



PRODUCT CATALOGUE

INDUSTRIAL ACTUATORS



ENGINEERING, EQUIPMENT AND CONSULTING

Contents

ENEQ Overview.....	3
Detailed Overview of Actuators	4
Detailed Information	8
1. Rotary (Part-Turn) Actuators	8
KP MINI & KP MIDI Series	8
MODACT MOK, MOKED, & MOKP/MOKPED Ex Series	9
2. Multi-Revolution Actuators.....	10
MODACT MON/MOP/MONJ & MONED/MOPED/MONEDJ Series	10
MODACT MOED EEx Series.....	11
MODACT MOED EEx.....	11
MODACT MO EEx (Electro-mechanical Version)	12
3. Lever Actuators	12
MODACT MPS & MPR Series	12
4. Linear Thrust Actuators	13
MODACT MTN & MTP Series	13

ENEQ Overview

With nine years of solid performance and a project portfolio exceeding €20 million, ENEQ Consult Ltd. is a trusted partner in the power industry. We deliver cost-effective, high-quality mechanical equipment for the nuclear, conventional power, oil & gas, and petrochemical sectors, with a specialized focus on solutions for nuclear power plants with PWR reactor technology.

Our expertise spans the entire project lifecycle, from **equipment supply** and turn-key delivery to critical **engineering analyses** (including FEA & CFD) and comprehensive **service** from production to commissioning and after-sales support. Through exclusive partnerships with 15 global manufacturers, we provide a wide range of equipment compliant with international standards such as ASME, EN, N Stamp, DIN, and ISO.

This catalogue presents the comprehensive range of industrial electric actuators from ENEQ and a leading manufacturer with over 50 years of experience in the field. Built on a tradition of quality, long service life, and reliability, these actuators are designed for a wide array of industrial valve and damper applications.

The product portfolio is based on a modular system, allowing for numerous variations to meet specific customer requirements. The main actuator types featured include:

- **Quarter-turn Actuators:** Designed for ball and flap valves, this range includes the compact **KP MINI/MIDI** series (up to 35 Nm) and the robust **MODACT MOK** series (16 to 1000 Nm).
- **Multi-turn Actuators:** Intended for slide and gate valves, the **MODACT MON/MOP** series offers torques from 10 to 4000 Nm and is available with different IP ratings (IP55/IP67).
- **Linear Actuators:** The **MODACT MTN/MTP** series provides linear thrust up to 63 kN for applications such as globe valves, with IP55 and IP67 protection options.
- **Lever Actuators:** Used for dampers and louvers, this category includes the **MODACT MPS** series for constant speed operation and the **MODACT MPR** series for applications requiring variable speed.

Many of these series are also available in specialized versions, including **explosion-proof (EEx)** models for hazardous environments and **CONTROL** versions with advanced electronic systems for automatic regulation. We also offer complete, assembled actuator and valve combinations.

Detailed Overview of Actuators

Actuator Designation	Type No.	Function	Application	Tripping Torque / Thrust	Adjusting Time / Speed	Working Stroke	IP Rating	Weight [kg]
KP MINI	52 997	Rotary (90°)	Small ball valves, flaps, louvers	30 Nm	30 or 60 s/90°	90°	IP67	4
KP MINI EEx	52 998	Rotary (90°)	Small valves in explosive areas	30 Nm	30 or 60 s/90°	90°	IP67	4
KP MIDI	52 999	Rotary (90°)	Ball cocks & flaps	35 Nm	13 s/90°	0° - 180°	IP67	2
MODACT MOK 63	52 325	Rotary (90°)	Ball & flap valves	16 - 80 Nm	10, 20, 40, 80 s/90°	90°	IP67	7.4
MODACT MOK 125	52 326	Rotary (90°)	Ball & flap valves	63 - 125 Nm	10, 20, 40, 80 s/90°	90°	IP67	12.3 - 12.7
MODACT MOK 250	52 327	Rotary (90°)	Ball & flap valves	125 - 250 Nm	20, 40, 80, 160 s/90°	90°	IP67	20.5 - 21
MODACT MOK 500	52 328	Rotary (90°)	Ball & flap valves	250 - 500 Nm	20, 40, 80 s/90°	90°	IP67	26 - 27
MODACT MOK 1000	52 329	Rotary (90°)	Ball & flap valves	500 - 1000 Nm	40, 80, 160 s/90°	90°	IP67	43 - 45
MOKPED Ex 100	52 320	Rotary (90°)	Valves in explosive areas	25 - 100 Nm	10, 20, 40, 80 s/90°	90°	IP67	9.7

Actuator Designation	Type No.	Function	Application	Tripping Torque / Thrust	Adjusting Time / Speed	Working Stroke	IP Rating	Weight [kg]
MOKPED Ex 250	52 321	Rotary (90°)	Valves in explosive areas	63 - 250 Nm	10, 20, 40, 80 s/90°	90°	IP67	18.5
MOKPED Ex 600	52 322	Rotary (90°)	Valves in explosive areas	250 - 600 Nm	10, 20, 40, 80, 160 s/90°	90°	IP67	31
MON/MOPED 40-80	52 030	Multi-turn	Slide & gate valves	20 - 80 Nm	7 - 80 rpm	2 - 2,830 rev	IP55 / IP67	24 - 28
MON/MOPED 63-160	52 031	Multi-turn	Slide & gate valves	63 - 160 Nm	7 - 145 rpm	2 - 1,400 rev	IP55 / IP67	41 - 51
MON/MOPED 100-250	52 032	Multi-turn	Slide & gate valves	100 - 250 Nm	7 - 145 rpm	2 - 1,400 rev	IP55 / IP67	45 - 54
MONED/MOPED 230-400	52 033	Multi-turn	Slide & gate valves	230 - 400 Nm	7 - 140 rpm	2 - 1,080 rev	IP55 / IP67	45 - 90
MONED/MOPED 250-630	52 034	Multi-turn	Slide & gate valves	250 - 630 Nm	16 - 100 rpm	2 - 1,080 rev	IP55 / IP67	90 - 109
MONED/MOPED 630-1800	52 035	Multi-turn	Slide & gate valves	630 - 1800 Nm	45, 70, 100 rpm	2 - 460 rev	IP55 / IP67	206 - 217
MONED/MOPED 1000-3900	52 036	Multi-turn	Slide & gate valves	1000 - 3900 Nm	20, 30, 40 rpm	1 - 300 rev	IP55 / IP67	304 - 315
MOED EEx 40-180	52 120	Multi-turn	Valves in explosive areas	20 - 180 Nm	8 - 80 rpm	2 - 1,980 rev	IP54/55/65	45 - 70
MOED EEx 63-160	52 121	Multi-turn	Valves in explosive areas	63 - 160 Nm	8 - 145 rpm	2 - 1,400 rev	IP54/55/65	41 - 78

Actuator Designation	Type No.	Function	Application	Tripping Torque / Thrust	Adjusting Time / Speed	Working Stroke	IP Rating	Weight [kg]
MOED EEx 100-250	52 122	Multi-turn	Valves in explosive areas	100 - 250 Nm	10 - 145 rpm	2 - 1,400 rev	IP54/55/65	42 - 81
MOED EEx 230-400	52 123	Multi-turn	Valves in explosive areas	230 - 400 Nm	7 - 140 rpm	2 - 1,080 rev	IP54/55/65	90 - 132
MOED EEx 250-630	52 124	Multi-turn	Valves in explosive areas	250 - 630 Nm	16 - 100 rpm	2 - 1,080 rev	IP54/55/65	90 - 150
MOED EEx 630-1800	52 125	Multi-turn	Valves in explosive areas	630 - 1800 Nm	32 - 100 rpm	2 - 460 rev	IP54/55/65	206 - 248
MPS(ED) 8-12.5	52 260	Lever	Flaps, louvers	80 - 125 Nm	8 - 63 s/90°	60° - 160°	IP55 / IP67	26
MPS(ED) 16	52 261	Lever	Flaps, louvers	100 - 160 Nm	16 - 120 s/90°	60° - 160°	IP55 / IP67	70
MPS(ED) 32	52 262	Lever	Flaps, louvers	160 - 320 Nm	16 - 120 s/90°	60° - 160°	IP55 / IP67	70
MPS(ED) 63	52 263	Lever	Flaps, louvers	320 - 630 Nm	16 - 120 s/90°	60° - 160°	IP55 / IP67	120
MPS(ED) 125	52 264	Lever	Flaps, louvers	630 - 1250 Nm	16 - 120 s/90°	60° - 160°	IP55 / IP67	120
MPS(ED) 200	52 265	Lever	Flaps, louvers	1250 - 2000 Nm	45 s/90°	60° - 160°	IP55 / IP67	267
MPS(ED) 400	52 266	Lever	Flaps, louvers	2500 - 4000 Nm	45 s/90°	60° - 160°	IP55 / IP67	267
MODACT MPR 63-250	52 221	Lever (160°)	Flaps, louvers	63 - 250 Nm	Variable (16-32 s/160°)	160°	IP55	65
MODACT MPR 160-630	52 222	Lever (160°)	Flaps, louvers	160 - 630 Nm	Variable (32-63 s/160°)	160°	IP55	115

Actuator Designation	Type No.	Function	Application	Tripping Torque / Thrust	Adjusting Time / Speed	Working Stroke	IP Rating	Weight [kg]
MODACT MPR 400-2500	52 223	Lever (160°)	Flaps, louvers	400 - 2500 Nm	Variable (63-120 s/160°)	160°	IP55	250
MTN/MTP(ED) 15	52 442	Linear Thrust	Valves	5 - 15 kN	27 - 200 mm/min	10 - 100 mm	IP55 / IP67	22 - 33
MTN/MTP(ED) 25	52 442	Linear Thrust	Valves	15 - 25 kN	27 - 80 mm/min	10 - 100 mm	IP55 / IP67	33
MTN/MTP(ED) 40	52 443	Linear Thrust	Valves	25 - 40 kN	80 mm/min	20 - 120 mm	IP55 / IP67	60
MTN/MTP(ED) 63	52 443	Linear Thrust	Valves	40 - 63 kN	80, 125 mm/min	20 - 120 mm	IP55 / IP67	63

Detailed Information

1. Rotary (Part-Turn) Actuators

KP MINI & KP MIDI Series

These are compact actuators for smaller automation tasks.



KP MINI



KP MIDI

- **Application:** Designed for actuating small ball valves, cocks, and flaps requiring a 90° turn. The **KP MINI EEx** version is for use in explosive atmospheres (Zones 1, 2, and 22).
- **Operating Conditions:**
 - **Temperature:** -25°C to +70°C (standard); -25°C to +55°C (EEx version).
 - **Enclosure:** IP67.
- **Technical Specifications:**
 - **Torque:** **KP MINI** has a rated torque of 30 Nm; **KP MIDI** has a rated torque of 35 Nm.
 - **Adjusting Time:** 30 or 60 s/90° for KP MINI; 13 s/90° for KP MIDI (50 Hz).
 - **Supply Voltage:** Standard is 220-240 V AC, 50-60 Hz.
 - **Mechanical Connection:** KP MINI uses flanges F03, F04, F05, or F07 with a universal clamp for square shafts (s=9 to 17 mm). KP MIDI uses F03/F05 flanges with a square drive of s=14 mm.
- **Outfit & Electronics:**
 - **Switches:** Standard configuration includes 4 microswitches (2 for position limits, 2 for signalling).
 - **Position Transmitters:** Options include a 1x100 Ω or 2x100 Ω resistance transmitter, or an active current transmitter (DCPT2).
 - **CONTROL Version:** An electronic position regulator (ZP2.RE4) can be built-in for continuous-action control circuits.

MODACT MOK, MOKED, & MOKP/MOKPED Ex Series



This is a comprehensive series of rotary actuators for general and hazardous industrial environments.

- **Application:** Control of ball and flap valves. The MOKP/MOKPED Ex versions are for environments with a danger of explosion (Zones 1, 2, 21, and 22).
- **Operating Conditions:**
 - **Temperature:** Standard range is -25°C to +70°C. The MOKED version can operate down to -40°C. The explosion-proof Ex versions are rated for -25°C to +55°C, with a special IIB variant for temperatures down to -50°C.
 - **Enclosure:** All series variants (MOK, MOKED, MOKPED Ex) are rated **IP67**.
 - **Operating Mode:** Designed for short-time duty (S2, 10 minutes) and interrupted duty (S4, 25% load factor) with up to 1200 cycles per hour.
- **Technical Specifications:**
 - **Torque:** The series covers a wide range: **MOK 63** (16-80 Nm) up to **MOK 1000** (500-1000 Nm). The explosion-proof **MOKPED Ex** series covers 25 Nm to 600 Nm.
 - **Adjusting Time:** Ranges from 10 s/90° to 160 s/90° across the different models.
 - **Supply Voltage:** 1 x 230 V and 3 x 230/400 V, 50 Hz.
 - **Mechanical Connection:** Connection via flanges **F04, F05, F07, F10, F12** and output drives with either a **square hole** or **keyway**.
- **Outfit & Electronics:**
 - **Switches:** Standard electro-mechanical versions (MOK) include torque, position, and signalling microswitches.
 - **Position Transmitters:** Options include resistance (1x100 Ω), passive current (CPT 1Az), and active current (DCPT3) transmitters.
 - **Electronic System:** The MOKED and MOKPED Ex versions are equipped with the **DMS2 ED** or **DMS2** electronic systems, which replace mechanical components with contactless magnetic sensors for position and torque, offering diagnostics, an optional display, and local control.

2. Multi-Revolution Actuators

MODACT MON/MOP/MONJ & MONED/MOPED/MONEDJ Series



MOP

MOPED

**MON
MONJ**

MOP

**MONED
MOPED
MONEDJ**

These are robust multi-turn actuators for large valves, with versions for different environmental protections and power supplies.

- **Application:** Actuating valves (e.g., slide valves) and other devices requiring multi-turn motion.
- **Operating Conditions:**
 - **Temperature:** Standard range from -25°C to +70°C (MONED/MONEDJ) or +60°C (MOPED). A low-temperature option for -40°C is available.
 - **Enclosure:** **MONED/MONEDJ** series is **IP55**. **MOPED** series is **IP67**.
 - **Operating Mode:** S2 (10 min) or S4 (25% load factor) at up to 1200 cycles/hour.
- **Technical Specifications:**
 - **Torque:** The series covers a very wide range, from 20 Nm (Type 52 030) up to 3900 Nm (Type 52 036).
 - **Adjusting Speed:** Ranges from 7 to 145 rpm.
 - **Working Stroke:** Adjustable, typically from 2 to 250 revolutions, with special versions up to 2830 revs.
 - **Supply Voltage:** 3 x 230/400 V for MONED/MOPED; 1 x 230 V for MONEDJ.
 - **Mechanical Connection:** Flanges **F10, F14, F16, F25, F30** with various output drive shapes (A, B1, C, D, E) according to ISO 5210 and DIN standards.
- **Outfit & Electronics:**
 - **Electronic System:** The MONED, MOPED, and MONEDJ actuators use the **DMS2 ED** or **DMS2** electronic systems with contactless position and torque sensors.

- **CONTROL Version:** Can be equipped with an integrated position regulator, reversing contactors, and an electronic brake.
- **Position Transmitters:** Available with resistance, passive current (CPT), or active current (DCPT) transmitters.

MODACT MOED EEx Series



MO EEx



MOED EEx

Explosion-proof multi-turn actuators for hazardous industrial applications.

MODACT MOED EEx

- **Application:** Control of slide, gate, and globe valves in environments with explosive gas atmospheres (Zone 1 and 2).
- **Operating Conditions:**
 - **Temperature:** -25°C to +55°C (standard IIC); -50°C or -60°C to +55°C (special IIB).
 - **Enclosure:** IP54, IP55, or IP65.
 - **Explosion-Proof Rating:** Ex d IIC T4 Gb or Ex d IIB T4 Gb.
- **Technical Specifications:**
 - **Torque:** 20 Nm to 1800 Nm across models 52 120 to 52 125.
 - **Adjusting Speed:** 7 rpm to 145 rpm.
 - **Supply Voltage:** 3 AC 400V / 50 Hz.
 - **Mechanical Connection:** Flanges **F10, F14, F16, F25, F30** with drive shapes A, B1, C, D, E.
- **Outfit & Electronics:**
 - **Electronic System:** Equipped with the **DMS2 ED** system featuring contactless magnetic sensors, diagnostics, optional display, and local control.
 - **Cable Entries:** Uses certified cable glands (e.g., HAWKE type ICG 623) to maintain the explosion-proof enclosure.

MODACT MO EEx (Electro-mechanical Version)

- **Function:** An explosion-proof, electric rotary multi-turn actuator.
- **Application:** Controlling valves (slide, gate, globe) in environments with a danger of explosive gaseous atmospheres (Zone 1 and 2).
- **Control System:** It uses an electro-mechanical control board with reversing contactors. The service life with this system is rated for at least 1 million starts.
- **Explosion-Proof Rating:** The same ratings apply as for the MOED EEx: **Ex d IIC T4 Gb** or **Ex d IIB T4 Gb**, depending on the temperature range.

3. Lever Actuators

MODACT MPS & MPR Series



MPR



**MPS
MPSP**



**MPSED
MPSPED**

These actuators are designed for lever-operated devices, offering either constant or variable speed control.

- **Application:** Remote control and regulation of flaps, louvers, and valves.
- **Operating Conditions:**
 - **Temperature:** -25°C to +70°C (MPSED) or +60°C (MPSPED). A -40°C version is available. MPR operates from -25°C to +55°C.
 - **Enclosure:** MTNED/MPSED is IP55; MTPED/MPSPED is IP67. MPR is IP55.
- **Technical Specifications:**
 - **Torque:** MPS series: 80 Nm to 4,000 Nm. MPR series: 63 Nm to 2,500 Nm.
 - **Adjusting Speed:**
 - **MPS:** Constant speed, with adjusting times from 8 to 120 s/90°.
 - **MPR:** Variable speed, allowing adjustment of the travel time for the full 160° stroke.

- **Working Stroke:** **MPS** has an adjustable stroke up to 120°; **MPR** has a 160° stroke.
- **Supply Voltage:** 1 x 230 V and 3 x 230/400 V, 50 Hz.
- **Outfit & Electronics:**
 - **Electronic Systems:** Modern versions (MPSED/MPSPED) are equipped with the **DMS2 ED** or **DMS2** electronic systems.
 - **Dynamic Brake:** An optional electronic brake (BR2) is available for Control versions to reduce run-down time and improve regulation precision.

4. Linear Thrust Actuators

MODACT MTN & MTP Series



**MTP
MTPED**



**MTN
MTNED**



**MTP
MTPED**

This series converts rotary motion to linear thrust for valves requiring reciprocating motion.

- **Application:** Remote two- or three-position control of valves via linear motion.
- **Operating Conditions:**
 - **Temperature:** -25°C to +70°C (MTNED) or +60°C (MTPED). A low-temperature -40°C version is available.
 - **Enclosure:** **MTN/MTNED** is **IP55**. **MTP/MTPED** is **IP67**.
- **Technical Specifications:**
 - **Thrust:** Ranges from **5 kN to 63 kN**.
 - **Adjusting Speed:** Ranges from 27 mm/min to 200 mm/min.
 - **Working Stroke:** Max stroke ranges from 100 mm to 160 mm.
 - **Supply Voltage:** Primarily 3 x 230/400 V; some smaller MTPED models are available in 1 x 230 V.
 - **Mechanical Connection:** Connection via pillars with defined spacing and various pull-rod terminations (threads, joints).

- **Outfit & Electronics:**
 - **Electronic System:** The MTNED and MTPED versions are based on the MODACT MONED/MOPED series and use the **DMS2** or **DMS2 ED** electronic systems with contactless sensors.
 - **Control Version:** Available with an integrated position regulator, reversing contactors, local control, and an electronic brake.