

# NEWTORK KOREA

The world leader in actuation solution

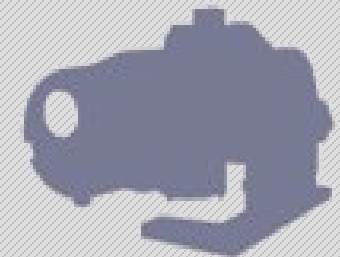
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INTELLIGENT ELECTRIC ACTUATOR  
MULTI-TURN / PART-TURN

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**COMPANY AND PRODUCT PROFILE**

[www.newtork.co.kr](http://www.newtork.co.kr)





**NEWTORK KOREA** was founded by engineers with more than 20years experience in the valve industry. For more than 10 years, we have manufactured and supplied electric actuators, functional control devices for plant fluid management and we are certified to ISO 9001, ISO14001, and OHSAS 18001 quality assurance standard.

# BUSINESS AREA

01

Power Plant

02

Water & Sewage

03

Gas & Oil

Petrochemical Plant

04

Nuclear Energy

05

Dam

06

Shipyard

07



**ELECTRIC ACTUATOR**



**MOTOR OPERATED VALVE**



**MOV CONSULTING**



**SITE SERVICES**



# HISTORY

## 2007

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Founded a company

Assumed a representative director

Contracted BIFFI Italy sub-agent

## 2008

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Registered a plant

## 2012

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Contracted Limitorque agent

## 2013

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Registered a trademark

Changed a representative director

## 2014

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Registered a patent

Contract Limitorque agent

## 2015

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Obtained certificates of ISO 9001:2004,  
ISO14001:2004

Registered a patent

Acquired for venture business

Acquired for process risk evaluation

## 2016

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Registered a patent

Received a certificate of merit

Acquired for clean and safe factory

## 2017

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Registered a research institute

Obtained certificates of OHSAS 18001:2007

Acquired for promising export firm

## 2018

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Acquired for innovation business

Obtained certificates of ISO 9001:2015,  
ISO14001:2015

Acquired for CE waterproof (IP68-15M,90Hr)

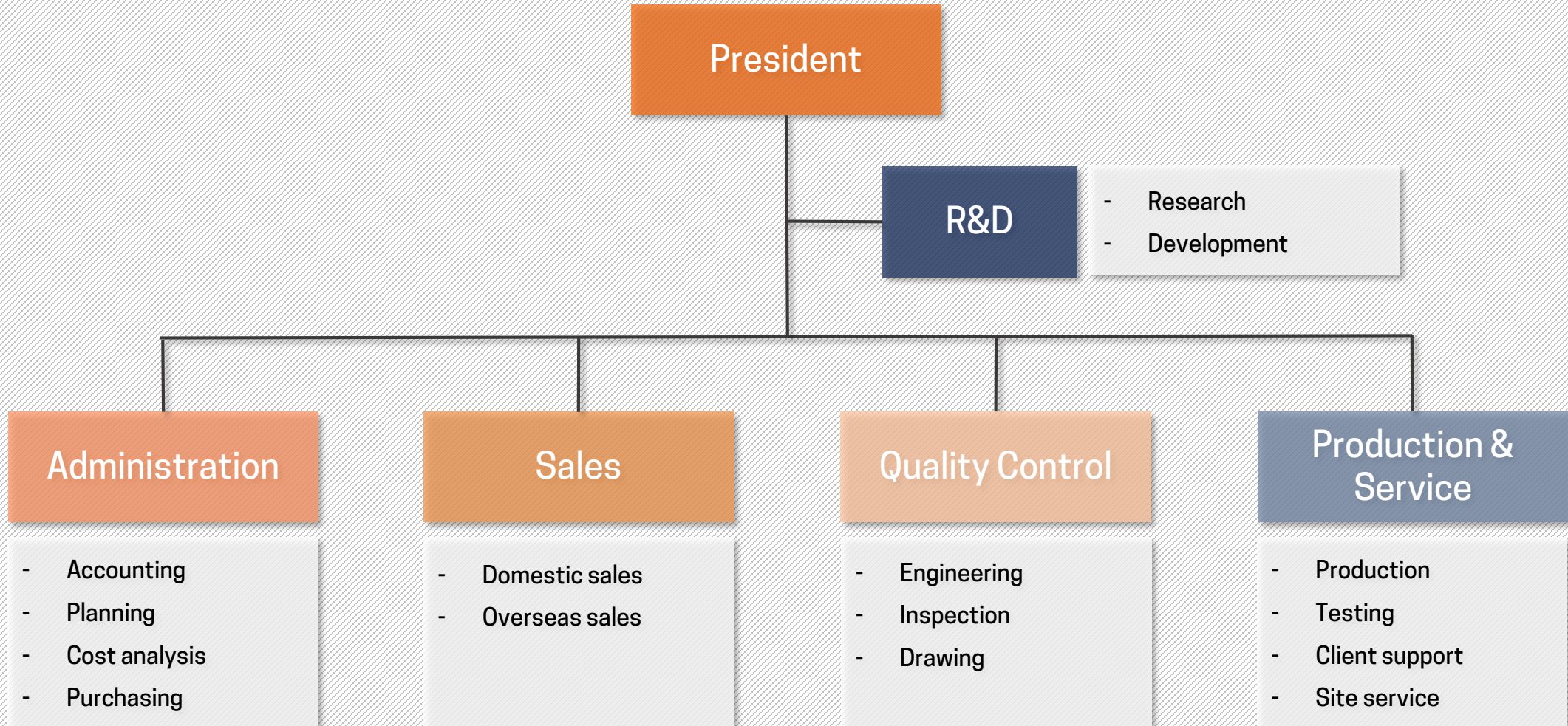
Acquired for Product-specific Approved Exporter

Attend to Work-life balance campaign

Received a prime minister citation for product  
development

Acquired for GGWP from Gyeonggi Province

# ORGANIZATION







# CONTACT



## LOCATION

#602-603 Hyeondae I Valley, 31, Galmachi-ro 244Beon-gil, Jungwon-gu, Seongnam-si, Gyeonggi-do, Republic of Korea 13212



## TEL

+82-31-711-3107



## FAX

+82-31-711-3057



## WEBSITE

[www.newtork.co.kr](http://www.newtork.co.kr)



## E-MAIL

[newtork@newtork.co.kr](mailto:newtork@newtork.co.kr)





**NEWTORK KOREA** has in-depth experience in retrofit and the strength to deliver on-site service that even covers products of other makers. With the expertise to advise on national standard enactment of electric actuators, **NEWTORK KOREA** is developing next-generation products to reduce the burden on customers and increase convenience.



# **PRODUCT: Features**

- 01 It is made of Aluminum which is **lightweight, resistant to corrosion**.
- 02 As introduced **non-interfacial designs** are provided, can be set the product with a setting tool without opening the control room cover; to prevent ingress of dust or humidity from the site.
- 03 It is designed with a **double waterproof structure**, fully protecting internal electric operation parts despite a terminal cover open.
- 04 Waterproof structure offer highest grade **IP68 by enduring 90 hours under water 15m depth** and it is the best in the industry.
- 05 A precise encoder and pressure sensor is provided and it allows **accurate torque and position measurements** and shows the change amount in 1 % units in LCD window.
- 06 It features a variety of **product protection functions** such as position transmit(4~20mA) function, and auto-synchrophase as a standard.
- 07 The handwheel design has been adapted for **efficient manual operation** and has a half wheel gap to facilitate manual operation using the Hammer Blow effect.
- 08 It is a smart and has the function which **automatically detects and removes foreign substance**.
- 09 It provides Modbus, Profibus, Foundation Fieldbus communications that are **compatible with any interfaces**.



# PRODUCT: Specification

CONTENTS	DESCRIPTION		REMARK
<b>Main Power Supply</b>	Find the nameplate attached on the product		
<b>Motor</b>	3 Phase AC motor	Single Phase AC motor	
<b>Motor Control</b>	Magnetic Contactor		
<b>Motor Protection</b>	Thermostat: Enable at 132°C (270°F) motor surface temperature		
<b>Location Sensor</b>	Saves the number of turns through Counting PCB method		
<b>Torque Sensor</b>	Torque Transducer method through Strain Gauge which detects the slight amount of torque value in units of %		
<b>Input Command Signal</b>	Standard: 24DCVD	Option: 110VAC	
<b>ESD Control</b>	Enable by setting (Full Open or Full Close)		
<b>Location Display Unit</b>	Directly connected to the output shaft to indicate position on the display window		
<b>Relay</b>	Standard: Monitor Relay and 4 contacts	Option: 8 contacts (Total)	
<b>Analog Output</b>	Position actual value, 4-20mA or 20-4mA		
<b>Local Control</b>	REMOTE/STOP/LOCAL Switch (or Button)	3 color LED lamp, infra-rad receive lam	
	OPEN/CLOSE Switch (or Button)	LCD display window	
<b>Manual / Motor Operation</b>	Manual->Motor : Convert to Motor operation when motor is driven		
	Motor->Manual : Convert to Manual operation when clutch is engaged by pressing hand auto lever		
<b>Structure</b>	NTI, NTIT Series : Waterproof IP68 (15m depths, 90hours), NTIR Series: Waterproof IP67		EN60529:1991/A2:2013



# PRODUCT: Specification

CONTENTS	DESCRIPTION	REMARK
Material	Aluminum/stainless alloy fastner, Cast iron thrust base	
Operating Temperature	-30℃ ~ +70℃ (-22°F ~ +158°F)	
Operating Under Load Cycle	On-Off rating: S2-15min: 60 operation per hour	
	Modulating rating: S4-30min: 1200 operation per hour	
Life Cycle	At least 30,000 cycles with Open-Close-Open	
Noise	Under 61dB(A) within 1m distance	
Vibration	The cumulative vibration value in the 10~1,000MHz frequency range is less than 1gms	
Impact	The maximum acceleration is 5g	
Paint	Polyester powder coating (Body : RAL 9006, Handwheel and Hand auto lever : RAL9005)	





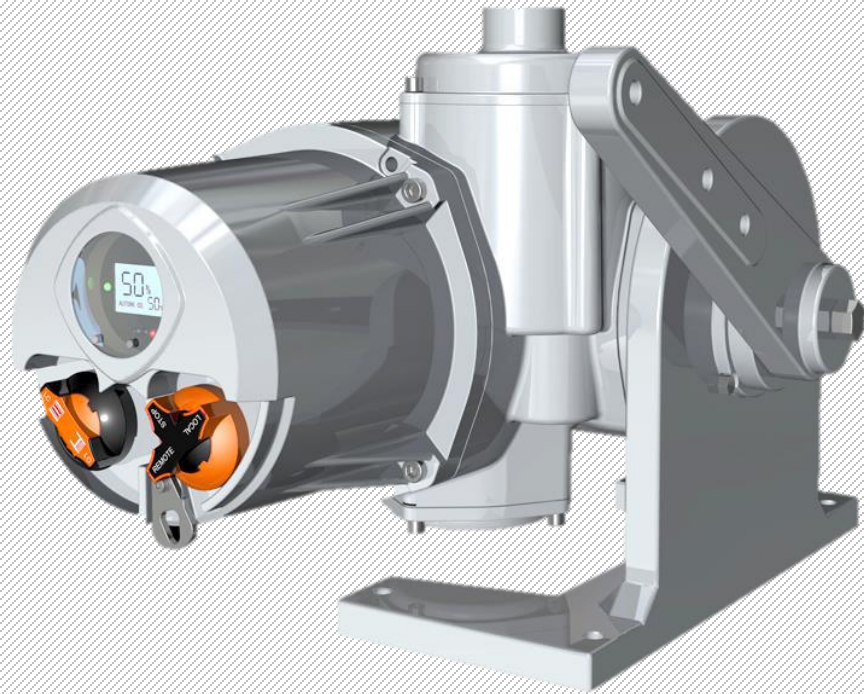
# NTI Series

## Multi-turn Actuator

NTI Series are multi-turn actuators for globe valves, gate valves, floodgate and extra. It is also for quarter-turn valves such as dampers, ball valves, and butterfly valves when combined with gear boxes.

\*\* MAIN POWER SUPPLY: 380V/3Ph

MODEL	TORQUE (Nm)	SPEED (RPM)	ALLOWABLE STEM DIA (mm)	VALVE ATTACHMENT	RATED CURRENT (A)	RATED POWER(KW)	WIGHT (KG)
NTI-01 ~ 03	30 to 110	50Hz: 18~144	Rising: 32 / Non-rising: 26	F10	1.47 ~ 1.92	0.47 ~ 0.65	32
NTI-04 ~ 05	100 to 450		Rising: 51 / Non-rising: 38	F14	3.90 ~ 6.60	1.75 ~ 3.00	52
NTI-06	270 to 650	60Hz: 21~173	Rising: 54 / Non-rising: 45	F16	7.20 ~ 14.50	3.00 ~ 5.11	75
NTI-07	550 to 1100		Rising: 70 / Non-rising: 60	F25	11.00 ~ 18.20	5.20 ~ 9.10	200
NTI-08 ~ 10G	745 to 3500		Rising: 83 / Non-rising: 73	F30	10.50 ~ 35.00	5.70 ~ 18.00	230



# NTIT Series

## Part-turn Actuator

NTIT Series are quarter-turn electric actuators in order to operate applications such as ball valves, butterfly valves and dampers.

\*\* MAIN POWER SUPPLY: 380V/3Ph

MODEL	TORQUE (Nm)	OPERATING TIME (Sec)	ALLOABLE STEM DIA (mm)		VALVE ATTACHMENT	RATED CURRENT (A)	RATED POWER(KW)	WIGHT (KG)
NTIT-01	125	50Hz: 18~20 / 60Hz: 15~17	Key 28	Square 19	F07	50Hz: 0.47 / 60Hz: 0.07	50Hz: 0.13 / 60Hz: 0.17	24
NTIT-02	250	50Hz: 18~20 / 60Hz: 15~17	Key 28 / 42	Square 19 / 27	F07 or F10	50Hz: 0.49 / 60Hz: 0.56	50Hz: 0.13 / 60Hz: 0.17	24
NTIT-03	500	50Hz: 26~30 / 60Hz: 22~25	Key 42	Square 27	F10	50Hz: 0.53 / 60Hz: 0.59	50Hz: 0.14 / 60Hz: 0.18	24
NTIT-04	1000	50Hz: 38~40 / 60Hz: 32~34	Key 50 / 60	Square 32 / 36	F12 or F14	50Hz: 0.56 / 60Hz: 0.62	50Hz: 0.14 / 60Hz: 0.18	35
NTIT-05	1500	50Hz: 46~50 / 60Hz: 38~42	Key 50 / 60	Square 36	F12 or F14	50Hz: 0.60 / 60Hz: 0.65	50Hz: 0.15 / 60Hz: 0.19	35
NTIT-06	2000	50Hz: 58~60 / 60Hz: 48~50	Key 60	Square 45	F14	50Hz: 0.62 / 60Hz: 0.69	50Hz: 0.15 / 60Hz: 0.19	35



# NTIR Series

## Part-turn Actuator

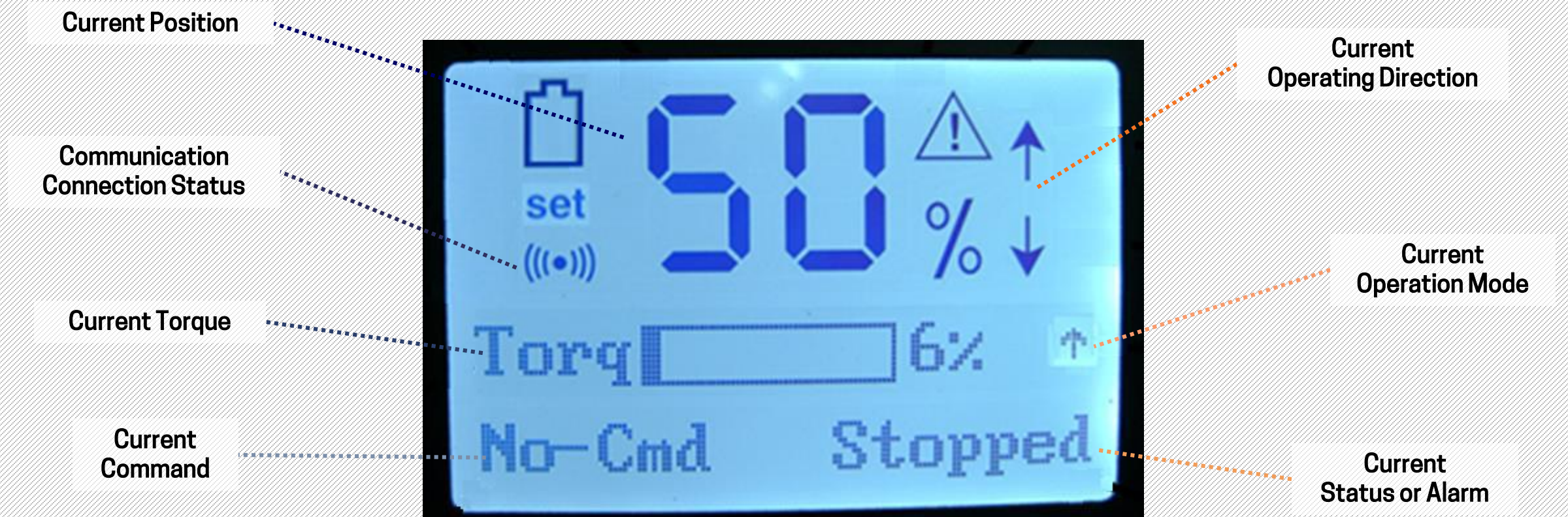
NTIR Series are specially designed for small quarter-turn valves and dampers.

\*\* MAIN POWER SUPPLY: 380V/3Ph

MODEL		TORQUE (Nm)	OPERATING TIME (Sec)	ALLOABLE STEM DIA (mm)		VALVE ATTACHMENT	RATED CURRENT (A)	RATED POWER(KW)	WIGHT (KG)
NTIR-200	NTIR-05 NTIR-10	50 100 200	50Hz: 20 60Hz: 17	Key 22	Square 15	F05 or F07	50Hz: 0.50 ~ 0.62 60Hz: 0.51 ~ 0.63	50Hz: 0.16 ~ 0.17 60Hz: 0.16 ~ 0.17	14
	NTRI-15 NTIR-20								
NTIR-500	NTIR-30 NTIR-40	300 400 500	50Hz: 30 60Hz: 25	Key 33	Square 23	F07 or F10	50Hz: 1.03 ~ 1.12 60Hz: 0.95 ~ 1.12	50Hz: 0.30 ~ 0.31 60Hz: 0.29 ~ 0.29	17
	NTIR-50								



# STANDARD FEATURE: Display Window



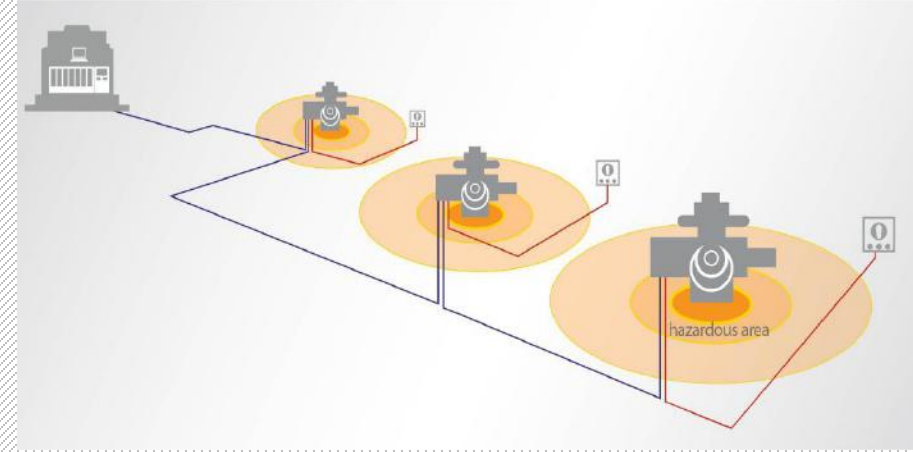
INDICATE ALL THE **CONDITION** OF PRODUCT

# STANDARD FEATURE: Product protection function



## AUTO-SYNCHROPHASE

The rotor operates correct direction even when the supply power R, S, T phase is miss-connected to the product.



## POSITION TRANSMITTER

Transmits a signal by varying the current value as the valve changes its position.

# STANDARD FEATURE: Fault Diagnosis



Battery is disconnected

PhaseLst

Phase is lost

TempErr

Motor temperature  
:132°C ↑

TorqTrip

Excessive torque valve is detected

LockRotor

Fault with rotor  
(more than 5 seconds)

24vErr

Fault with internal power

NoOpenIL

Open signal on close interlock enabled

SensorErr

Fault with torque sensing device

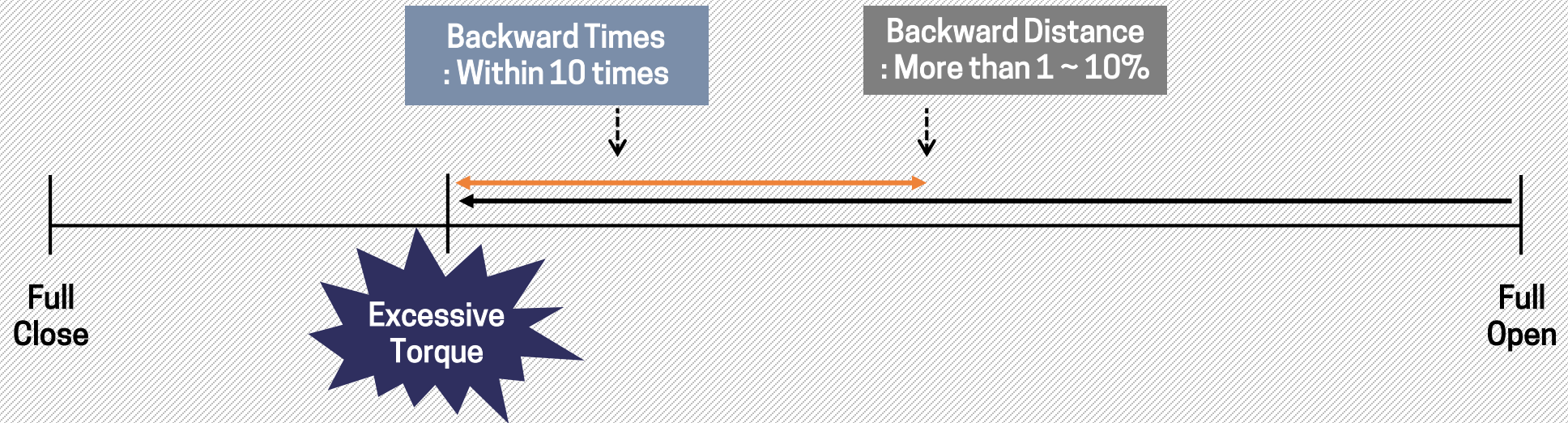
**SELF-DIAGNOSIS FOR PROBLEM WITH THE PRODUCT**

**INDICATE ON THE DISPLAY WINDOW**

**FOR REDUCING TIME AND INCREASE CONVENIENCE**



# STANDARD FUNCTION: Intelligent Mode



**REDUCE RESOURCES AND PREVENT POTENTIAL PROBLEMS**  
MANPOWER, TIME, COST, PROCEDURES      OVERLOAD, SUPPLY DELAY, WATER HAMMERING

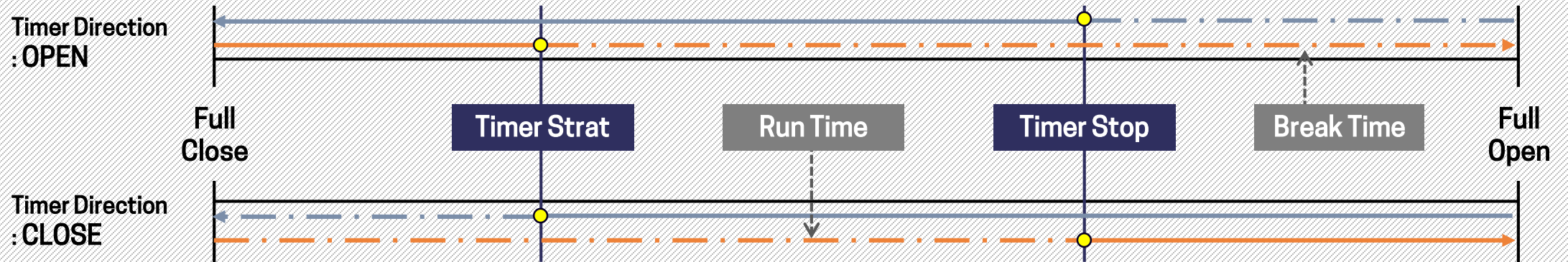
\*\* Intelligent Mode: The function to repeat reverse/forward rotation when the excessive torque value is detected.

\*\* ① Backward Distance ② Backward Times ③ Position Tolerance can be set according to customer needs.

## ALLOW SELECTION OF **VARIOUS PRODUCT STATES** THROUGH ON/OFF SIGNAL FEEDBACK

- |                                     |                           |                            |
|-------------------------------------|---------------------------|----------------------------|
| 01 Valve closing limit position     | 11 Stall                  | 21 Local State             |
| 02 Valve opening limit position     | 12 Low battery            | 22 Remote State            |
| 03 Middle position                  | 13 Manual operation       | 23 Inspecting              |
| 04 Torque trip when valve closing   | 14 Running blink          | 24 24V Error               |
| 05 Torque trip when valve opening   | 15 Stop state             | 25 Motor Running           |
| 06 Torque trip                      | 16 Open interlock signal  | 26 Motor Temperature Error |
| 07 Torque Trip when at any position | 17 Close interlock signal | 27 Sensor Error            |
| 08 Valve opening                    | 18 Interlock signal       | 28 CPU Temperature Error   |
| 09 Valve closing                    | 19 ESD Signal             | 29 Integrated Error        |
| 10 Running                          | 20 Losing phase power     |                            |

# STANDARD FUNCTION: Interrupt Timer



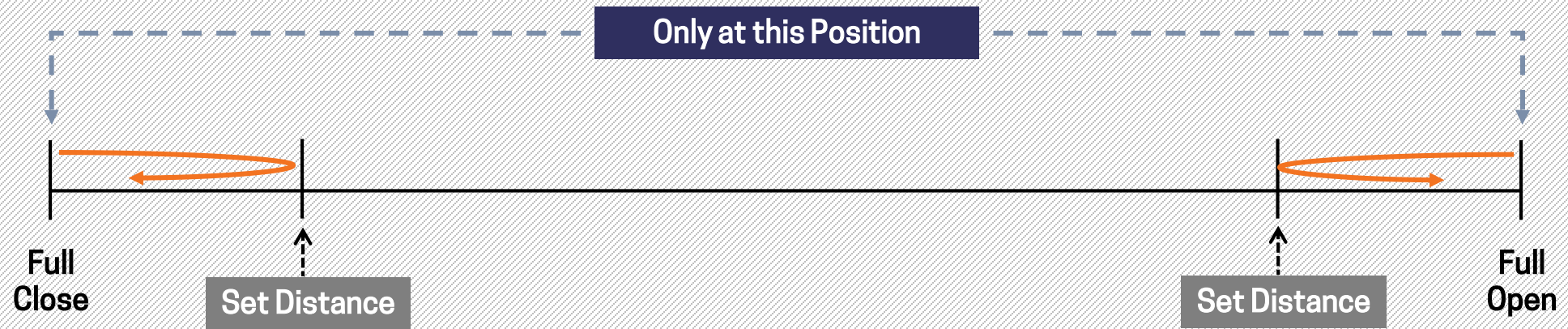
## ADJUST OPERATING TIME AND PREVENT WATER HAMMERING

\*\* Interrupt Timer: The function to repeat 'operation - stop - operation'.

\*\* ① Direction ② Start point ③ Stop point ④ Motor run time ⑤ Motor break time can be set according to customer needs.



# STANDARD FUNCTION: Auto Inspection



## **AVOID VALVE JAMMING AND PROTECT ALL THE DEVICE**

\*\* Auto Inspection: The function to automatically move a little distance in the open or close direction.

\*\* ① Interval(Unit: Day) ② Distance can be set according to customer needs.

## TEN RECENT **COMMANDS**

SAMPLES:

2018/11/16 17 : 13

Close Limit Stop

2018/11/16 14 : 25

Local Stop

•  
•  
•

## TEN RECENT **ERRORS**

SAMPLES:

2018/11/16 17 : 13

Torque Trip Off

2018/09/27 03 : 47

Low Battery On

•  
•  
•

# CUSTOMER SUPPORT AND SITE SERVICES



## INSPECTION MAINTENANCE

A fully experienced manager and skilled engineers are dispatched to provide inspection and maintenance services of all electric actuators installed at the plant considering the project and field schedule.

❖ COMPREHENSIVE CONSULTING

❖ FIELD SUPPORT

❖ COMMISSIONING AND SETTING

❖ WORKSHOP OVERHAUL

❖ REPLACEMENT

❖ VALVE RETROFIT

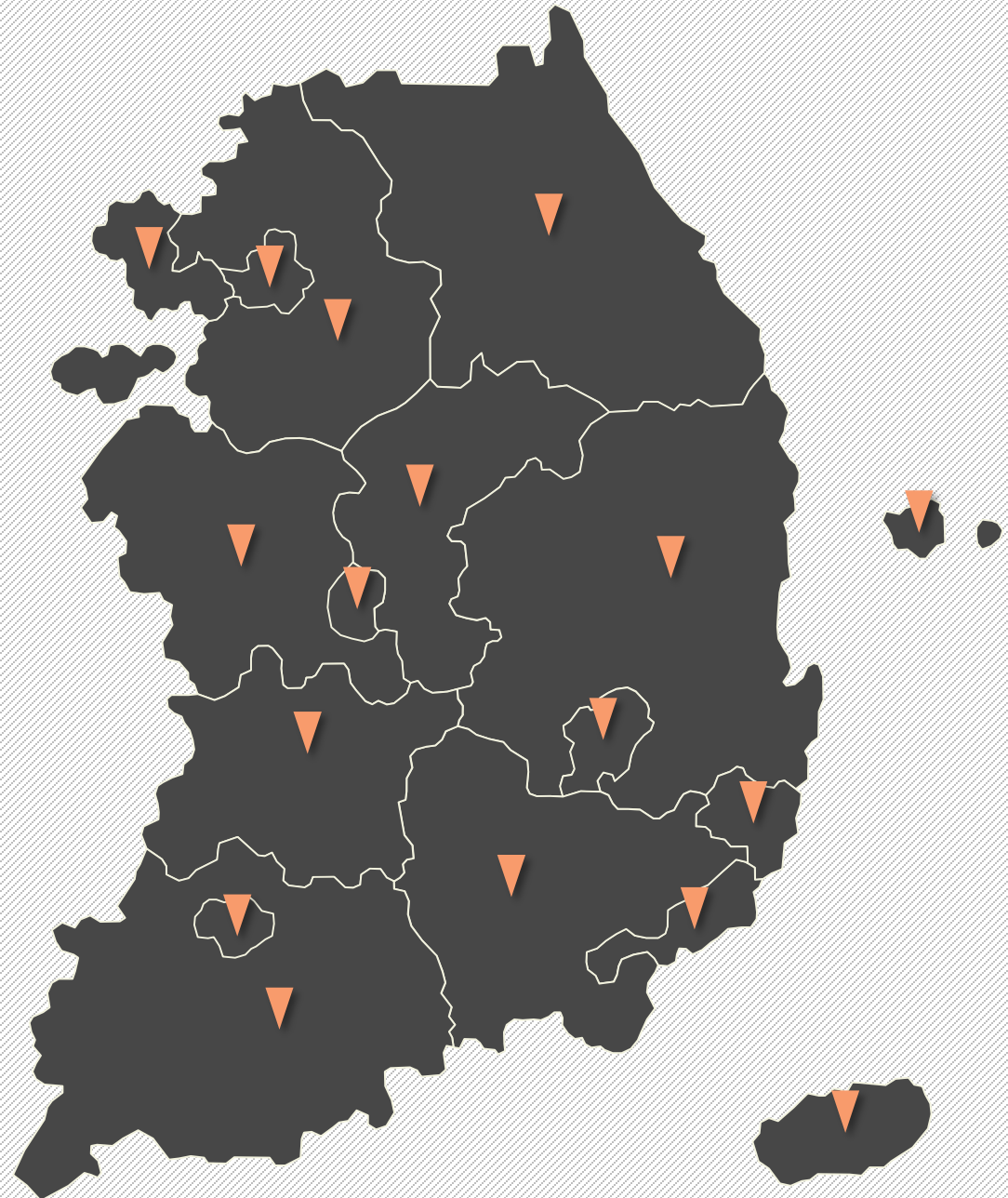
As a leader in actuation solutions, **NEWTORK KOREA**'s prime goal is to provide efficient and economical solutions to customers through continuous efforts, excellent technology, and long-term expertise, ultimately to advance as a business partner that helps drive customer growth.



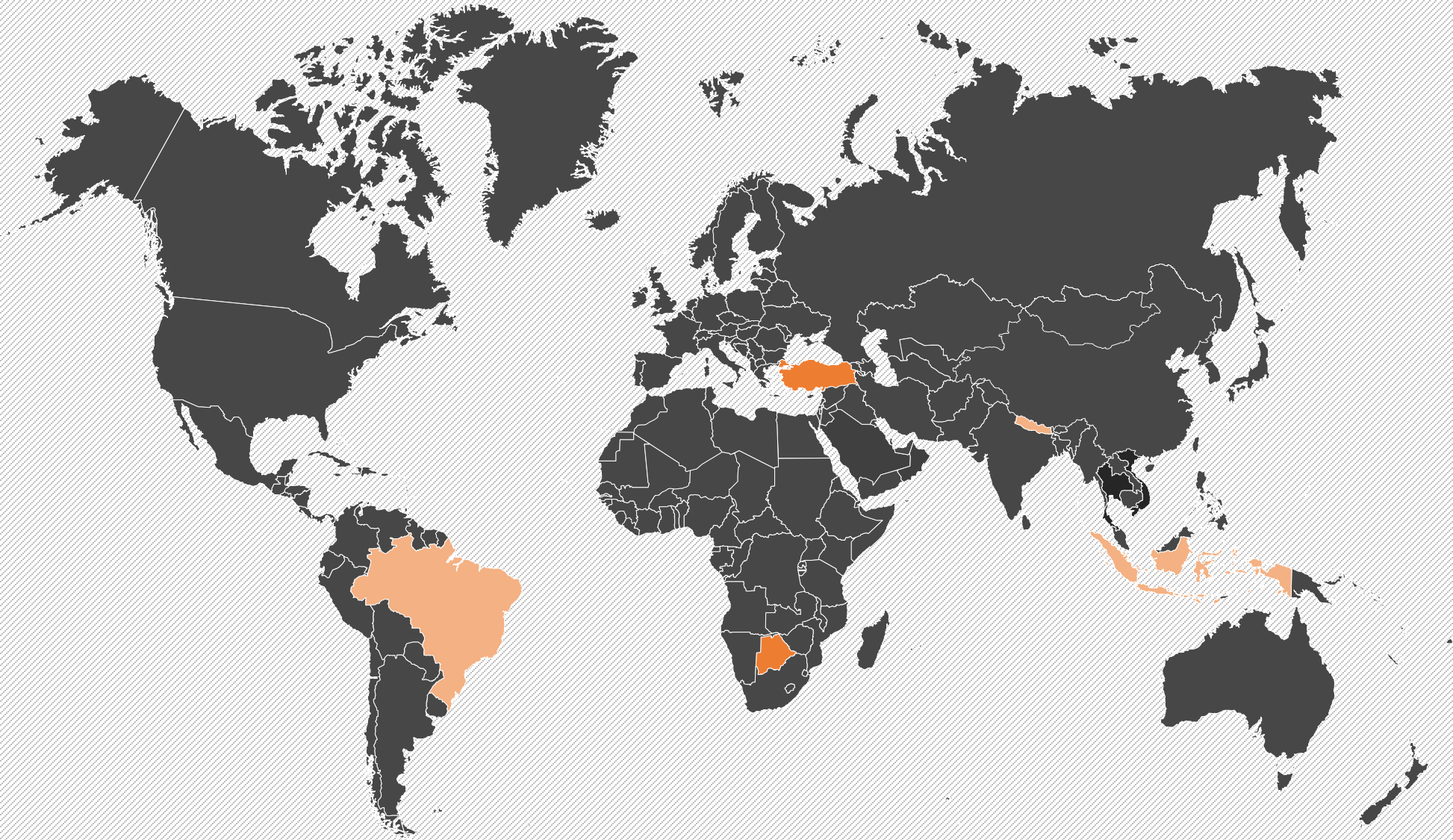


# DOMESTIC PERFORMANCE

- Korea Gas Corporation
- Korea National Oil Corporation
- Seoul Water Treatment
- Korea Rural Community Corporation
- Korea Water Resources Corporation
- Hyundai Oil Bank for MOV Maintenance Service
- Etc.



# OVERSEAS PERFORMANCE




- Indonesia
- Nepal
- Turkey
- Brazil
- Botswana


 Product       Service



LINE	CUSTOMER	PROJECT	LOCATION	YEAR	INDUSTRY
01	Korea Gas corporation	MOV replace and extra	Busan, Daegu, etc. / Republic of Korea	'14 ~ '17	Oil & Gas
02	Korea Water Resource Corporation	A lot of water and waste water plants	Wonju, Ilsan, Seoul, etc / Republic of Korea	'07 ~ '17	Water & Sewage
03	Doosan Heavy Industries & Construction	Morupule power plant Inspection	Falafel / Botswana	'16	Power Plant
04	POSCO	CSP Thermal Power Plant	Ceara / Brazil	'16	Power Plant
05	Hyundai Oilbank	Overhaul plant Inspection	Jeacheon / Republic of Korea	'12 ~ '16	Petrochemical
06	Gunjang Energy	GE-3, GE-4, Asia Cement and extra	Gunsan / Republic of Korea	'16 ~ '17	Power Plant
07	PT Krakatau POSCO	Cilegon Steel Mill	Cilegon / Indonesia	'15 ~ '17	Power Plant
08	Korea Hydro & Nuclear Power	Hanul nuclear power plant	Uljin / Republic of Korea	'13	Nuclear Energy
09	KOMIPO (PT.PLN)	Tanjung Jati B Termo electric Power Plant	Kembang / Indonesia	'18	Power Plant
10	Gwangju City	Public wastewater treatment plant	Gwangju/ Republic of Korea	'12 ~ '17	Sewage
11	Pyeongtaek water supply and sewerage office	Jian distributing reservoir, Booster station, and etc.	Pyeongtaek / Republic of Korea	'17 ~ '18	Water
12	DSME	3033 Vessel	Geoje Island / Republic of Korea	'14 ~ '17	Shipard


# REFERENCE DETAILS

TITLE	CONTANTS
DATE	2016 ~ 2017
CUSTOMER	Gunjang Energy
PROJECT	GE-4 Project
PLANT PROCESS LINE	

TITLE	CONTANTS
DATE	2017
CUSTOMER	Korea Gas Corporation
PROJECT	2017 Integrated order of MOV Actuator
GAS STATION	




# REFERENCE DETAILS

TITLE	CONTANTS
DATE	2018
CUSTOMER	KOMIPO (PT.PLN)
PROJECT	Indonesia Tanjung Jati B Termo electric Power Plant (1320MW)
POWER PLANT	


TITLE	CONTANTS
DATE	2012
CUSTOMER	Gwangju City
PROJECT	Public wastewater treatment plant
SEWAGE TREATMENT	


# REFERENCE DETAILS

TITLE	CONTANTS
DATE	2015
CUSTOMER	Korea Water Resources Corporation
PROJECT	Hwaseong purification plant
WATER TREATMENT	

TITLE	CONTANTS
DATE	2017
CUSTOMER	Korea Environment Corporation
PROJECT	Okcheon sewage treatment facilities
PUMP STATION	


# REFERENCE DETAILS


TITLE	CONTANTS
DATE	2016
CUSTOMER	Korea Water Resources Corporation
PROJECT	Tongyeong-si water supply office
MANHOLE	

TITLE	CONTANTS
DATE	2015
CUSTOMER	Hankook Seghers Co., Ltd.
PROJECT	Incinerator
DUST CONTITION	



# REFERENCE DETAILS


TITLE	CONTANTS
DATE	2015 ~ 2016
CUSTOMER	Gunjang Energy
PROJECT	GE-3 Project
WATER SPREAD CONDITION (DAMPER)	

TITLE	CONTANTS
DATE	2016
CUSTOMER	Doosan Heavy Industries & Construction
PROJECT	Botswana Power Plant
COMSSIONING INSPECTION MAINTENANCE	



# REFERENCE DETAILS

TITLE	CONTANTS
DATE	2016 ~ 2017
CUSTOMER	Korea Water Resources Corporation
PROJECT	Ilsan purification plant
REPLACE	

TITLE	CONTANTS
DATE	2016
CUSTOMER	Gunjang Energy
PROJECT	Asia cement plant
RETROFIT	



Over the past years, **NEWTORK KOREA** has developed close relationships with our clients and the client's satisfaction has been always our number one priority. Most of our customers are well-known large companies and public offices as listed earlier and we believe and have high confidence this fact proves the reliability and quality of our products.

## 사업자등록증 (법인사업자)

등록번호 : 129-86-07195

법인명(단체명) : 뉴토크코리아주식회사  
대표자 : 허응우

개업년월일 : 2007년 03월 13일 법인등록번호 : 131111-0182970

사업장소재지 : 경기도 성남시 중원구 갈매치로244번길 31 602(상대원동, 성남현대빌리6층)

본점소재지 : 경기도 성남시 중원구 갈매치로244번길 31 602(상대원동, 성남현대빌리6층)

사업의종류 : [업태] 제조업 [종목] 자동차(유압식, 전기식, 펌프양식) 부품(유압식, 전기식, 펌프양식) 자동차(유압식, 전기식, 펌프양식) 부품(유압식, 전기식, 펌프양식) 기계수리

교부사유 : 정정

사업자단위과세 적용사업자 여부 : 여( ) 부( V )  
전자세금계산서 전용메일주소 :

2015년 01월 08일  
성남세무서장 (인)




Business Registration

문서확인번호: 1500-9620-9481-2453 (신청인 : 뉴토크코리아)

### 공장등록증명(신청서)




신청인: 뉴토크코리아(주) 대표자 허응우  
소재지: 경기도 성남시 중원구 갈매치로244번길 31, 6층 602 (상대원동, 성남현대빌리)

등록내용: 공장소재지 면적 113,260㎡, 제조시설면적 192,270㎡, 부대시설면적 361,600㎡

등록조건: 등록비용·증정금 기재사항 변경내용(변경 날짜 및 내용)

2017년 7월 25일 성남시장 귀하 허응우 (서명 또는 인)

2017년 7월 25일 성남시장 (인)

Plant Registration  
1055-9620-9481-2453

## 경쟁입찰참가자격등록증

등록번호: 129-86-07195

신청인: 뉴토크코리아주식회사 (Newtorq Korea Co., Ltd.)

소재지: 경기도 성남시 중원구 갈매치로244번길 31, 602호 (상대원동, 성남현대빌리)

등록번호: 131111-0182970

입찰참가 등록물품

등록일	세부 품명	보통품명	제조	제조승인 증명서류	제조경쟁등록 등록기간		등록유�효기간	
					시작 일자	종료 일자	시작 일자	종료 일자
2015. 02. 25	3125170001	농산물기계류	Y	공정분류승인	2015/02/25	2016/02/24	2015/02/25	2016/02/24

등록사항변경

연월일	변경항목	변경사항
2015/02/25 09:00	계수발부	유: 농산물기계류 (81816260)

## 조달청장

발행기관명: 서울지방보조금  
전화번호: 02-61-0100

Manufacturing Registration



제 20170113857 호

## 벤처기업확인서

업 체 명 : 뉴토코리아(주)  
 대 표 자 : 허응무  
 소 재 지 : 경기도 성남시 중원구 갈마치로244번길 31, 602호(상대원동, 현대아이밸리)  
 확 인 유 형 : 기술평가보증기업(기술보증기금)  
 평 가 기 관 : 기술보증기금  
 유효 기 간 : 2017년12월15일 ~ 2019년12월14일

위 업체는 벤처기업육성에관한특별조치법 제25조의 규정에 의하여 벤처기업임을 확인합니다.

2017 년 12 월 15 일

**KIBO** 기술보증기금 이사장

**Venture Business**  
20170113857

Certificate No : 180601 - 00095

## CERTIFICATE OF Inno-Biz

Company : NEWTORK KOREA CO., LTD.  
 C E O : HUH EUNG MOO  
 Address : 31, GALMACH-RO 244BEON-GIL, JUNGWON-GU, SEONGNAM-SI, GYEONGGI-DO, REPUBLIC OF KOREA  
 Validity of Certificate : 2018. 02. 08 ~ 2021. 02. 07

This is to certify that the above mentioned company is a Technology Innovation-Oriented Small and Medium Enterprise(Inno-Biz) selected by the Ministry of SMEs and Startups in accordance with the Act on the Promotion of Technology Innovation of Small and Medium Enterprises.

FEB 8, 2018

minister

Ministry of SMEs and Startups  
Republic of Korea

**Innovation Business**  
180601-00095

[문서번호: fmqI-gYmv-GY0t-Mxaa] [발급일자: 2017년 03월 27일]

제 2017111587 호

## 기업부설연구소 인정서

- 연 구 소 명 : 뉴토코리아(주) R&D CENTER  
[소속기업명: 뉴토코리아(주)]
- 소 재 지 : 경기도 성남시 중원구 갈마치로244번길 31 602호(상대원동, 성남현대밸리6층)
- 신고 연월일: 2017년 03월 21일  
※ 유효기간: 벤처기업 만료일(2017년 12월 14일까지)

### 미래창조과학부

「기초연구진흥 및 기술개발지원에 관한 법률」 제14조, 같은 법 시행령 제16조제1항 및 제27조제1항에 따라 위와 같이 기업부설연구소로 인정합니다.

2017년 3월 24일

한국산업기술진흥협회

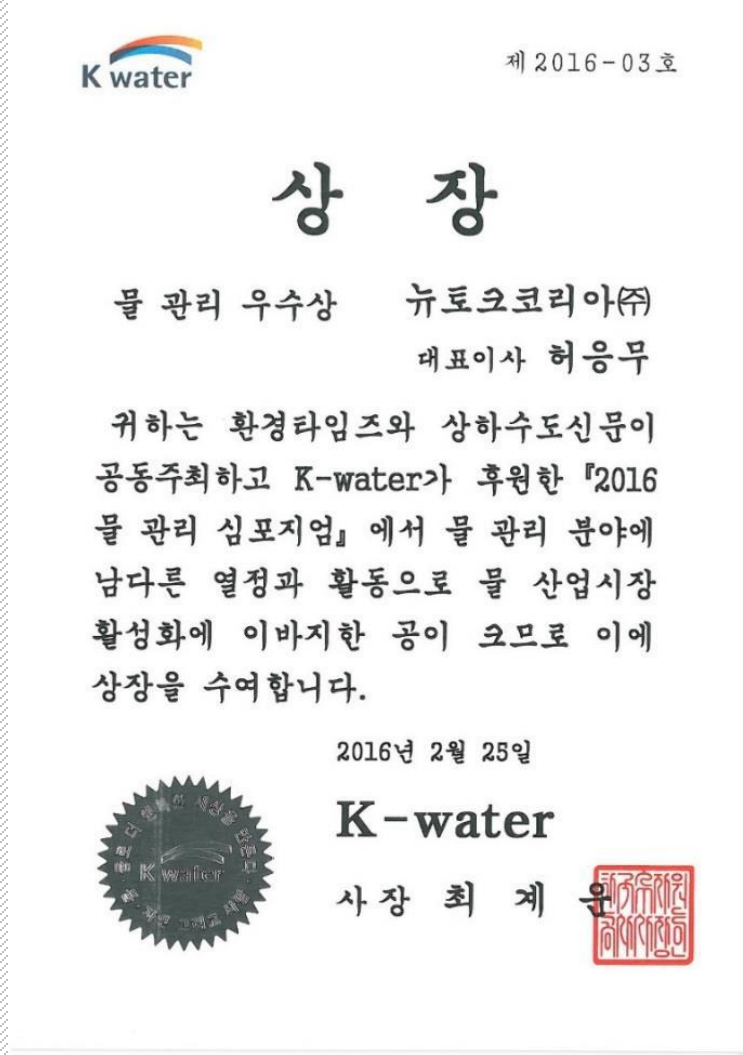
※ 한국산업기술진흥협회는 발급요령서 'http://www.rnd.or.kr' 및 '문서번호'를 검색하여 문의사항을 문의하실 수 있습니다.

**Research Institute**  
2017111587

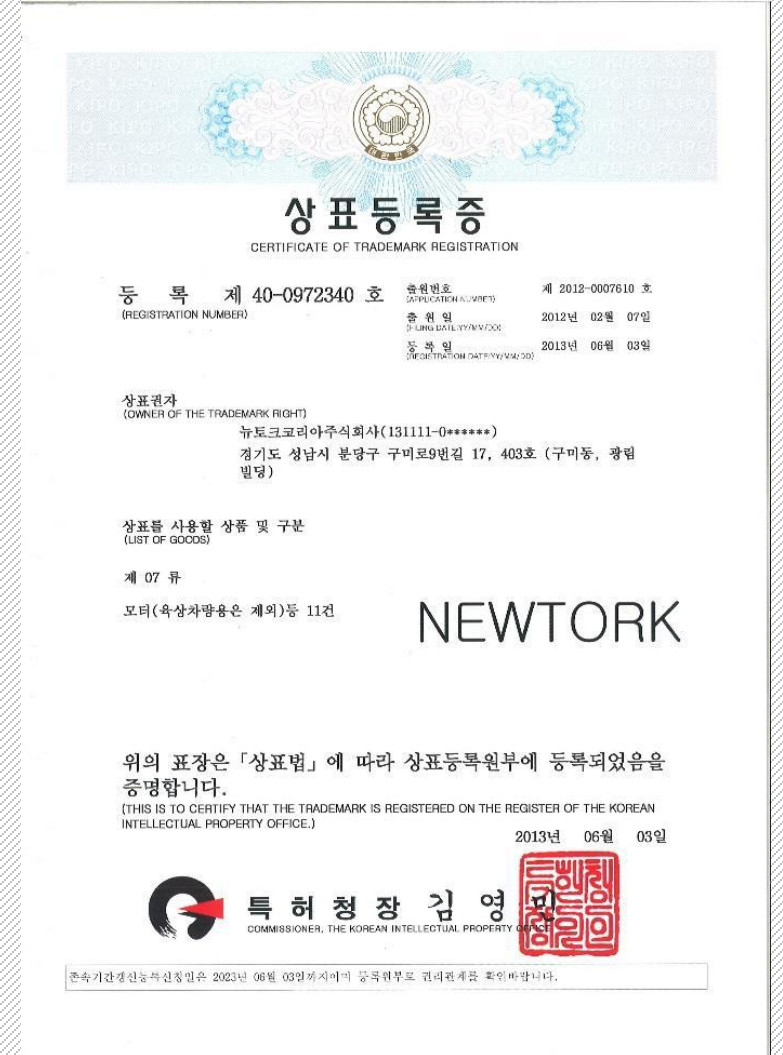




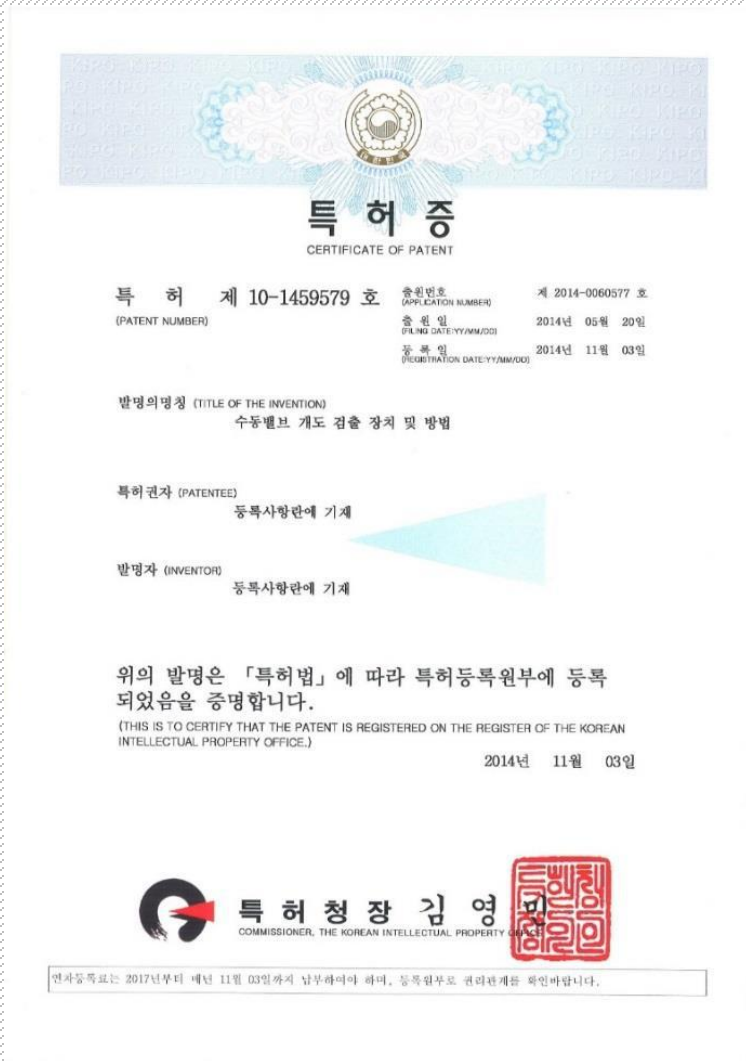
**Prime minister citation for product development**  
199136



**A certificate of Merit**  
2016-03



**Trademark Registration**  
40-9072340



A patent for manual valve opening degree detecting apparatus and method thereof  
10-1459579



A patent for actuator having detecting and removing function for foreign substance  
10-1547817



A patent for check valve opening and closing characteristic monitoring and diagnosing devices 10-1589127



INSTITUTE OF GLOBAL CERTIFICATION

  
 Institute of Global Certification  
 Management System Certification Body No. MSCB-105

## CERTIFICATE

No. 18-AC-0076

This is to certify that the Quality & Environmental Management System of

**NEW TORK KOREA CO., LTD.**

of

(#602, Hyeondae I Valley) 31, Galmachi-ro 244beon-gil, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea

Company Reg. No.: 129-86-07195

has implemented and documented a quality and environmental management system in compliance with the requirements of the standard

### ISO 9001:2015 & ISO 14001:2015

for

Design, Development, Production and Servicing of Actuator

The certificate is issued on the basis of the results mentioned in the pertinent audit report. Validity of the certificate is conditionally limited by positive results of surveillance audits, which the certified company committed to undergo.

This certificate can be invalid if the certificate holder does not fulfill the conditions set out in the certification agreement.

Initial issue date:	Feb. 17, 2015
Re-issue date:	Feb. 07, 2018
Expire date:	Feb. 16, 2021




  
 Betty Kim  
 Head of Certification Body

No. 1005, Byacksan Digital Valley 3rd, Digital-Ro 271, Guro-Gu, Seoul, Korea  
www.igiccert.org

**ISO 9001:2015 and ISO 14001:2015**  
18-AC-0076

OHS Management System

## CERTIFICATE OF REGISTRATION

### OHS Management System

**NEWTORK KOREA CO., LTD.**

(6F, Hyundai I Valley) Rm.602 #31, Galmachi-ro 244beon-gil, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea

KIC hereby certifies that the management system of the above organization conforms with the requirement of the following standard :

### OHSAS 18001:2007

This certificate is valid for the following product or service ranges :

### Design, Development, Production and Service of Automatic Valve Operators

Certificate NO. : OSC0052  
Valid Until Date : 22-October-2020  
Certificate Issue Date : 23-October-2017  
Original Certificate Date : 23-October-2017



**KOREA INT'L STANDARDS CERTIFICATION**

This certificate is intellectual property of KIC Co., Ltd. and can be maintained through surveillance and renewal audits. If you can not maintain the certification, this certificate shall be returned to KIC Co., Ltd.



This certificate remains the property of KIC Co., Ltd. and is bound by the conditions of contract.

Authorized by:   
Dong Chul Won, President

KIC Co., Ltd. (Cheonan) 2F, 18, Gukhoe-daro 86-gil, Yeongtong-gu, Seoul, Korea TEL: 02-798-0706 FAX: 02-798-0708

**OHSAS 18001:2007**  
OSC0052

ZERTIFIKAT CERTIFICATE CERTIFICADO CERTIFICAT

## Attestation of Compliance

No. N5A 003211 0001 Rev. 00

**Holder of Certificate:** NEWTORK KOREA CO., LTD.  
#602 Hyeondae I Valley  
31, Galmachi-ro, 244beon-gil, Jungwon-gu, Seongnam-si, Gyeonggi-do 13212  
REPUBLIC OF KOREA

**Product:** Actuators  
(Electric Actuator)


**Model(s):** NT101, NT102, NT103, NT104, NT1-04Z, NT105, NT1-05Z, NT106, NT1-06Z, NT107, NT108, NT109, NT109.1, NT110, NT110G, NT1M-01, NT1M-02, NT1M-03, NT1M-04, NT1M-04Z, NT1M-05, NT1M-05Z, NT1M-06, NT1M-06Z, NT1M-07, NT1M-08, NT1M-09, NT1M-09.1, NT1M-10, NT1M-10G

<b>Parameters:</b>	Width:	Max. 1003 mm
	Height:	Max. 494 mm
	Depth:	Max. 680 mm
	Material:	Aluminium
	Degree of protection:	IP68 (15 m, 90 h)

**Tested according to:** EN 60529:1991/A2:2013

This Attestation of Compliance is issued on a voluntary basis for electrical equipment below the voltage limits of Low Voltage Directive 2014/35/EU. The essential requirements are fulfilled accordingly based on the technical specifications applicable at the time of issuance. It refers only to the particular sample submitted for testing and certification. See also notes overleaf.

**Test report no.:** 077-1270018-000

**Date,** 2018-07-17   
(Young-Chul Yu)

Page 1 of 1  
Other relevant European directives have to be observed. If they require CE marking, it may be affixed on the product after preparation of the necessary technical documentation as well as the EU declaration of conformity.

TUV SUD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

**CE - IP68 (15M, 90Hr)**  
N5A 003211 0001

산업재해예방  
안전보건공단

인증번호 : 제 18-26-C-204 호


## 위험성평가 인정서

사업장명 : 뉴토크코리아(주)  
대표자 : 허응무  
소재지 : 경기도 성남시 중원구 갈매치로244번길 31 6층 602호 (현대아이빌리)  
유효기간 : 2018.12.19 ~ 2021.12.18

귀 사업장에 대한 위험성평가 수준을 확인한 결과 위험성평가 인정 기준에 적합하므로 위험성평가 우수사업장으로 인정합니다.

2018 년 12 월 19 일

한국산업안전보건공단 경기동부지사장



**Process risk evaluation**  
18-26-C-204

인증번호 : 제 83719 호

CLEAN WORKPLACE  
깨끗한職場

## CLEAN 사업장 인정서

사업장명 : 뉴토크코리아(주)  
대표자 : 허응무  
소재지 : 경기도 성남시 중원구 갈매치로244번길 316층 602호 (현대아이빌리)  
인정일자 : 2016년 6월 8일 (유효기간 : 인정일로부터 3년)

귀 사업장을 안전하고 쾌적한  
'CLEAN 사업장'으로 인정합니다.

2016년 6월 8일

한국산업안전보건공단 이사장



발급사유 : 최초인정 최초인정일자 : 2016년 6월 8일

**Clean and Safe Factory**  
83719

인증번호 : 제 2018-14-031 호


일·생활균형 캠페인 참여확인서

기업명 : 뉴토크코리아(주)  
소재지 : 경기도 성남시 중원구 갈매치로244번길 31, 602호  
참여형태 : 참여기업  
유효기간 : 2018. 7. 31. ~ 2020. 7. 30.

귀 기업은 일하는 방식과 문화를 개선하여 기업의 생산성을 높이고 근로자의 일과 생활의 균형을 도모하는 일·생활균형 캠페인에 참여하는 기업임을 확인합니다.

2018 년 7 월 31 일

중부지방고용노동청 성남지청장



**Work-life balance campaign**  
2018-14-031



**품목별 원산지인증수출자 인증서**  
**CERTIFICATE OF PRODUCT-SPECIFIC APPROVED EXPORTER**

○ 상 호 : 뉴토코리아(주)  
 (Name of Company) (NEWTORR KOREA CO., LTD.)  
 ○ 주 소 : 13212 경기도 성남시 중원구 갈매치로244번길 31 (상대원동)  
 (Address)  
 (31, Galmachi-ro 244beon-gil, Jungwon-gu, Seongnam-si, Gyeonggi-do, Republic of Korea)

○ 대 표 자 : 허응무  
 (Representative) (HUH EUNG MOO)  
 ○ 인 증 번 호 (Customs Authorisation No.) : 010-18-200043


**원산지인증 품목내역(List of Certified Products)**

품목번호(4단위) [HS No. (4-digit)]	자유무역협정 명 (Name of FTA)	인증유효기간 (Validity Period)
8481	한-아세안	18-01-31-23-01-30

위 업체를 「자유무역협정의 이행을 위한 관세법의 특례에 관한 법률」 제12조1항에 따라 품목별 원산지인증수출자로 인증합니다.  
 We hereby certify that the above company is authorised as "Product-specific approved exporter" in accordance with Article 12.1 of 'The Act on Special Cases of the Customs Act for the Implementation of Free Trade Agreements'.

2018년 01월 31일  
 (2018 / 01 / 31)

서울세관장  
 Head of SEOUL Customs



**Product-specific Approved Exporter**  
 010-18-200043



This is to certify that **Newtorr Korea Co., Ltd.**  
 represented by **Huh Eung Moo** has been designated as a  
**Promising Export Firm** by the Small & Medium  
 Business Administration, Republic of Korea

Certificate No : 2017- 12 Certified Date : 2017. 7. 17  
 Issue Date : 2017. 7. 17 Expiry Date : 2019. 7. 16

*Youngsin Kim*  
 KIM YOUNGSIN  
 Authorized Local Signatory

**Gyeonggi Export Center, SMBA**

**A certificate of Promising Export Firm**  
 17Gyeonggi-12

Global Inspiration  
 세계속의 경기도

제2018-0018호

**경기가족친화 일하기 좋은기업 인증서**


경기가족친화  
일하기 좋은기업  
GYEONGGI  
GOOD WORKS FIRM

회 사 명 : 뉴토코리아(주)  
 소 재 지 : 성남시  
 대 표 자 : 허응무  
 인증기간 : 2018. 12. 14. ~ 2021. 12. 13.

귀 기업은 일·가정 양립 지원 및 가족친화제도를 모범적으로 운영하여 일하는 재미가 넘치는 훌륭한 일터 구현에 귀감이 되는 기업으로 선정되었기에 경기가족친화 일하기 좋은 기업으로 인증합니다.

2018년 12월 14일

경 기 도 지



**GGWP Certificate**  
 2018-0018



With over 30 years experience in the valve and actuator industries, **NEWTORK KOREA** has expertise and specialist knowledge of every aspect of electric actuators. Also, we understand the value of prompt and punctual customer site services. That is why we aim to supply our customers with superior actuation solutions by developing functions designed for convenience of users and providing high quality innovative products and exceptional technical skill on time, every time.





# COMPARISON

	NEWTORK (NTI)	AUMA (SA)	ROTORK (IQ)
<b>Housing</b>	- Aluminum die casting (Light and resistant to corrosion)	- Aluminum die casting + Plastic (Risk of breakage)	- Aluminum die casting (Light and resistant to corrosion)
<b>Design</b>	- Compact	- Compact	- Compact
<b>Enclosure</b>	- WT / IP68 (15M, 90Hr: prime grade) - Double O-ring sealing method	- Standard: WT / IP65 - Option: WT / IP67, IP68	- IP68(7M, 72Hr) - Double O-ring sealing method
<b>Damp-proof heater</b>	- Sealed type: don't need to open the cover when set the product - Self-heating: generated from electronic components	- Need to open the cover when set the product. - Must need the damp-proof heater because of permeated humidity inside	- Sealed type: don't need to open the cover when set the product - Self-heating: generated from electronic components
<b>Lubricating type</b>	- Oil, semi-permanent	- Grease	- Oil, semi-permanent
<b>Motor</b>	- Class F insulation - High starting torque	- Class F insulation	- Class F insulation - High starting torque
<b>Gearing</b>	- Phosphor bronze worm wheel : long life time - Efficient manual operation :motor shaft and worm wheel are connected directly.	- It is not efficient because super gear and worm are connected as multistep.	- Phosphor bronze worm wheel : long life time - Efficient manual operation :motor shaft and worm wheel are connected directly.
<b>Temperature</b>	- 30°C ~ 70°C (-22°F ~ 158°F)	- 25°C ~ 80°C (-13°F ~ 176°F)	- 30°C ~ 70°C (-22°F ~ 158°F)
<b>Handwheel</b>	- Top - Side(Optional)	- Side	- Top - Side(Optional)



# COMPARISON

	NEWTORK (NTI)	AUMA (SA)	ROTORK (IQ)
<b>Manual Operating</b>	<ul style="list-style-type: none"> <li>- 1:1 connection: takes less time due to small number of turns</li> </ul>	<ul style="list-style-type: none"> <li>- Multiplex gear: easy to control, takes longer time due to a lot of number of turns</li> </ul>	<ul style="list-style-type: none"> <li>- 1:1 connection: takes less time due to small number of turns</li> </ul>
<b>Local positioner</b>	<ul style="list-style-type: none"> <li>- Digital type</li> <li>- Easy to check the exact valve position, torque value in unit %.</li> <li>- Displayed the condition of product such as current command, status, and errors in real time.</li> </ul>	<ul style="list-style-type: none"> <li>- Analog type: It is hard to check exact valve position.</li> <li>- (Only 3 position –Close / Mid / Open)</li> </ul>	<ul style="list-style-type: none"> <li>- Digital type</li> <li>- Easy to check the exact valve position, torque value in unit %.</li> <li>- Displayed the condition of product such as current command, status, and errors on a separate screen.</li> </ul>
<b>Power input</b>	<ul style="list-style-type: none"> <li>- Terminal block type</li> <li>- Easy to connect wiring</li> </ul>	<ul style="list-style-type: none"> <li>- Terminal block type (Small)</li> <li>- Hard to connect</li> <li>- Confined inside of terminal block</li> <li>- Pin type: vulnerable to vibration</li> </ul>	<ul style="list-style-type: none"> <li>- Terminal block type</li> <li>- Easy to connect wiring</li> </ul>
<b>Switch contact</b>	<ul style="list-style-type: none"> <li>- Electronic switch</li> <li>- "A", "B" contact changeable</li> <li>- Changeable contact function: 25 different type</li> <li>- Set by remote controller</li> </ul>	<ul style="list-style-type: none"> <li>- Rotary switch: less accuracy</li> <li>- Should change gear in accordance with the number of turns due to the limited valve turns</li> <li>- Snap-on operation</li> <li>- Unchangeable "A", "B" contact</li> </ul>	<ul style="list-style-type: none"> <li>- Electronic switch</li> <li>- "A", "B" contact changeable</li> <li>- Changeable contact function: 25 different type</li> <li>- Set by remote controller</li> </ul>
<b>Operation system</b>	<ul style="list-style-type: none"> <li>- Enable changeover OPEN and CLOSE without STOP</li> <li>- Self-diagnostic: Easy to figure out the problem</li> </ul>	<ul style="list-style-type: none"> <li>- Need to STOP for changeover OPEN and CLOSE</li> <li>- Hard to figure out the</li> </ul>	<ul style="list-style-type: none"> <li>- Enable changeover OPEN and CLOSE without STOP</li> <li>- Self-diagnostic: Easy to figure out the problem</li> </ul>



# COMPARISON

	NEWTORK (NTI)	AUMA (SA)	ROTORK (IQ)
<b>Positive and negative phase syncrophase</b>	<ul style="list-style-type: none"> <li>- A built in an auto-syncrophase: the rotor operates correct direction even when the supply power R, S, T phase is miss-connected.</li> </ul>	<ul style="list-style-type: none"> <li>- In case that one of R, S, T phase is incorrectly connected, motor doesn't rotate.</li> </ul>	<ul style="list-style-type: none"> <li>- A built in an auto-syncrophase: the rotor operates correct direction even when the supply power R, S, T phase is miss-connected to the product.</li> </ul>
<b>Motor protective function</b>	<ul style="list-style-type: none"> <li>- A built in thermostat (To prevent overheating of motor)</li> <li>- A built in an auto-syncrophase</li> <li>- To prevent overvoltage and thunderstroke</li> <li>- To prevent valve jam</li> </ul>	<ul style="list-style-type: none"> <li>- A built in thermostat</li> <li>- To prevent valve jam</li> </ul>	<ul style="list-style-type: none"> <li>- A built in thermostat (To prevent overheating of motor)</li> <li>- A built in an auto-syncrophase</li> <li>- To prevent overvoltage and thunderstroke</li> <li>- To prevent valve jam</li> </ul>
<b>Position transmitter (4-20mA)</b>	<ul style="list-style-type: none"> <li>- Included in standard item (No charge)</li> <li>- All in one with main card</li> <li>- Easy to control</li> </ul>	<ul style="list-style-type: none"> <li>- Optional item</li> <li>- Resistive type or converter</li> <li>- Required to repeat full open and close for control precisely</li> <li>- Expensive</li> </ul>	<ul style="list-style-type: none"> <li>- Optional item</li> <li>- Easy to control</li> <li>- Expensive</li> </ul>
<b>Control for position and torque switch</b>	<ul style="list-style-type: none"> <li>- A sensor detects the number of turns precisely and enables detailed position.</li> <li>- Enable to control the torque value as the unit % from 40%(Min) to 100%(Max).</li> </ul>	<ul style="list-style-type: none"> <li>- Counter gear method: mechanical control is not precise</li> </ul>	<ul style="list-style-type: none"> <li>- A sensor detects the number of turns precisely and enables detailed position.</li> <li>- Enable to control the torque value as the unit % from 40%(Min) to 100%(Max).</li> </ul>



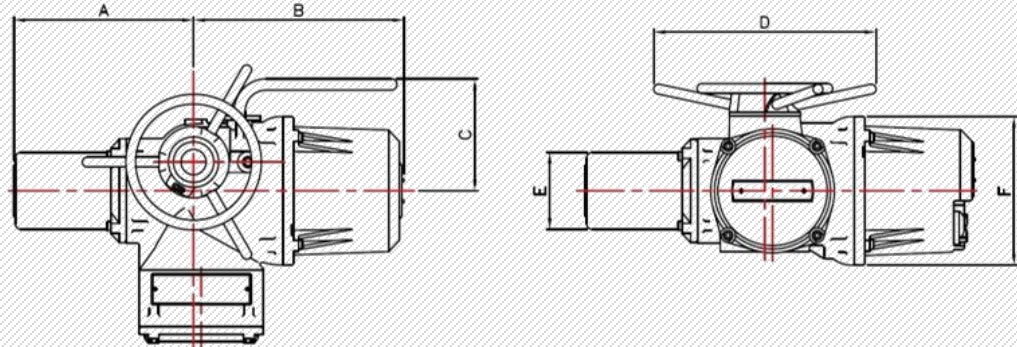
# MANUFACTURING PROCESS FLOW CHART

	PROCESS	EQUIPMENT REQUIRED	DESCRIPTION	QUALITY CONTROL CHECK
1	Design	Computer	Custom-made Design	- Checking the validity of the specifications required by the customer
2	Warehousing and Inspection	Forklift	Warehousing of raw material	- Practicing FIFP Method - Checking of raw material handing / storage condition - Preparation of acceptance test report - Tagging the identification mark on the raw material
3	Machining	Slotter, Drill, Taping Machine, Marking Machine, Compressor	Bush Key and Nameplate machining	- Checking that the customer's requirements are well reflected - Inspection that the machining is finished neatly
4	Assembling	Jig, Hammer, Compressor, Tools	Bearing, Oil Seal, Center Column, Gears, Terminal, Cables, Motor, Boards, Base, Handwheel, and Nameplate Assembling	- Manufacturing in compliance with the procedures - Using a tool that fits each part of the component size
5	Test and commissioning	Test Bench, Voltage Regulator, AC/DC and Insulation Resistance Tester	Main Power Supply, Contact, Current Position Transmitter, Torque and Opening Test	- Inspection and checking the difference between Actual dimension and Design value - Determining the inspection product whether acceptable or failed
6	Packing	Forklift, Wrapping Machine	Products packing and shipping mark tagging	- Inspection the shipping mark and packing condition - Complying with the prescribed packing procedure
7	Dispatching	Forklift	Products dispatching	- Checking the impacts of the package - Preparation of the factory book



# INSPECTION AND TEST PLAN

LINE	TEST ITEM	TEST REQUIREMENTS	TEST RESULT
1	Appearance	No harmful defect in structure, assembly condition, painting, and extra	Qualified / Not qualified
2	Dimension	Within $\pm 1\%$ of difference between approval drawing	Qualified / Not qualified
		A	mm
		B	mm
		C	mm
		D	mm
		F	mm
3	Power Type	The power accordance with required specification	220V 380V 440V
4	Internal Power Output	Within 20 ~ 32VDC	VDC
5	Insulated Resistance	Insulated Resistance between power board contactor and inside of Body $\geq 100M\Omega$	$M\Omega$
6	Local control of valve open/close	Local control test of valve open/close $\geq 5$ times	Qualified / Not qualified
7	Remote control of valve open/close	Remote control test of valve open/close $\geq 5$ times	Qualified / Not qualified
8	Torque of closed valve	Within $\pm 10\%$ of difference with standard (100% and 40% of rated torque is loaded with corresponding voltage)	40% : Nm 100% : Nm
REMARK			





# INSPECTION AND TEST PLAN

LINE	TEST ITEM	TEST REQUIREMENTS	TEST RESULT
9	Torque of open valve	Within $\pm 10\%$ of difference with standard (100% and 40% of rated torque is loaded with corresponding voltage)	40% : Nm 100% : Nm
10	RPM	Within $\pm 15\%$ of difference with standard	RPM
11	Indicated light color	Full Open - Red, Full Close - Green, Operating - Yellow	Qualified / Not qualified
12	Local / Remote Switch	Local / Remote switch test $\geq 5$ times	Qualified / Not qualified
13	Shaft rotation direction	Open - CCW, Close - CW	Qualified / Not qualified
14	Manual / Electric Clutch	Manual / Electric Clutch test $\geq 5$ times	Qualified / Not qualified
15	Contact	Full Close: S1 closed	Qualified / Not qualified
		Full Open: S2 closed	Qualified / Not qualified
		Torque Trip: S3 closed	Qualified / Not qualified
		Except for Full Open: S4 closed	Qualified / Not qualified
16	Remote interlock control	When remote interlock signal is input, stop and reverse operation	Qualified / Not qualified
17	Analogue Output	Within $\pm 2\%$ of difference with Pull Open - 20mA, Pull Close - 4mA	Full Open : mA Full Close : mA
REMARK			

# OPERATING TEST REPORT

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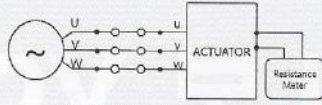
## 시험 결과

성적서 번호 : T2016-01781

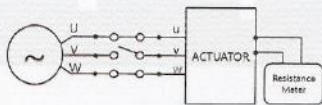
1-1. 시험결과 : Alarm terminal 저항

시험 항목	단위	시험 결과	
Alarm terminal 저항	Ω	U-v, V-v, W-w Close	9.99 MΩ
		U-v, W-w Close V-v Open	0.3 Ω

- 시험방법 : 1. 시료를 삼상(U, V, W) 380 V 전원 연결.  
2. 모든 단자가 연결된 상태(Close)의 Alarm terminal 저항을 측정.  
3. 임의의 단자(V-v)를 Open하여 Alarm terminal의 저항을 측정.



<그림 1> U-v, V-v, W-w Close



<그림 2> U-v, W-w Close, V-v Open

**Alarm terminal resistance Test**



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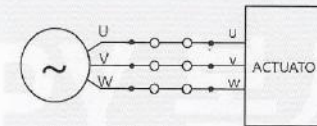
## 시험 결과

성적서 번호 : T2016-01781

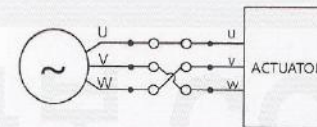
1-2. 시험결과 : 자동 시험-1

시험 항목	단위	시험 결과	
공급 전원 상에 따른 밸브 닫힘	-	U-u, V-v, W-w	닫힘
		U-u, W-w, V-v	닫힘
		W-u, U-v, V-w	닫힘

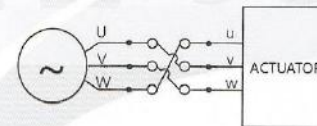
- 시험방법 : 1. 삼상(U, V, W) 380 V 공급 전원을 시료의 단자(u, v, w)를 변경하여 연결.  
2. 밸브 닫힘(Close)여부를 Actuator의 지시부를 통해 확인.



<그림 3> U-u, V-v, W-w



<그림 4> U-u, W-w, V-v



<그림 5> W-u, U-v, V-w

**Auto-Syncrophase Test**





# OPERATING TEST REPORT

## 시험 결과

성적서 번호 : T2016-01781

1-3. 시험결과 : 작동 시험-2

시험 항목	지시부 설정값	단위	시험 결과
설정된 Close Torque 값에서 역진행(밸브 열림)	Close Torque 40 % Backward Times 4 Backward Distance 10 % Postolerance 1 %	-	이상없음
역진행(밸브 열림) 횟수		-	4회
역진행(밸브 열림) 비율		%	11
Torque Stop 작동		-	이상없음
지시부 표시		-	이상없음

- 시험방법 : 시료의 지시부(LCD 창)을 통해 설정값을 설정하고, 밸브 내 이물질(길이 300 mm, 지름 30 mm)을 삽입하여 시험함.
- 비 고 : 1. 밸브의 역진행이라 함은 밸브 닫힘(Close) 동작에서 밸브 내 이물질 감지 시, 밸브가 열림(Open) 동작을 말함.  
2. 역진행 횟수는 밸브 열림 동작하는 횟수임.  
3. 역진행 비율은 밸브 열림 동작으로 인해 변화된 개도를 값임.  
4. Torque Stop은 설정된 횟수와 비율만큼 역진행 동작 이후, 밸브 작동이 멈추는 동작임.  
5. 지시부 표시는 밸브 작동이 정지된 후 지시부(LCD 창)의 상태 표시(Torqtrip)를 나타냄.  
6. 설정값, 역진행, 밸브 동작, 개도를 등은 Actuator의 지시부(LCD 창)으로 확인함.

### Intelligent Mode Test



## 시험 결과

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2. 시료사진



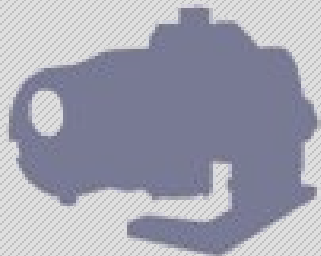
3. 사용장비

사용장비명 Description	제조회사 및 형식 Manufacturer & Model	기기번호 Serial Number	차기교정일자 Date of next Cal.	교정기관 Cal. Institute
교류 전력계, 클램프형 전류저/전압계	HIOKI / 3169-20	110820775	2016. 07. 01	한국캘랩(주)
DIGITAL MULTIMETER	FLUKE / 87 V	26730010	2016. 05. 29	한국캘랩(주)

끝







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**Thank you for your time.**

