify "Negative Load Limit" in System Configuration
608	Axis #1 Load Max Limit		1. Eliminate Cause that makes abnormal Load 2. Verify "Positive Load Limit" in System Configuration
609	Axis #1 Position Min Limit in Move Cycle		Verify "Min Position Limit" in the Step
610	Axis #1 Position Max Limit in Move Cycle		Verify "Max Position Limit" in the Step
611	Axis #1 Load Min Limit in Move Cycle		Verify "Min Load Limit" in the Step
612	Axis #1 Load Max Limit in Move Cycle		Verify "Max Load Limit" in the Step
700	Axis #2 Servo Drive Alarm		1. See the Servo Drive Manual 2. Contact ATA
701	Axis #2 Position Control Limit		1. Set Position Control Limit (in Admin Window) 2. Reduce Speed and Acc 3. Contact ATA
702	Axis #2 Positive Limit		Verify Positive Limit Sensor
703	Axis #2 Negative Limit		Verify Negative Limit Sensor
704	Axis #2 Homing Load Limit		1. Eliminate Cause that makes abnormal Load while Homing 2. Increase "Move to Home Load Limit" in System Configuration (Keep in mind that the number should be safe enough)

705	Axis #2 Position Min Limit	Verify Negative Position Limit in System Configuration
706	Axis #2 Position Max Limit	Verify Positive Position Limit in System Configuration
707	Axis #2 Load Min Limit	1. Eliminate Cause that makes abnormal Load 2. Verify "Negative Load Limit" in System Configuration
708	Axis #2 Load Max Limit	1. Eliminate Cause that makes abnormal Load 2. Verify "Positive Load Limit" in System Configuration
709	Axis #2 Position Min Limit in Move Cycle	Verify "Min Position Limit" in the Step
710	Axis #2 Position Max Limit in Move Cycle	Verify "Max Position Limit" in the Step
711	Axis #2 Load Min Limit in Move Cycle	Verify "Min Load Limit" in the Step
712	Axis #2 Load Max Limit in Move Cycle	Verify "Max Load Limit" in the Step

REVISION

- v01.00: Engineering Released**
- v01.10: IX.B.2 was +Vcc (24V)**
- v01.20: Appendix #1 Added**
- v01.31: Detailed Comments for wiring Added**
- v01.32: Updated OACIS Exterior Dimensions**
- v01.33: Correct VIII.A.4**
- v01.35: OACIS-P(ServoPress) Warning 3. Added**
- v01.36: Document Format Updated**
- v01.37: Correct IX.B**
- v01.38: Correct IX.C**
- v01.39: A few items Updated**
- v01.40: Document Format Updated**
- v01.41: "Headers & Footers" Format Updated**
- v01.42: Image Size & Resolution Updated**
- v01.43: Tips on Servo Wiring Added**
- v01.44: Image on Servo Connections Added**
- v02.00: Installation and Maintenance Manuals Separated.**
- v02.01: Injection Volume in I.C Modified.**
- v02.02: All Contents Downsized.**
- v02.03: Page format Updated**
- v02.04:**
 - . Images in I & II Updated**
 - . One lubrication port in I Removed**
- v02.05: Add a grease gun nozzle type**