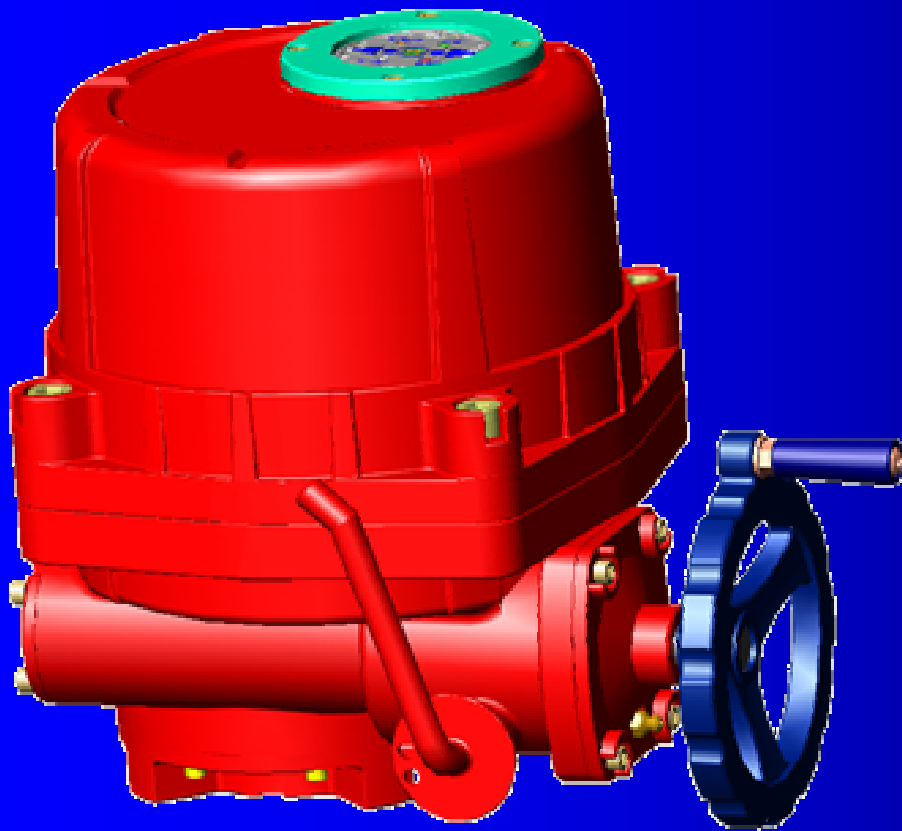
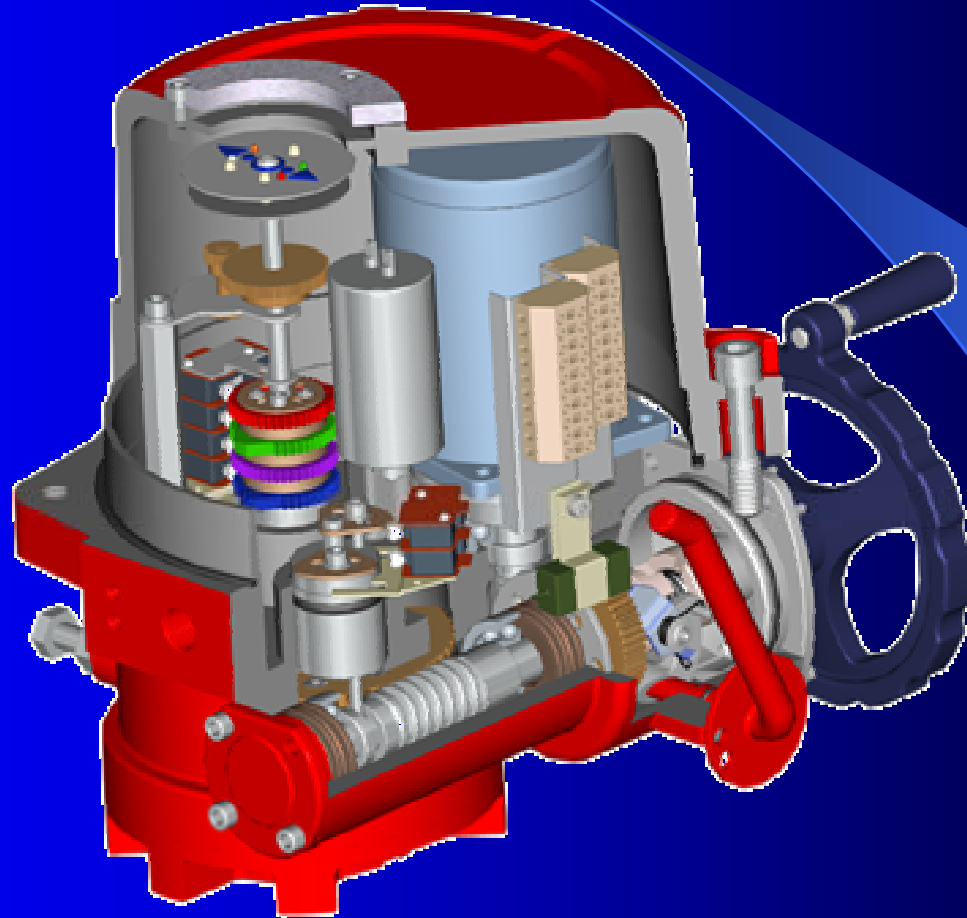


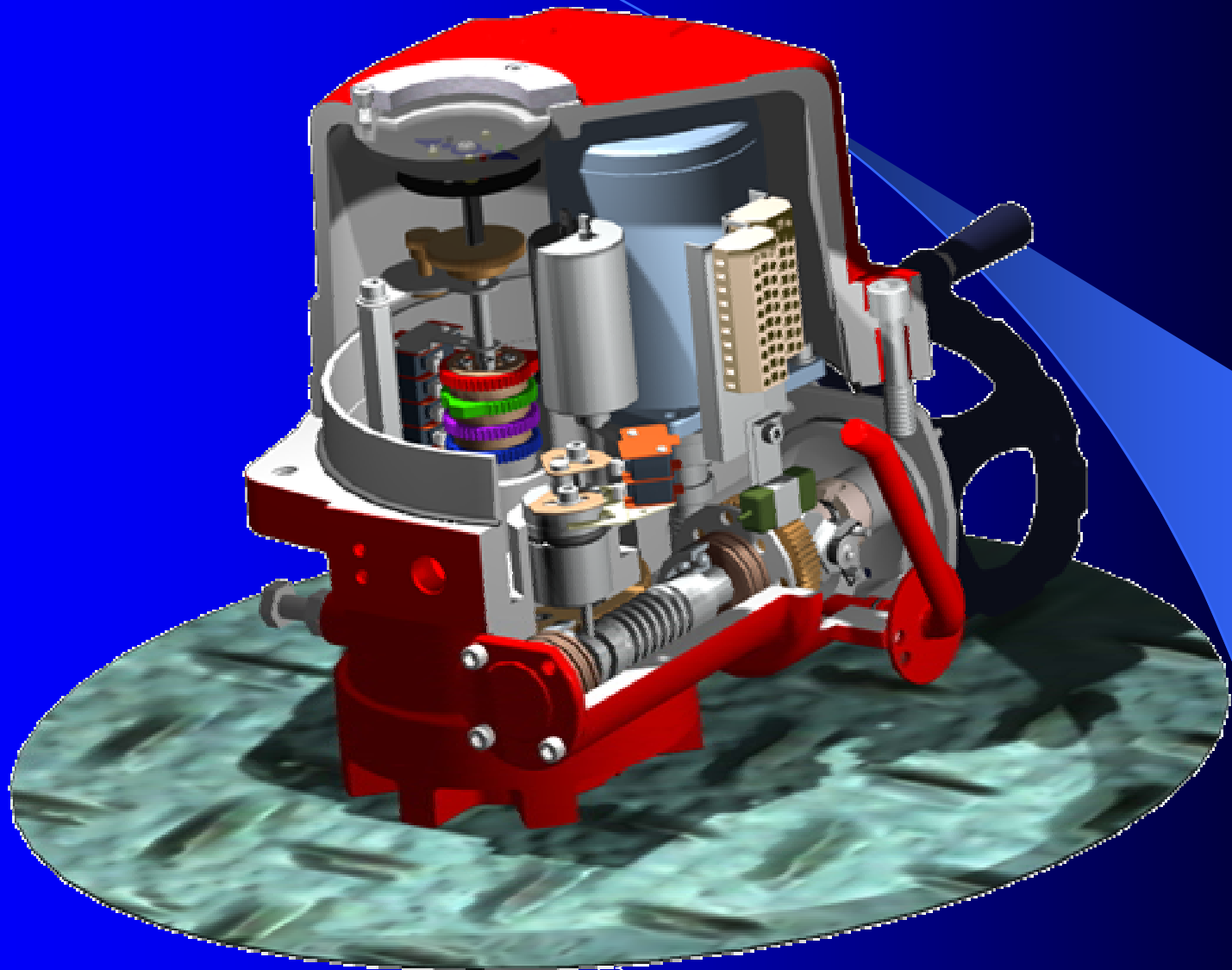
ELECTRIC QUARTER TURN ACTUATOR



STRUCTURE



STRUCTURE



performance

Model	Torque(kg-m)	Oper. Time 60/50Hz	Rate 110/220 1PH, 380/440 3PH			
HQ-008	8	13/16	1.20	0.45	N/A	N/A
HQ-015	15	21/25	1.75	0.71	0.30	0.30
HQ-020	20	21/25	1.78	0.73	0.32	0.32
HQ-030	30	26/31	3.90	1.50	0.56	0.57
HQ-050	50	26/31	4.05	1.55	0.58	0.59
HQ-080	80	31/37	4.70	2.15	0.84	0.78
HQ-120	120	31/37	4.90	2.25	0.88	0.82
HQ-200	200	93/112	4.70	2.15	0.84	0.78
HQ-300	300	93/112	4.90	2.25	0.88	0.82

Standard Specification

ENCLOSURE	: WATERTIGHT ENCLOSURE IP67, NEMA 4 AND 6
POWER SUPPLY	: 110/220V AC 1PH, 380/440V AC 3PH 50/60Hz, $\pm 10\%$
CONTROL POWER SUPPLY	: 110/220V AC 1PH 50/60Hz, $\pm 10\%$
DUTY CYCLE	: S2 40~100%
MOTOR	: SQUIRREL CAGE INDUCTION MOTOR
LIMIT SWITCHES	: OPEN/CLOSE, SPDT, 250V AC 10A RATING
TORQUE SWITCHES	: OPEN/CLOSE, SPDT, 250V AC 10A RATING(EXCEPT HQ-008)
ADDITIONAL LIMIT SWITCHES	: OPEN/CLOSE, SPDT, 250V AC 16A RATING(EXCEPT HQ-008)
STALL PROTECTION OPERATING TEMP.	: BUILT-IN THERMAL PROTECTION, OPEN $140^{\circ}\text{C} \pm 5^{\circ}\text{C}$ /CLOSE $90^{\circ}\text{C} \pm 10^{\circ}\text{C}$
TRAVEL ANGLE	: $90^{\circ} \pm 10^{\circ}$ ($0^{\circ} \sim 110^{\circ}$)
INDICATOR	: CONTINUOUS POSITION INDICATOR AND SIGNAL LED
MANUAL OVERRIDE	: HAND/AUTO DECLUTCHING MECHANISM
SELF LOCKING	: PROVIDED BY MEANS OF WORM GEARING
MECHANICAL STOPS	: EXTERNAL ADJUSTABLE SCREWS
SPACE HEATER	: 7~10W (110/220V AC) ANTI-CONDENSATION
CONDUIT ENTRIES	: TWO PF3/4" TAP
LUBRICATION	: GREASE MOLY(EP TYPE)
MATERIALS	: STEEL, ALUMINIUM ALLOY, AI BRONZE
AMBIENT TEMPERATURE	: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$ (EXCEPT OPTION ELECTRIC GARD)
AMBIENT HUMIDITY	: 90%RH MAX. (NON-CONDENSING)
DIELECTRIC STRENGTH	: 1500V AC 1MINUTE
INSULATION RESISTANCE	: 500V DC 30M OHM
ANTI VIBRATION	: X Y Z 10g, 0.2~34Hz, 30MINUATE
EXTERNAL COATING	: DRY POWDER, POLYESTER, MUNSELL NO. 5R 3.5/12

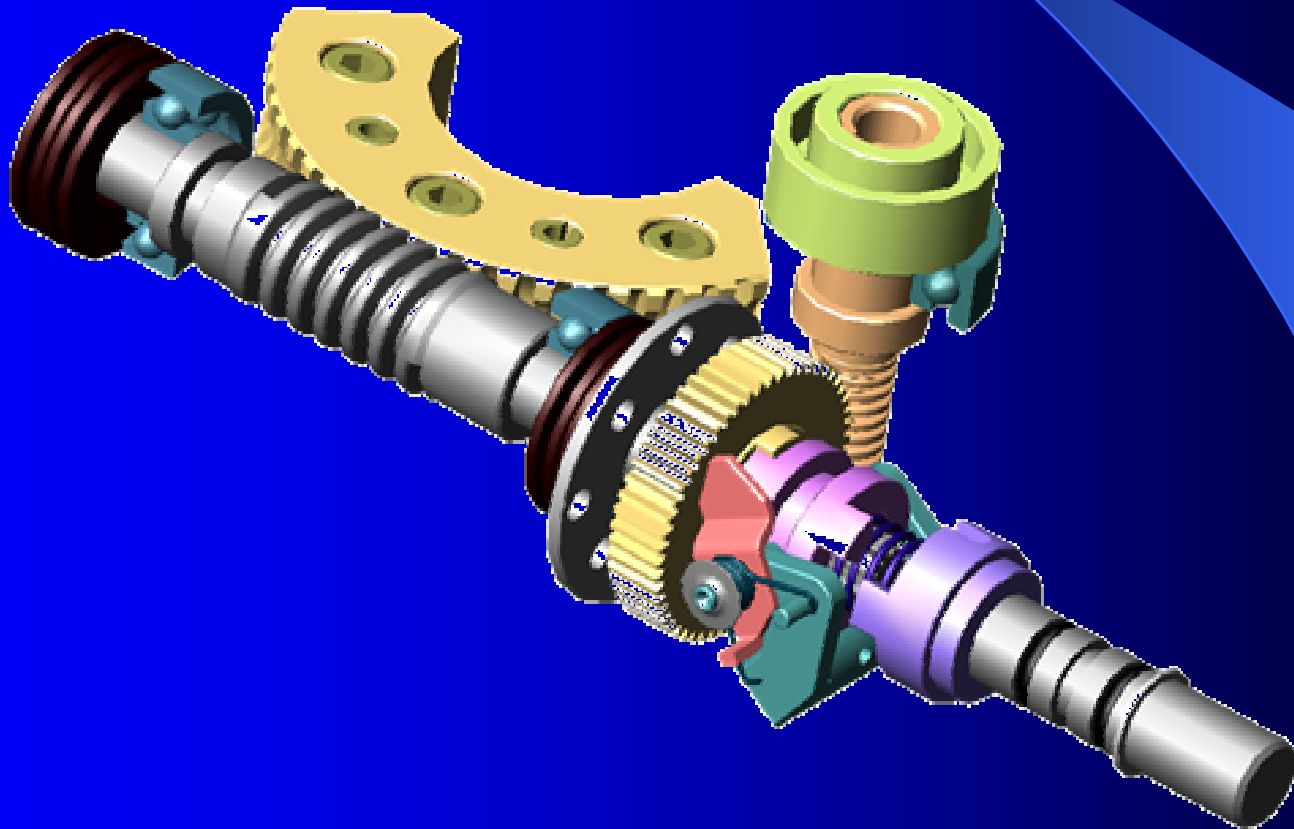
OPTION SPEC

EXA : EXPLOSION PROOF ENCLOSURE ACTUATOR(Ex d II C T6)	HQ-SERIES
WTA : WATERTIGHT ENCLOSURE ACTUATOR(IP6B 10M 250HR)	HQ-SERIES
PIU : POTENTIOMETER UNIT(1K OHM)	EXCEPT HQ-008
IMS : INTEGRAL MOTOR STARTER REVERSING ELE. CON. & TRANSFORMER	EXCEPT HQ-008
PCU : PROPORTIONAL CONTROL UNIT(INPUT, OUTPUT 4~20mA DC)	EXCEPT HQ-008
ATS : ADDITIONAL TORQUE SWITCHES(SPDT*2EA 250V AC 10A RATING)	EXCEPT HQ-008
LCU : LOCAL CONTROL UNIT(REMOTE/OPEN/STOP/CLOSE SELECTER S/W)	EXCEPT HQ-008
CPT : CURRENT POSITION TRANSMITTER(OUTPUT 4~20mA DC)	EXCEPT HQ-008
RBP : RECHARGEABLE BATTERY PACK POWER FAILURE CONTROL	HQ-015, 020, 030, 050
EXT : EXTENSION 120° 180° 270° TURN	EXCEPT HQ-200, 300
DCM : DC MOTOR(24V DC)	HQ-015, 020, 030
LPA : LEVER PLATE ACTUATOR	EXCEPT HQ-008
SLU : WHITE/POWER ON, GREEN/OPEN, RED/CLOSE, YELLOW/OVER TORQUE	EXCEPT HQ-008
HSA : HIGH SPEED ACTUATOR	HQ-SERIES
LSA : LOUGH SPEED ACTUATOR	HQ-SERIES
SCA : SPEED CONTROL ACTUATOR	EXCEPT HQ-008
LTA : LOW TEMPERATURE TYPE ACTUATOR(-60°C~+70°C)	EXCEPT HQ-008
HTA : HIGH TEMPERATURE TYPE ACTUATOR(-20°C~+120°C 150°C 1HR)	HQ-SERIES
SRA : SEA & RUSTLESS ACTUATOR	HQ-SERIES
NCA : NETWORK CONTROL ACTUATOR	EXCEPT HQ-008
CED : CUSTOMER ELECTRIC DRAWING ACTUATOR	HQ-SERIES
SVA : SPECIAL VOLTAGE ACTUATOR	HQ-SERIES
CCA : CUSTOMER COLOR ACTUATOR	HQ-SERIES
OEM : ORIGINAL EQUIPMENT MANUFACTURING	HQ-SERIES

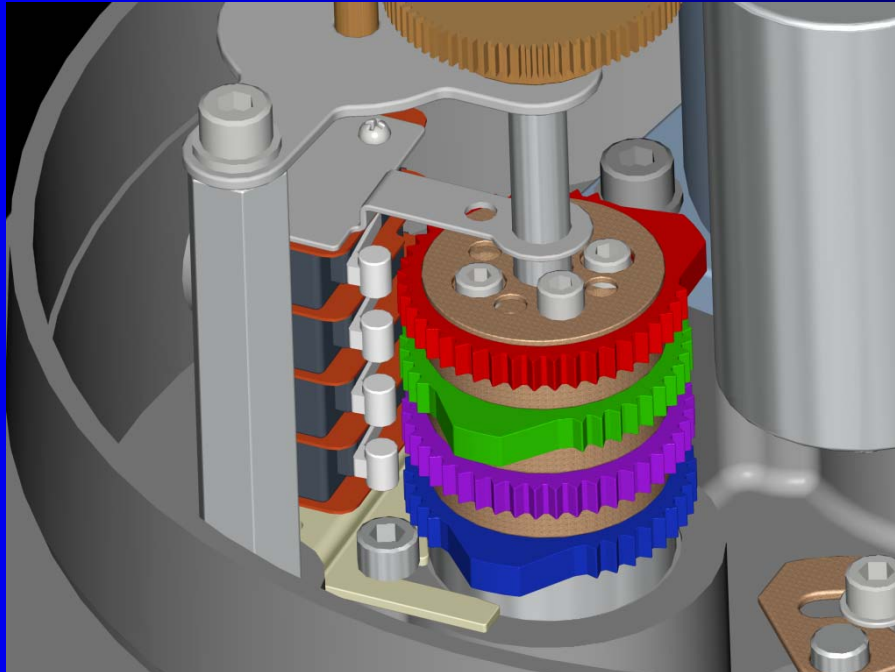
BENEFITS OF “HQ” ACTUATOR

Increased torque by 30%

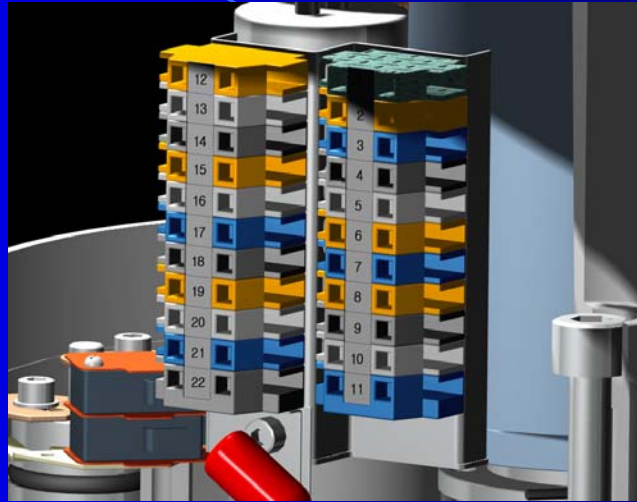
Perfect Self-Locking (2nd Worm Gear)



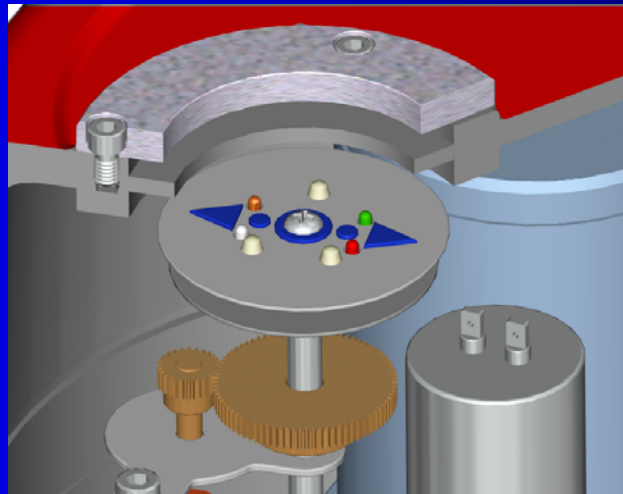
- Explosionproof Grade
Ex d IIB T6 / Ex d IIC T6
- Easy Cam Setting (cam block) – Patent
- ALS (additional Limit Switch) – Standard



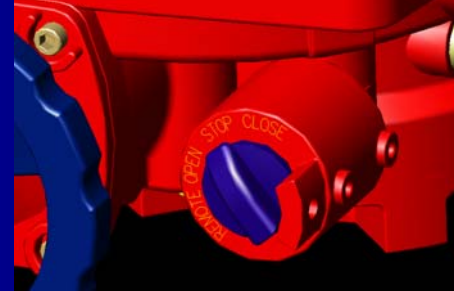
- Terminal Block



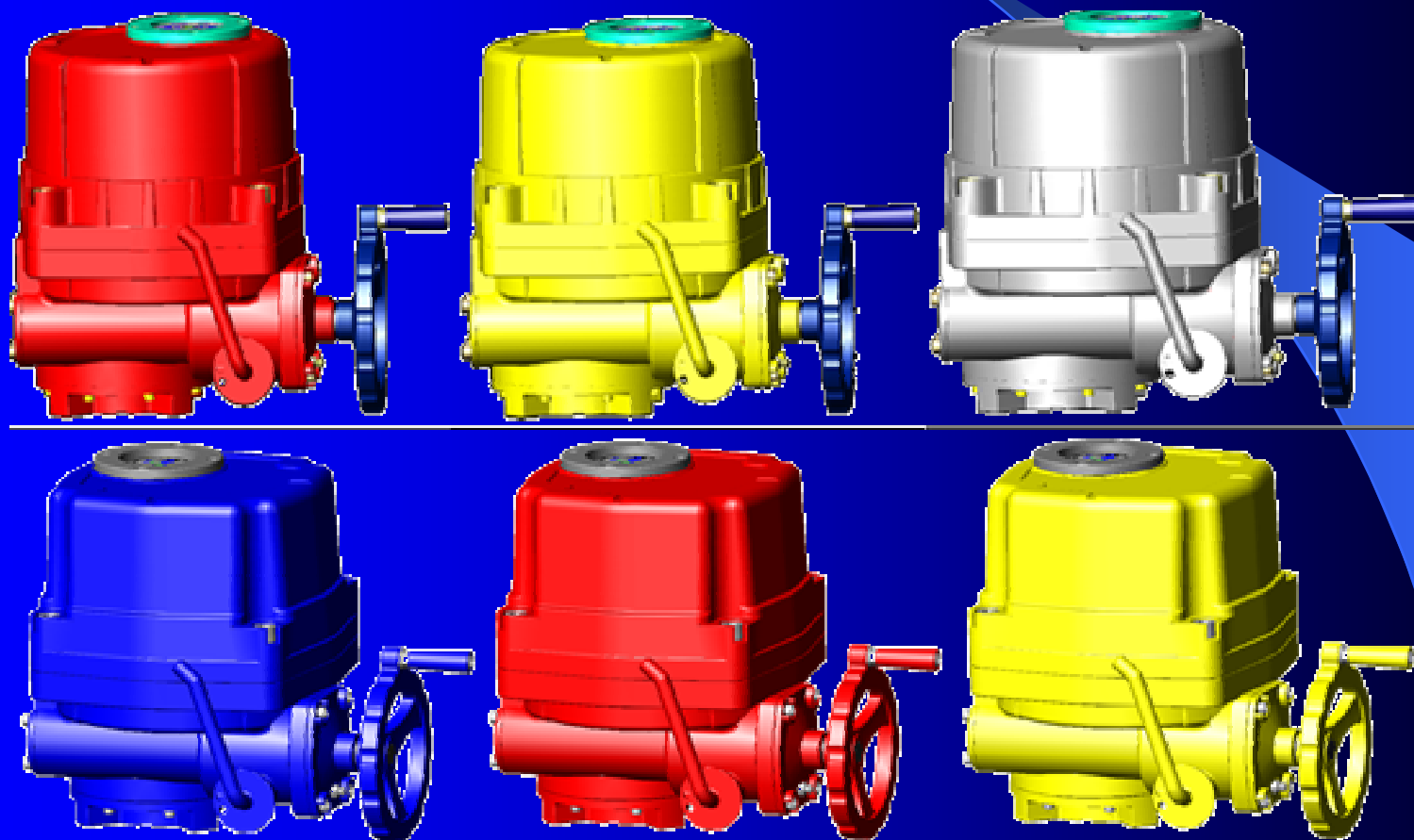
- Position Indicator Lamp – Patent



Easy Selector Switch – Option



Various Colors for OEM(Private Customer)

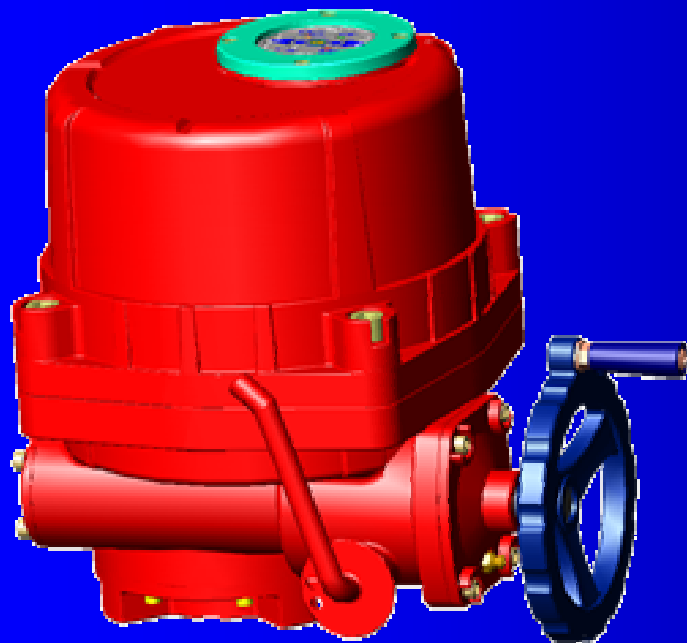


Electric Actuator

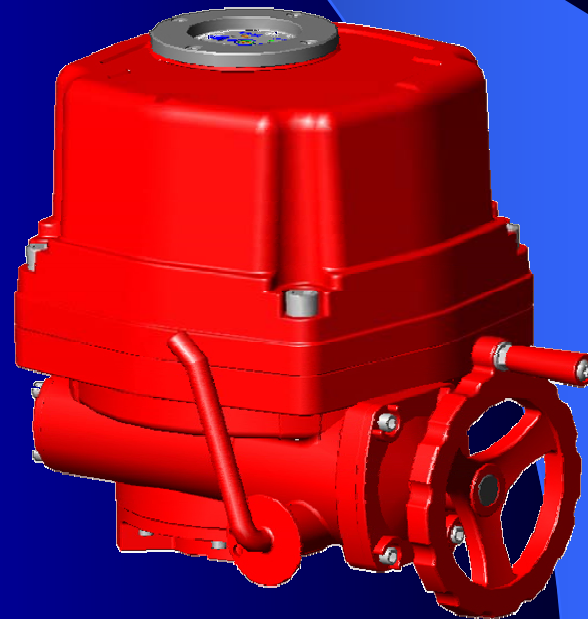
HQ-Series

- Weather proof Type (IP67, Ip68/option)
- Explosion proof Type (Ex d IIC T6)
- Explosion proof Type (Ex d IIB T6)

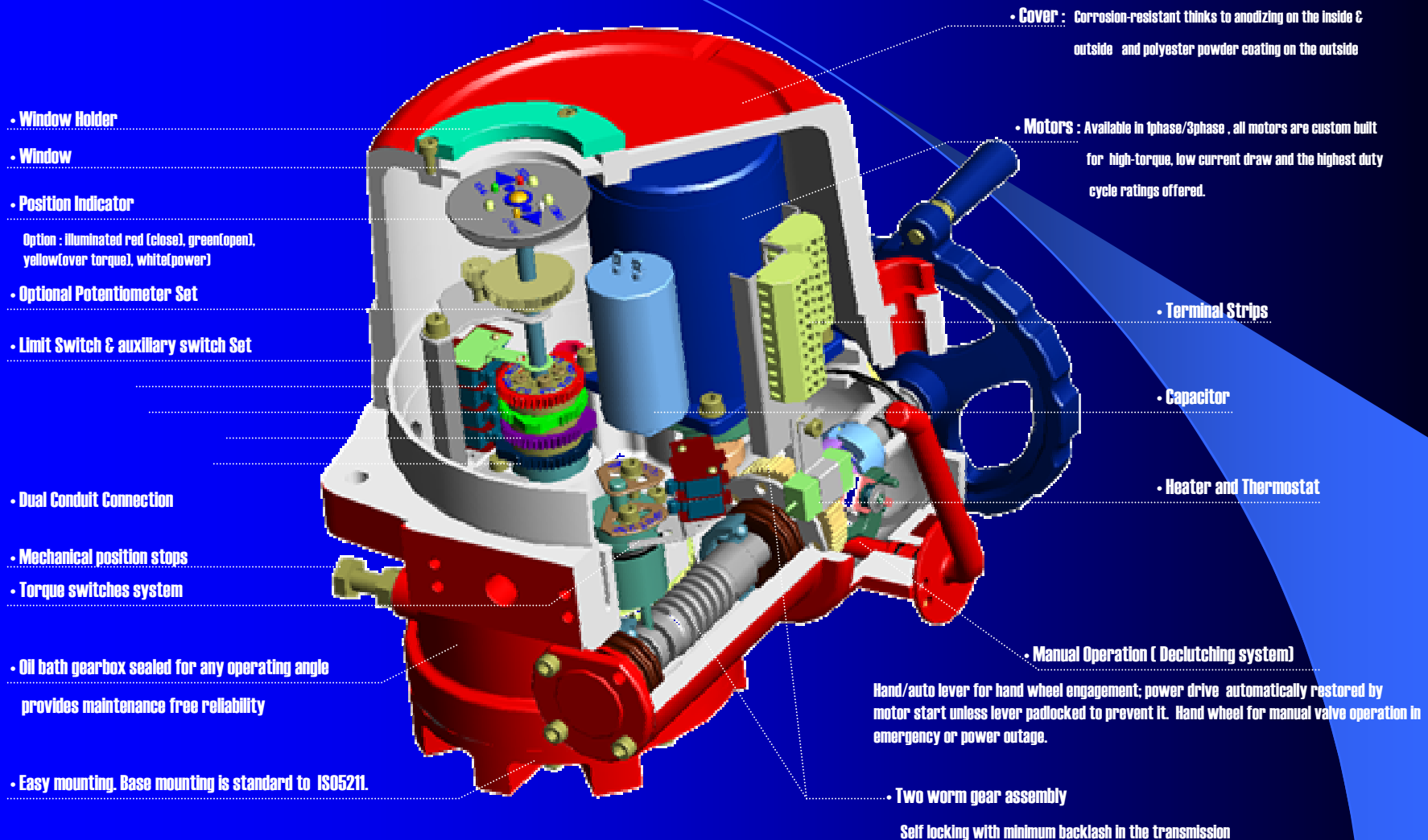
HQ-Series (TYPE1)



HQ-Series(TYPE2)



HQ-SERIES ELECTRIC ACTUATOR



• Standard Configuration

1. Manual Operation (Declutching system)
2. Limit Switch & auxiliary switch Set
3. Terminal Strips Maker "WAGO"
4. Heater and Thermostat
5. Position Indicator
6. Torque switches system

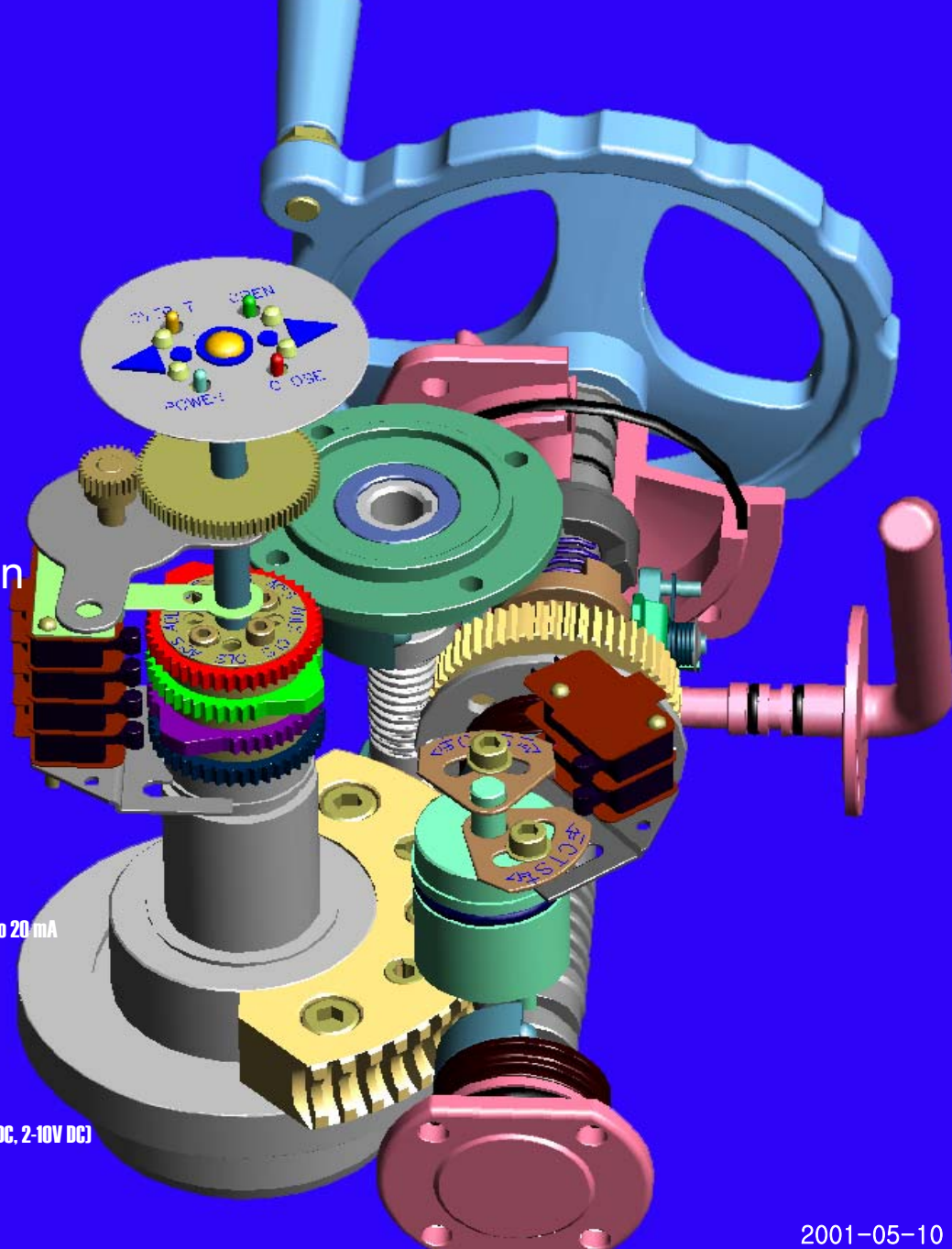
• Controls and Options Configuration

7. Local control system
8. Explosion proof housing
9. Output potentiometer
10. Position transmitter

HQ series actuator variation provides a continuous position indication by transmitting a 4 to 20 mA Signal (Input : AC 110/220V,50/60Hz output : 4 to 20mA with adjustable zero and span)

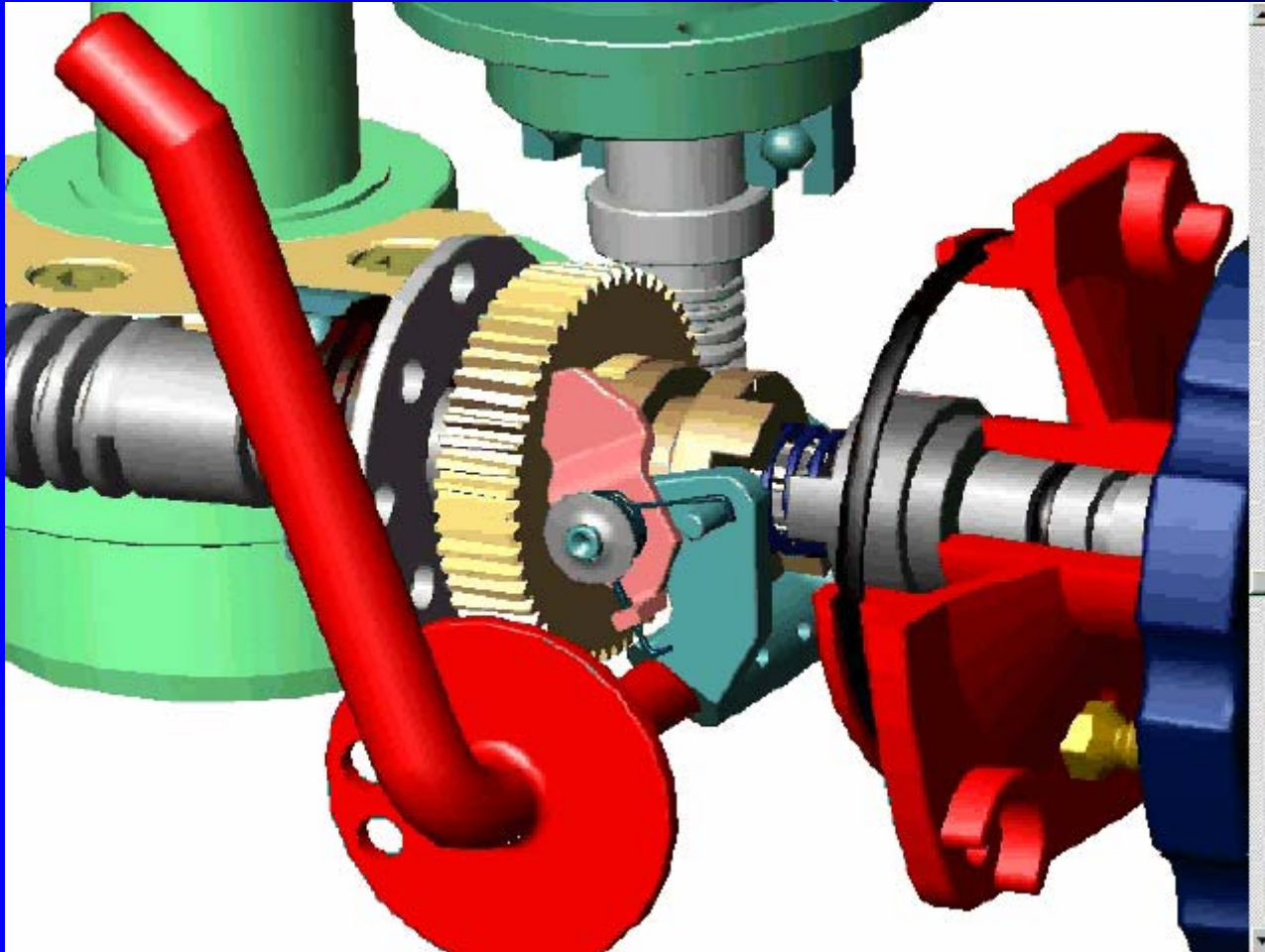
11. Electronic Positioner

HQ series actuator option provides continuous proportional position modulation for process Control applications. The servo can be easily configured by the factory or the customer to Accept several types of input signals such as 4-20mA DC, 0-10V DC, 1-5V DC(option 0-20mA DC, 2-10V DC) or potentiometer Control.



Manual Operation (Declutching system)

A handwheel is provided for manual operation which is engaged by a pad-lockable
Hand/auto selection lever arranged for power preference.



Limit Switch & auxiliary switch Set

The cam disks(②) in the cam block(①) can be set independent
by of each other as described below (②)

The pairs of screws are assigned in their height
to the respective cam ring.

① Cam Block

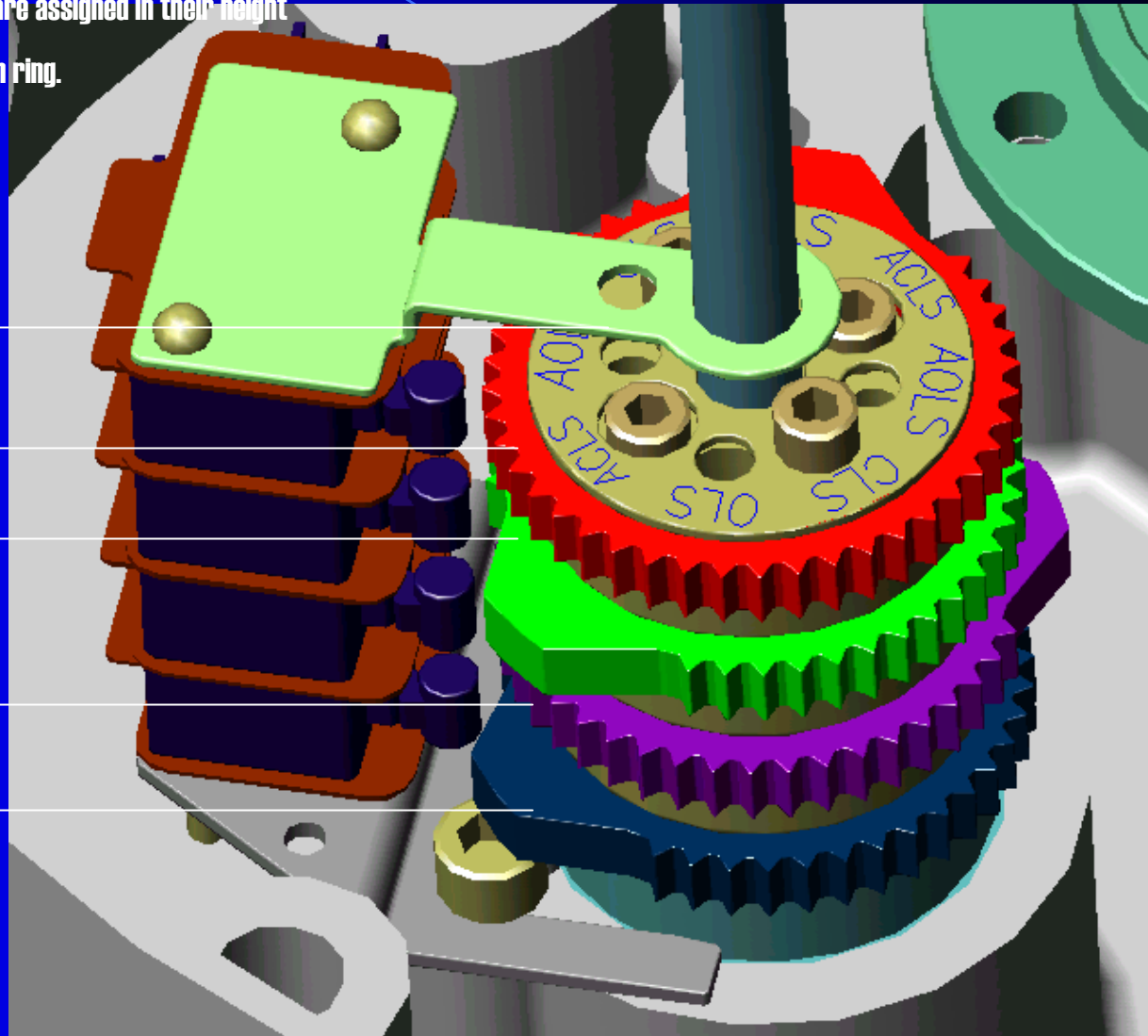
② Cam Disks

close limit switch cam/ Red

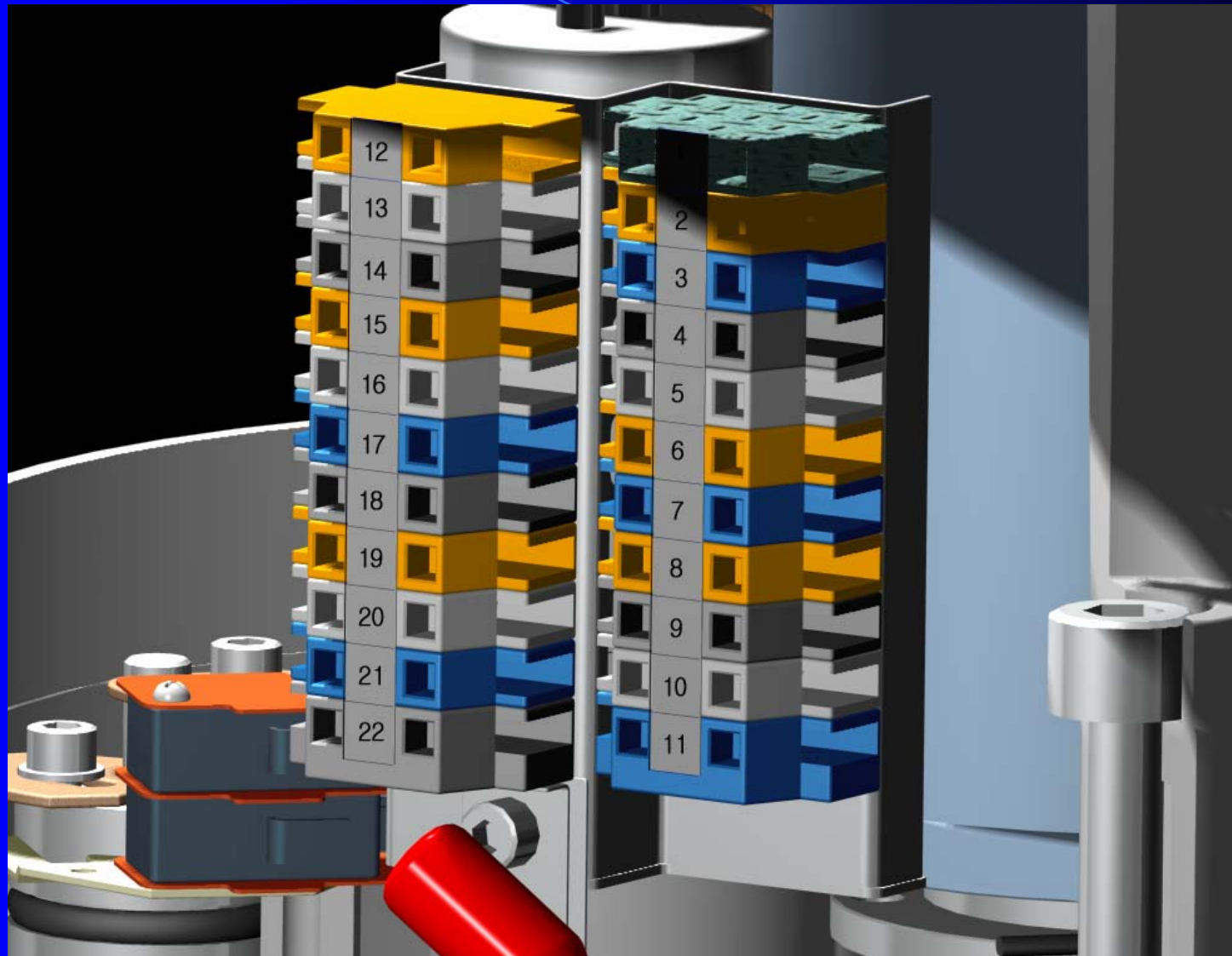
open limit switch cam/ Green

close extra switch cam /Purple

open extra switch cam / Blue

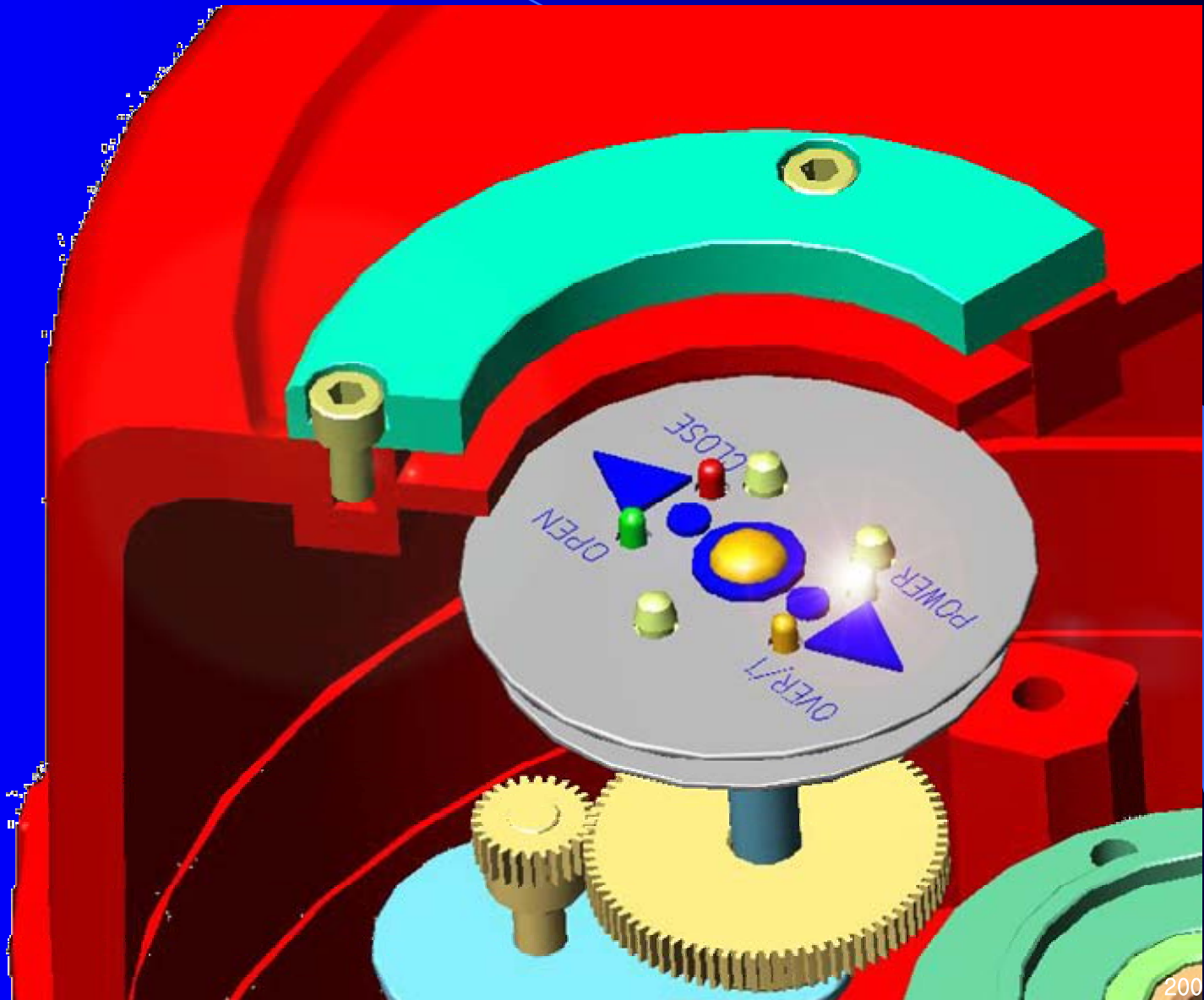


Terminal Strips

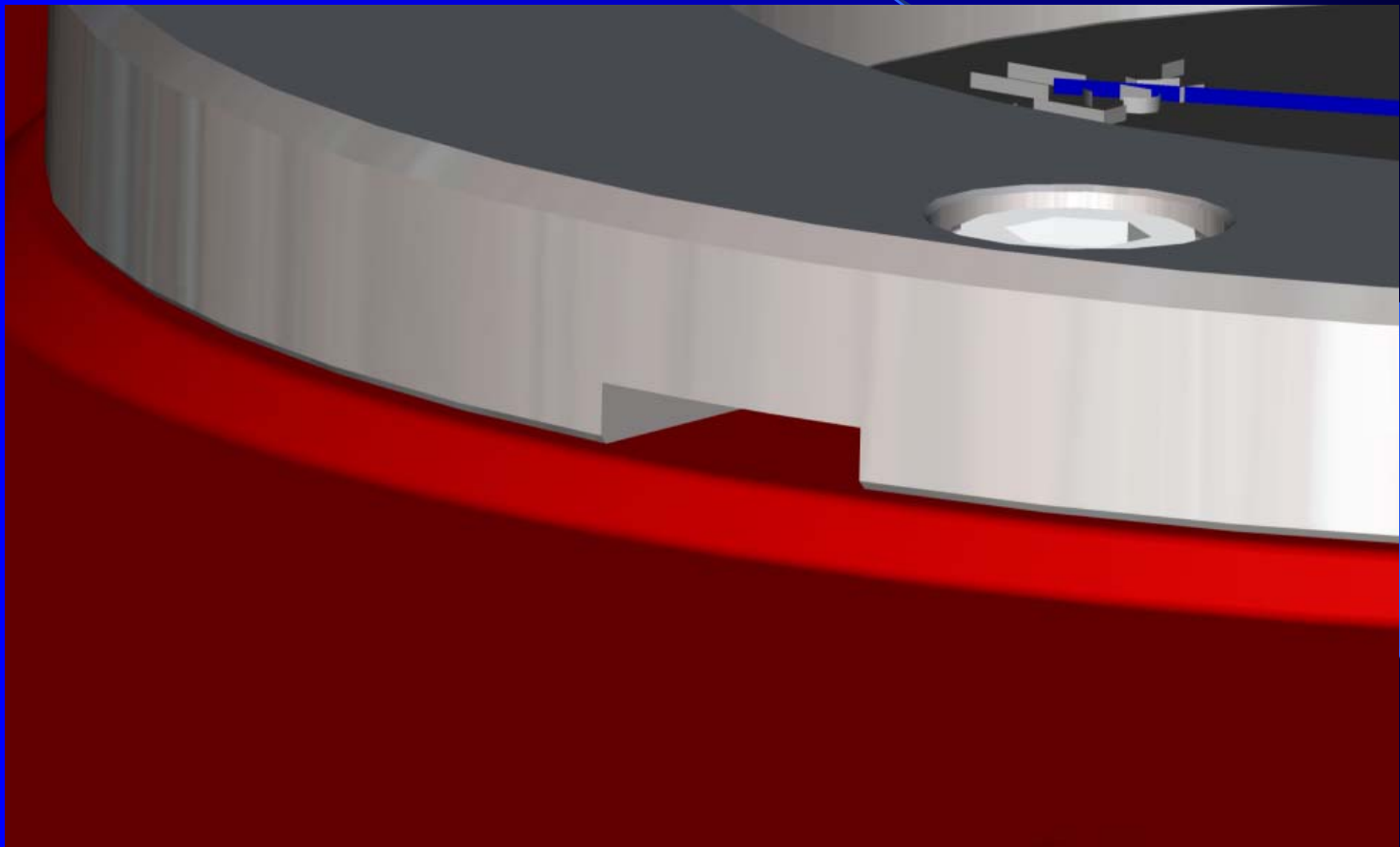


Position Indicator

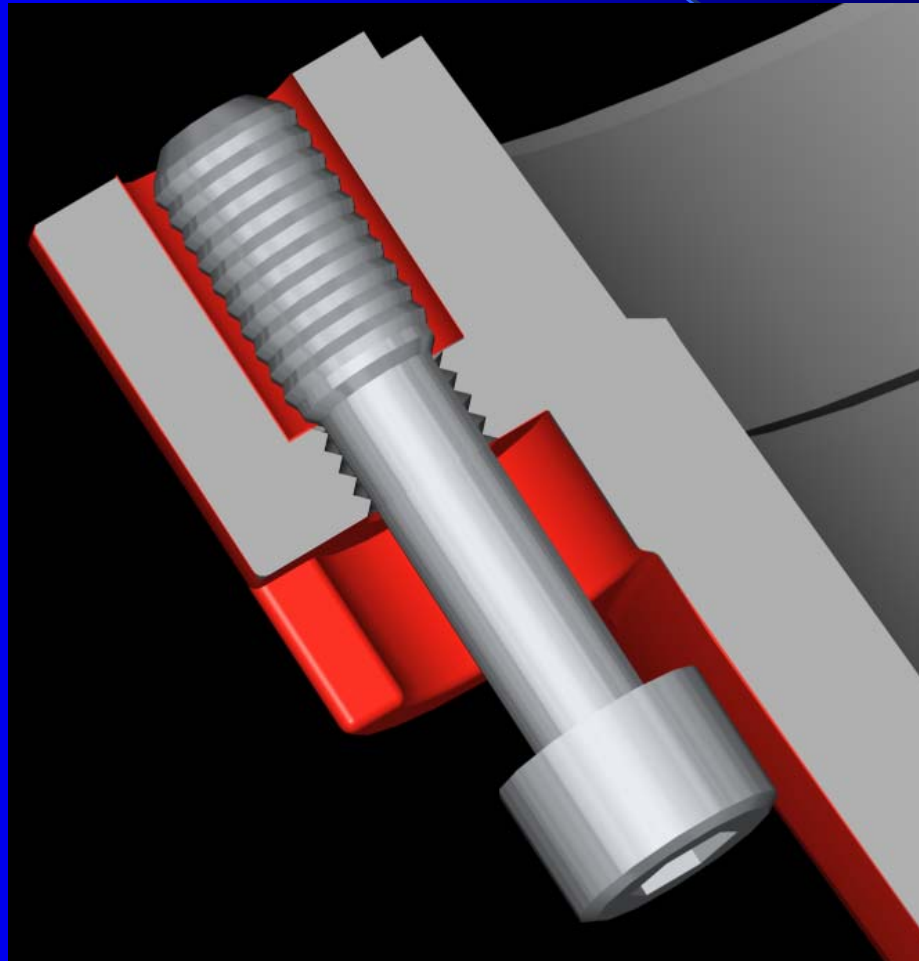
Option : illuminated red (close), green(open), yellow(over torque), white(power)



Water Exhausting groove of window cover

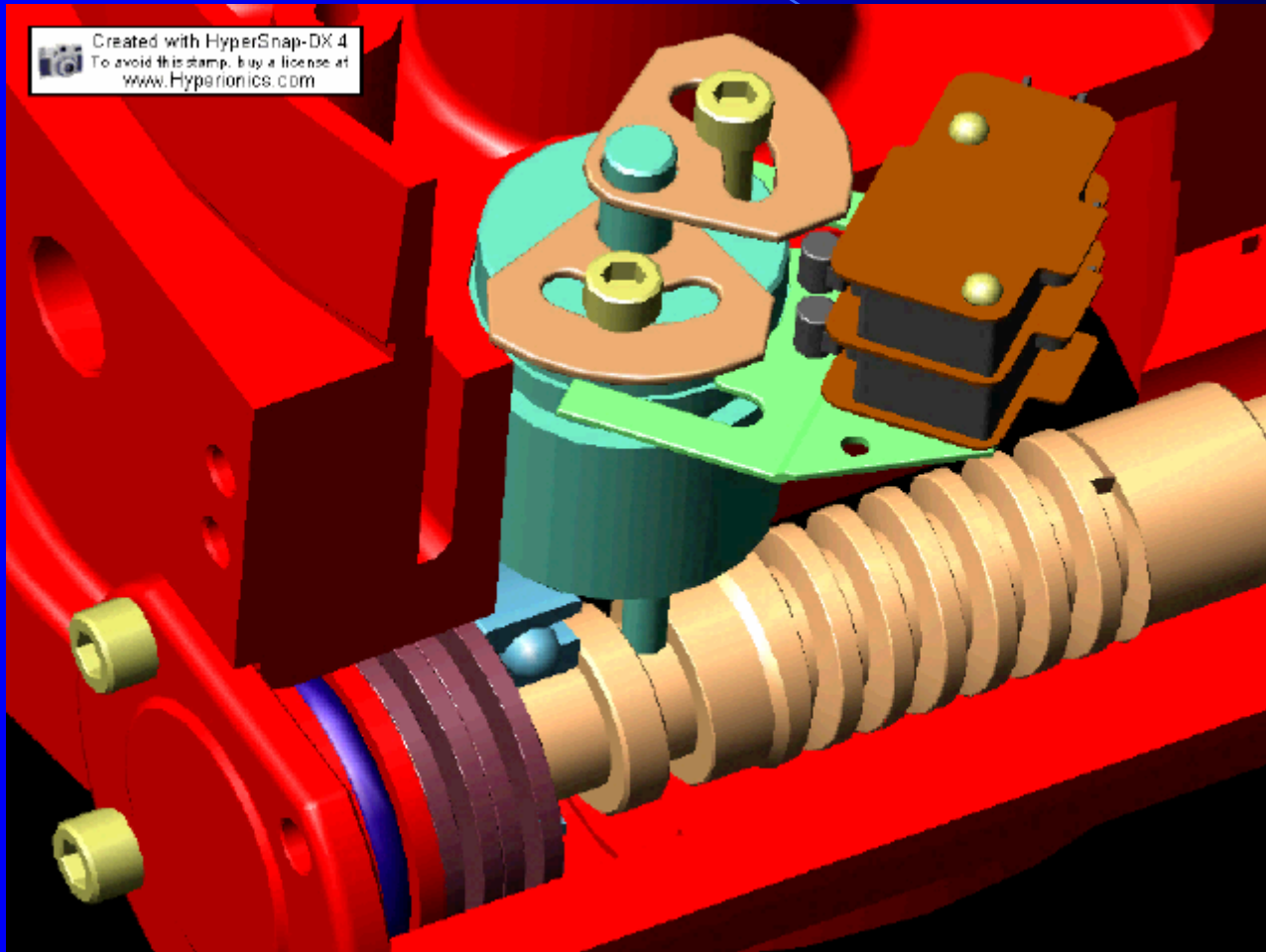


Captive Bolt



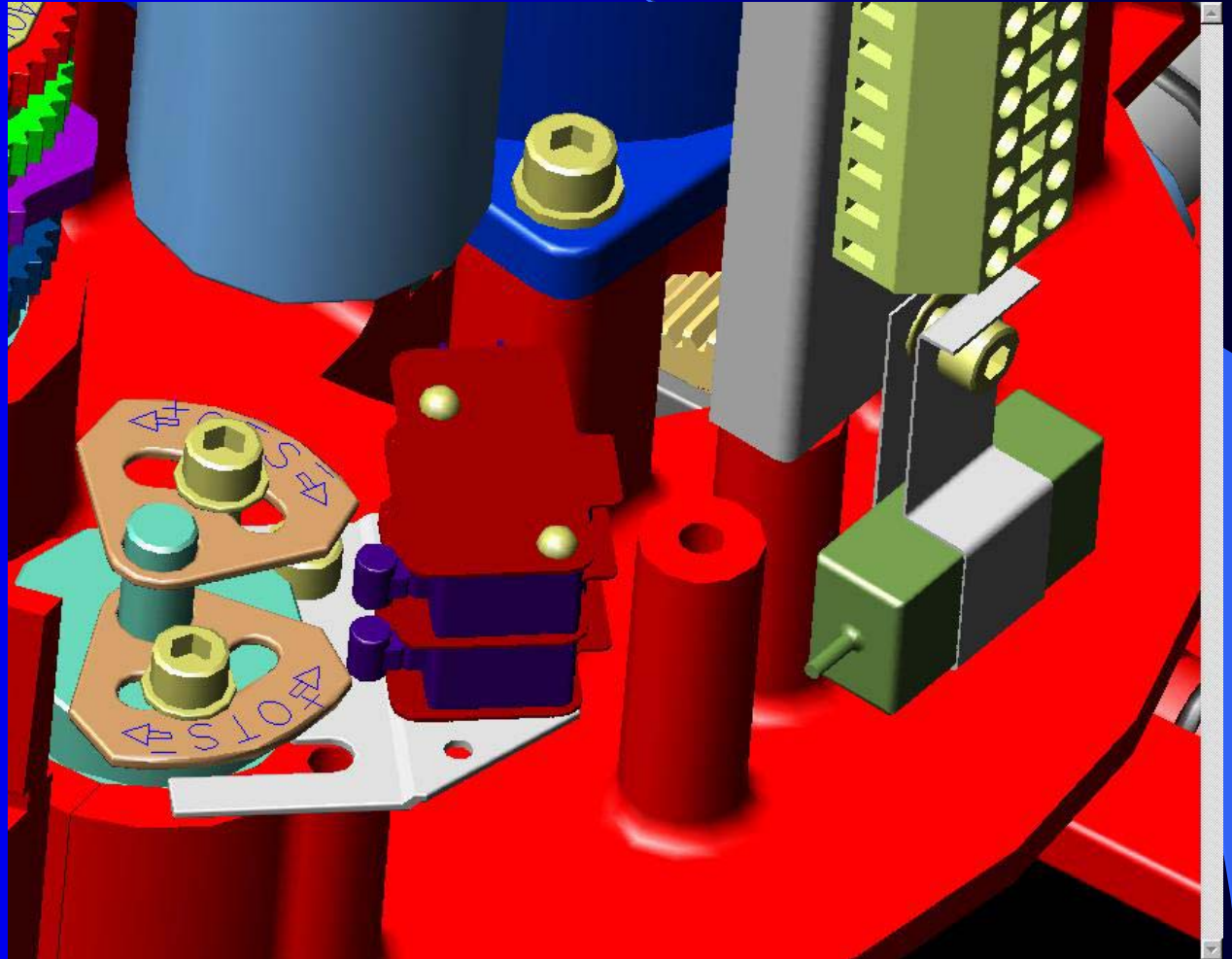
Torque switches system

These mechanical switches eliminate potential driven device damage
due to over torque conditions in either direction of operation



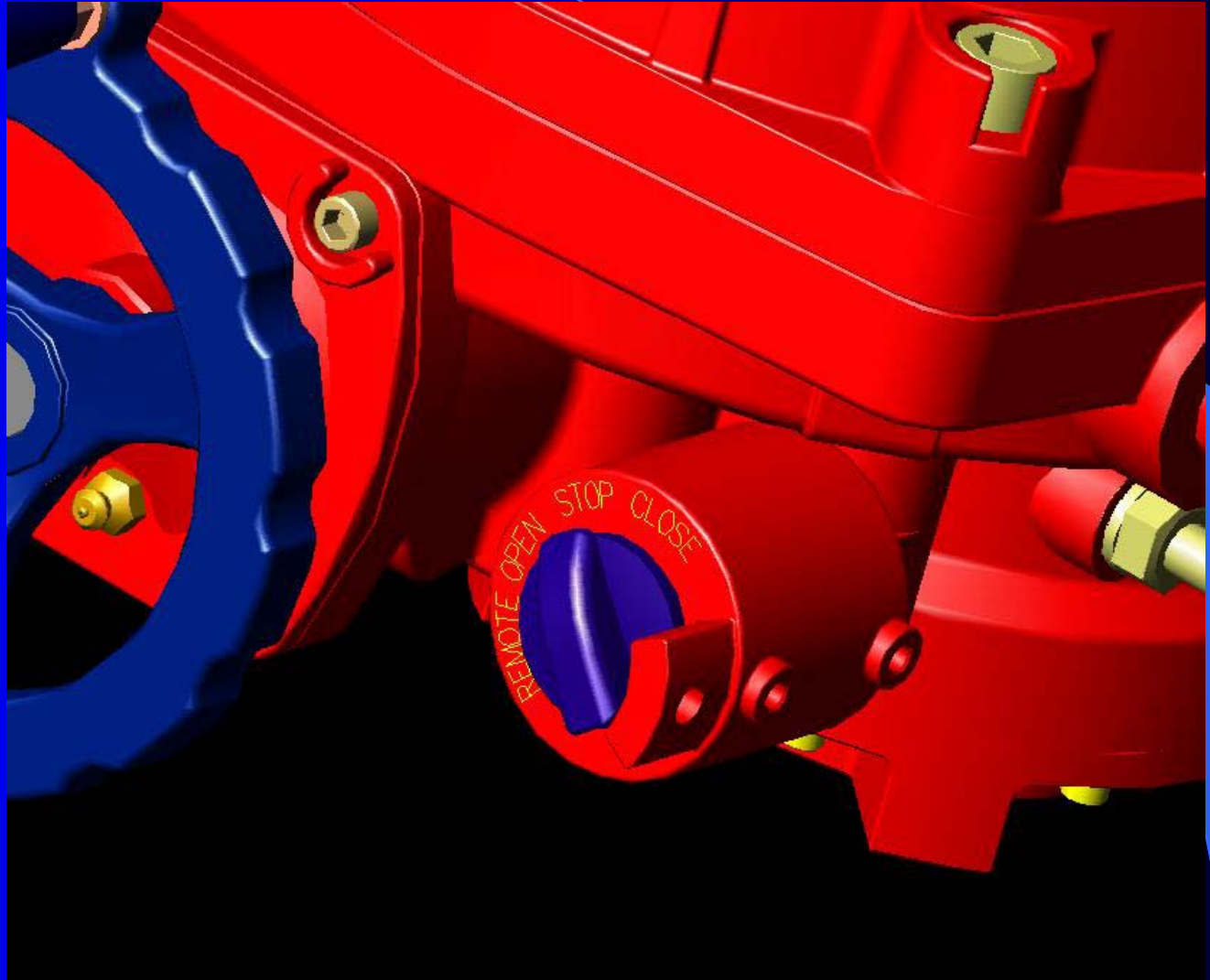
Heater and Thermostat

Installed to maintain a dry actuator interior, recommended usages include all outdoor applications, any high humidity areas and all installations at or below 0 °C (32 °F)



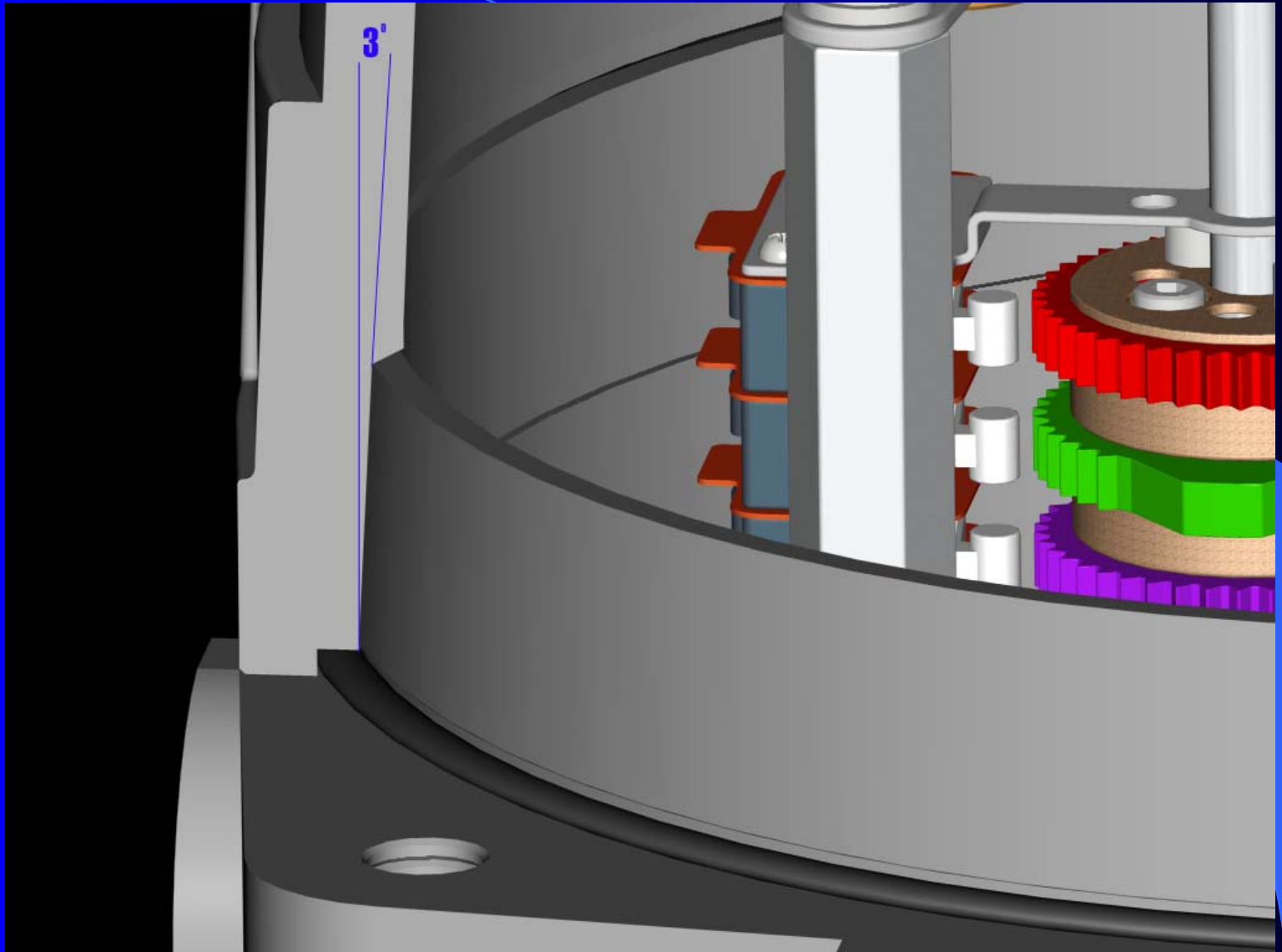
Local control system

This electric actuator variation has the addition of a local control box, with a single rotary 4 position switch with 4spst contacts. The switch selects between “REMOTE”, “LOCAL(OPEN/STOP/CLOSE)”. When in “LOCAL(OPEN/STOP/CLOSE)” position the actuator can not be operated remotely.



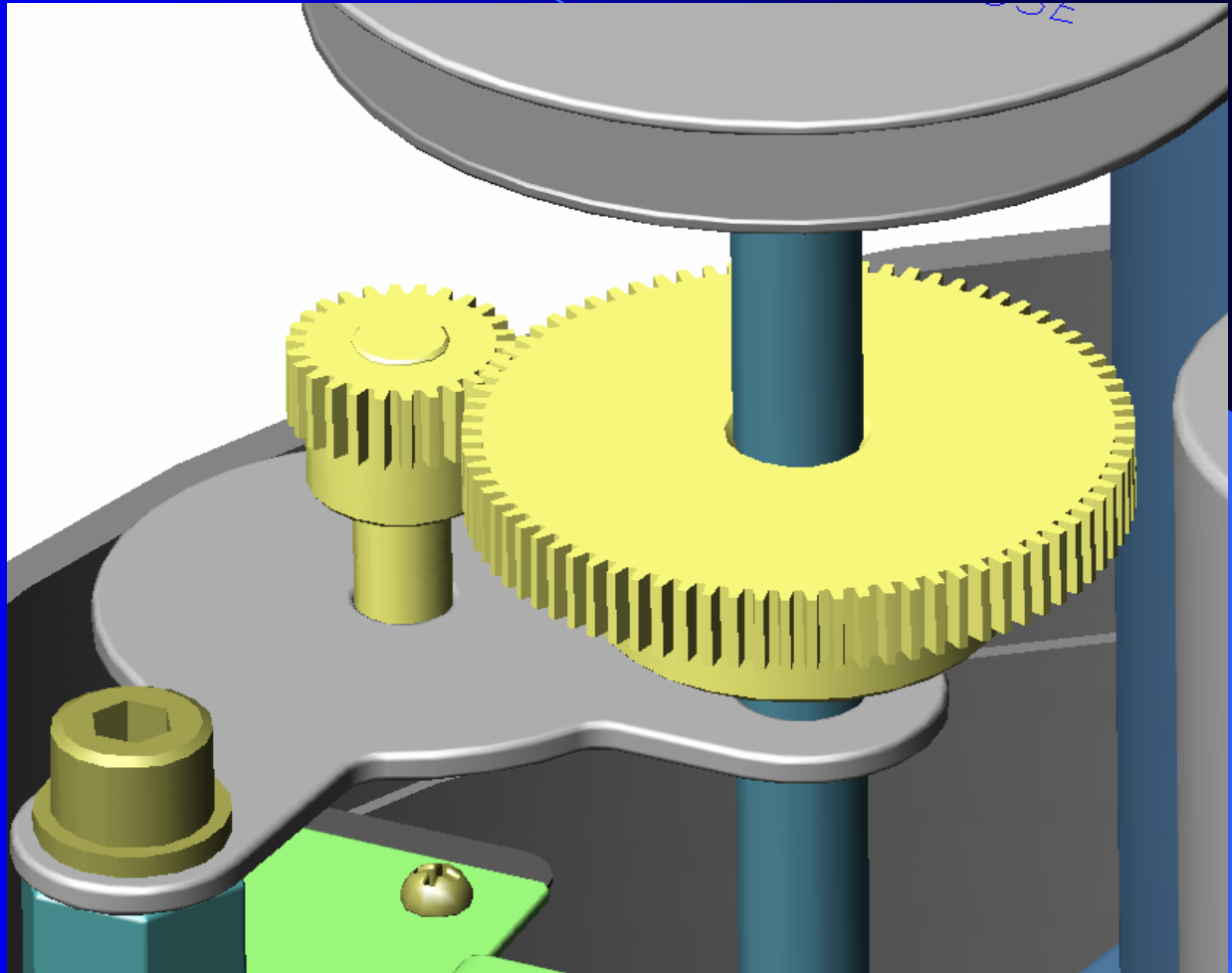
Explosion proof housing

Enclosure : Ex d IIB T6 (or Ex d IIC T6)



Output potentiometer

This electric actuator variation has the addition of a potentiometer to provides continuous of the actuator position. ($500\Omega \sim 20K\Omega$)



Detachable drive bushing machined to suit valve stem under hung for convenient valve adaptation.(Standard)

