

[1] EC-TYPE EXAMINATION CERTIFICATE

**[2] Equipment or Protected System Intended for use
in Potentially explosive atmospheres
Directive 94/9/EC**

- [3] EC-Type Examination Certificate Number: Nemko 03ATEX1342X**
- [4] Equipment or Protective System: Electric Actuator**
- [5] Applicant/Manufacturer: EUNHA MACHINERY IND CO., LTD**
**[6] Address: 141 Kwangmyoung Industrial Complex
201 Haan-Dong, Kwangmyoung-Si
Kyounggi-Do, KOREA, 423-060**
- [7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.**
- [8] Nemko AS, notified body number 0470 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.**
- The examination and test results are recorded in confidential report no. 10034**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
CENELEC EN 50014: 1997 + A1: 1999 + A2: 1999 and CENELEC EN 50018: 2000**
- [10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.**
- [11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.**
- [12] The marking of the equipment or protective system shall include the following:**

**II 2 G****EEx d IIB T4****Oslo, 2004-07-28**

**Rolf Hoel
Certification Department**

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[13] Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE No Nemko 03ATEX1342X

[15] Description of Equipment or Protective System

Electric actuators. May also be manually operated. The actuators are provided with two threaded holes for cable entries (gland or conduit) and an indicating arrow for open or closed position inside the enclosure. This is shown through a window at the top of the enclosure. The actuators can be delivered with position indication unit (PIU) and auxiliary limit switches (ALS).

The Actuators are certified without any cable entries fitted.

Type Designation

1. NA-006, NA-009
2. NA-015, NA-019
3. NA-028, NA-038, NA-050
4. NA-060, NA-080, NA-100

Technical Data

NA-006	15W	110/220V AC	1 phase, 220/380/440V AC	3 phase, 24V DC
NA-009	25W	110/220V AC	1 phase, 220/380/440V AC	3 phase, 24V DC
NA-015, NA-019, NA-028	40W	110/220V AC	1 phase, 220/380/440V AC	3 phase, 24V DC
NA-038	60W	110/220V AC	1 phase, 220/380/440V AC	3 phase
NA-050, NA-060	90W	110/220V AC	1 phase, 220/380/440V AC	3 phase
NA-080, NA-100	180W	110/220V AC	1 phase, 220/380/440V AC	3 phase

Ambient Temperature

-20°C to +55°C

[16] Report No. 10034

Descriptive Documents

NA-006, NA-009

Name/Title	Drawing No.	Rev.	Date	Sheets
1PH WIRING DIAGRAM	NU-11000-C	-	2002-04-01	1
3PH WIRING DIAGRAM	NU-31000-C	-	2002-04-01	1
DC WIRING DIAGRAM	NU-81000-C	-	2002-04-01	1
TOP COVER & WINDOW	ENC05-01	-	2001-08-21	1
NA-006 ASSEMBLY	M006-101-A	-	2001-12-12	1
NA-009 ASSEMBLY	M009-101-A	-	2001-12-12	1
BODY	A005-201-B	B	2000-01-17	1
TOP COVER	A005-202-B	B	2000-01-17	1
WINDOW COVER	A010-203-A	-	1995-05-08	1
BASE	A005-204-C	C	1997-06-04	1
DRIVE BUSHING	A005-205-B	B	1997-11-24	1

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HANDLE COVER	A010-206-B	B	1997-01-09	1
END COVER	A010-207-A	-	1995-04-18	1
DISK	A010-208-B	B	2000-03-17	1
THRUST COVER	A010-209-A	-	1995-04-17	1
1 ST WORM SHAFT	A010-211-B	B	1997-01-10	1
1 ST WORM WHEEL	A010-212-A	-	1995-04-18	1
2 ND WORM SHAFT	A005-213-A	-	1996-06-16	1
2ST WORM WHEEL	A005-214-A	-	1995-06-01	1
CENTER COLUMN	A005-215-A	-	1996-04-15	1
POINTER SHAFT	A005-216-A	-	1996-04-22	1
INDICATOR	A005-217-A	-	1995-06-02	1
WINDOW	A005-218-A	-	1998-10-26	1
HANDLE	A010-219-B	1	1995-12-07	1
HANDLE SHAFT	A010-224-A	-	1995-04-17	1
LEVER	A005-226-A	-	1995-05-30	1
DISK	A010-230-B	B	2000-03-17	1
PACKING(2)	A005-234-A	-	1995-06-03	1
CLS CAM	A010-236-A	-	1995-04-18	1
OLS CAM	A010-239-A	-	1995-04-18	1
S/W PLATE 1	A010-237-A	-	1995-04-18	1
MOTOR 15W	A006-250-A	-	2000-08-30	1
MOTOR 25W	A009-250-A	-	2000-08-30	1
T/B BRACKET	A015-254-A	-	1997-11-13	1
NA-015 and NA-019				
Name/Title	Drawing No.	Rev.	Date	Sheets
1PH WIRING DIAGRAM	NS-11000-C	-	2002-04-01	1
3PH WIRING DIAGRAM	NS-31000-C	-	2002-04-01	1
DC WIRING DIAGRAM	NS-81000-C	-	2002-04-01	1
TOP COVER & WINDOW	ENC10-01	-	2001-08-21	1
NA-015 ASSEMBLY	M015-101-A	-	2001-12-12	1
NA-019 ASSEMBLY	M019-101-A	-	2001-12-12	1
BODY	A010-201-B	B	2000-01-17	1
TOP COVER	A010-202-B	B	2000-01-17	1
WINDOW COVER	A010-203-A	-	1995-05-08	1
BASE	A010-204-C	C	1997-05-26	1
BASE	A018-204-C	C	1997-05-26	1

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DRIVE BUSHING	A010-205-B	B	1997-11-24	1
HANDLE COVER	A010-206-B	B	1997-01-09	1
END COVER	A010-207-A	-	1995-04-18	1
DISK	A010-208-B	B	2000-03-17	1
THRUST COVER	A010-209-A	-	1995-04-17	1
1 ST WORM SHAFT	A010-211-B	B	1997-01-10	1
1 ST WORM WHEEL	A010-212-A	-	1995-04-18	1
2 ND WORM SHAFT	A010-213-A	-	1996-06-26	1
2 ST WORM WHEEL	A010-214-A	-	1995-06-01	1
CENTER COLUMN	A010-215-A	-	1995-05-25	1
POINTER SHAFT	A005-216-A	-	1996-04-22	1
INDICATOR	A010-217-A	-	1995-06-02	1
WINDOW	A010-218-A	-	1998-10-26	1
HANDLE	A010-219-B	-	1995-12-07	1
HANDLE SHAFT	A010-224-A	-	1995-04-17	1
LEVER	A010-226-A	-	1995-05-30	1
DISK	A010-230-B	B	2000-03-17	1
PACKING(2)	A010-234-A	-	1995-06-03	1
TORQUE SHAFT	A010-235-A	-	1998-04-24	1
CLS CAM	A010-236-A	-	1995-04-18	1
OLS CAM	A010-239-A	-	1995-04-18	1
CTS CAM	A010-240-A	-	1995-04-18	1
OTS CAM	A010-241-A	-	1995-04-18	1
S/W PLATE 1	A010-237-A	-	1995-04-18	1
S/W PLATE 2	A010-242-A	-	1995-04-18	1
MOROR 40W	A015-250-A	B	2000-01-17	1
T/B BRACKET	A015-254-A	-	1997-11-13	1
NA-028, NA-038 and NA-050				
Name/Title	Drawing No.	Rev.	Date	Sheets
1PH WIRING DIAGRAM	NS-11000-C	-	2002-04-01	1
3PH WIRING DIAGRAM	NS-31000-C	-	2002-04-01	1
DC WIRING DIAGRAM	NS-81000-C	-	2002-04-01	1
TOP COVER & WINDOW	ENC10-01	-	2001-08-21	1
NA-028 ASSEMBLY	M028-101-A	-	2001-12-12	1
NA-038 ASSEMBLY	M038-101-A	-	2001-12-12	1
NA-050 ASSEMBLY	M050-101-A	-	2001-12-12	1

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BODY	A025-201-B	B	2000-01-17	1
TOP COVER	A035-202-B	B	2000-01-17	1
WINDOW COVER	A010-203-A	-	1995-05-08	1
BASE	A025-204-C	C	1997-05-26	1
BASE	A035-204-C	C	1997-05-26	1
DRIVE BUSHING	A025-205-D	D	1997-11-24	1
HANDLE COVER	A025-206-B	B	1997-01-09	1
END COVER	A025-207-A	-	1995-04-18	1
DISK	A025-208-B	B	2000-03-17	1
THRUST COVER	A010-209-A	-	1995-04-17	1
1 ST WORM SHAFT	A025-211-A	-	1995-05-30	1
1 ST WORM WHEEL	A010-212-A	-	1995-04-18	1
2 ND WORM SHAFT	A025-213-A	-	1996-06-26	1
2 ST WORM WHEEL	A025-214-A	-	1995-06-01	1
CENTER COLUMN	A025-215-A	-	1998-03-05	1
POINTER SHAFT	A025-216-A	-	1996-04-22	1
INDICATOR	A010-217-A	-	1995-06-02	1
WINDOW	A010-218-A	-	1998-10-26	1
HANDLE	A025-219-B	1	1995-12-07	1
HANDLE SHAFT	A025-224-A	-	1995-04-17	1
LEVER	A025-226-A	-	1995-05-30	1
DISK	A025-230-B	B	2000-03-17	1
PACKING(2)	A010-234-A	-	1995-06-03	1
TORQUE SHAFT	A025-235-A	-	1998-04-24	1
CLS CAM	A010-236-A	-	1995-04-18	1
OLS CAM	A010-239-A	-	1995-04-18	1
CTS CAM	A010-240-A	-	1995-04-18	1
OTS CAM	A010-241-A	-	1995-04-18	1
S/W PLATE 1	A010-237-A	-	1995-04-18	1
S/W PLATE 2	A010-242-A	-	1995-04-18	1
MOTOR 40W	A028-250-A	B	2000-01-17	1
MOTOR 60W	A038-250-A	-	2000-08-30	1
MOTOR 90W	A050-250-A	-	2000-08-30	1
T/B BRACKET	A015-254-A	-	1997-11-13	1

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Enterprise number:
NO 974404532

NA-060, NA-080 and NA-100				
Name/Title	Drawing No.	Rev.	Date	Sheets
1PH WIRING DIAGRAM	NS-11000-C	-	2002-04-01	1
3PH WIRING DIAGRAM	NS-31000-C	-	2002-04-01	1
DC WIRING DIAGRAM	NS-81000-C	-	2002-04-01	1
TOP COVER & WINDOW	ENC10-01	-	2001-08-21	1
NA-060 ASSEMBLY	M060-101-A	-	2001-12-12	1
NA-080 ASSEMBLY	M080-101-A	-	2001-12-12	1
NA-100 ASSEMBLY	M100-101-A	-	2001-12-12	1
BODY	A050-201-B	B	2000-01-17	1
TOP COVER	A080-202-B	B	2000-01-17	1
WINDOW COVER	A010-203-A	-	1995-05-08	1
BASE	A050-204-C	C	1997-05-26	1
DRIVE BUSHING	A050-205-C	C	1997-11-24	1
HANDLE COVER	A050-206-B	B	1997-01-09	1
END COVER	A050-207-A	-	1995-05-08	1
DISK	A025-208-B	B	2000-03-17	1
THRUST COVER	A010-209-A	-	1995-04-17	1
1 ST WORM SHAFT	A050-211-A	-	1995-05-30	1
1 ST WORM WHEEL	A010-212-A	-	1995-04-18	1
2 ND WORM SHAFT	A050-213-A	-	1996-06-21	1
2 ND WORM WHEEL	A050-214-A	-	1995-05-31	1
CENTER COLUMN	A050-215-A	-	1998-03-05	1
POINTER SHAFT	A060-216-A	-	1996-04-22	1
INDICATOR	A010-217-A	-	1995-06-02	1
WINDOW	A010-218-A	-	1998-10-26	1
HANDLE	A050-219-B	1	1995-12-07	1
HANDLE SHAFT	A050-224-A	-	1995-04-17	1
LEVER	A050-226-A	-	1995-05-30	1
DISK	A025-230-B	B	2000-03-17	1
PACKING(2)	A010-234-A	-	1995-06-03	1
TORQUE SHAFT	A025-235-A	-	1998-04-24	1
CLS CAM	A010-236-A	-	1995-04-18	1
OLS CAM	A010-239-A	-	1995-04-18	1
CTS CAM	A010-240-A	-	1995-04-18	1
OTS CAM	A010-241-A	-	1995-04-18	1
S/W PLATE 1	A010-237-A	-	1995-04-18	1

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S/W PLATE 2	A010-242-A	-	1995-04-18	1
MOTOR 90W	A050-250-A	-	2000-08-30	1
MOTOR 180W	A080-250-A	-	2000-08-30	1
T/B BRACKET	A015-254-A	-	1997-11-13	1
Actuator Option				
P.I.U and A.L.S				
Name/Title	Drawing No.	Rev.	Date	Sheets
PIU ASS'Y	APIU-101-A	-	2002-09-17	1
PIU PLATE	A005-260-A	-	2000-08-03	1
PIU PLATE	A010-260-A	-	2000-08-03	1
PIU PLATE	A050-260-A	-	2000-08-03	1
HELICAL GEAR	A015-904-A	-	1996-03-22	1
HELICAL GEAR	A015-903-A	-	1996-04-08	1
STEM BOLT	A010-261-A	-	2002-09-19	1
STEM BOLT	A025-260-A	-	2002-09-19	1
STEM BOLT	A050-261-A	-	2002-09-19	1
ALS ASS'Y	AALS-101-A	-	2002-09-19	1
POINTER SHAFT	A005-216-A	-	1996-04-22	1
POINTER SHAFT	A025-216-A	-	1996-04-22	1
POINTER SHAFT	A060-216-A	-	1996-04-22	1
CAM SWITCH	A200-236-B	-	1995-02-08	1

Routine Test

Routine test must be performed on every enclosure to ensure that the enclosures withstand the pressure and do not contain holes or cracks. Every sample shall withstand a static pressure of 10,2 bar, lasting between 10 s and 60 s.

[17] Special Conditions for Safe Use

1. Certified cable entries rated for at least 90°C must be used when installed.
2. If conduit is used for cable entry, a sealing device such as a stopping box with setting compound must be provided close to the entry.

[18] Essential Health and Safety Requirements

[See item 9](#)

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