

Service Unique Nice Youthful Energy Honesty

SUNYEH

M

SERIES

MULTI-TURN ELECTRIC ACTUATORS





Company Introduction

Sun Yeh Electrical Ind. Co., Ltd. was established in 1986 and it is committed to continuous technical innovation, the most advanced product quality management, organizational excellence, and outstanding customer satisfaction.

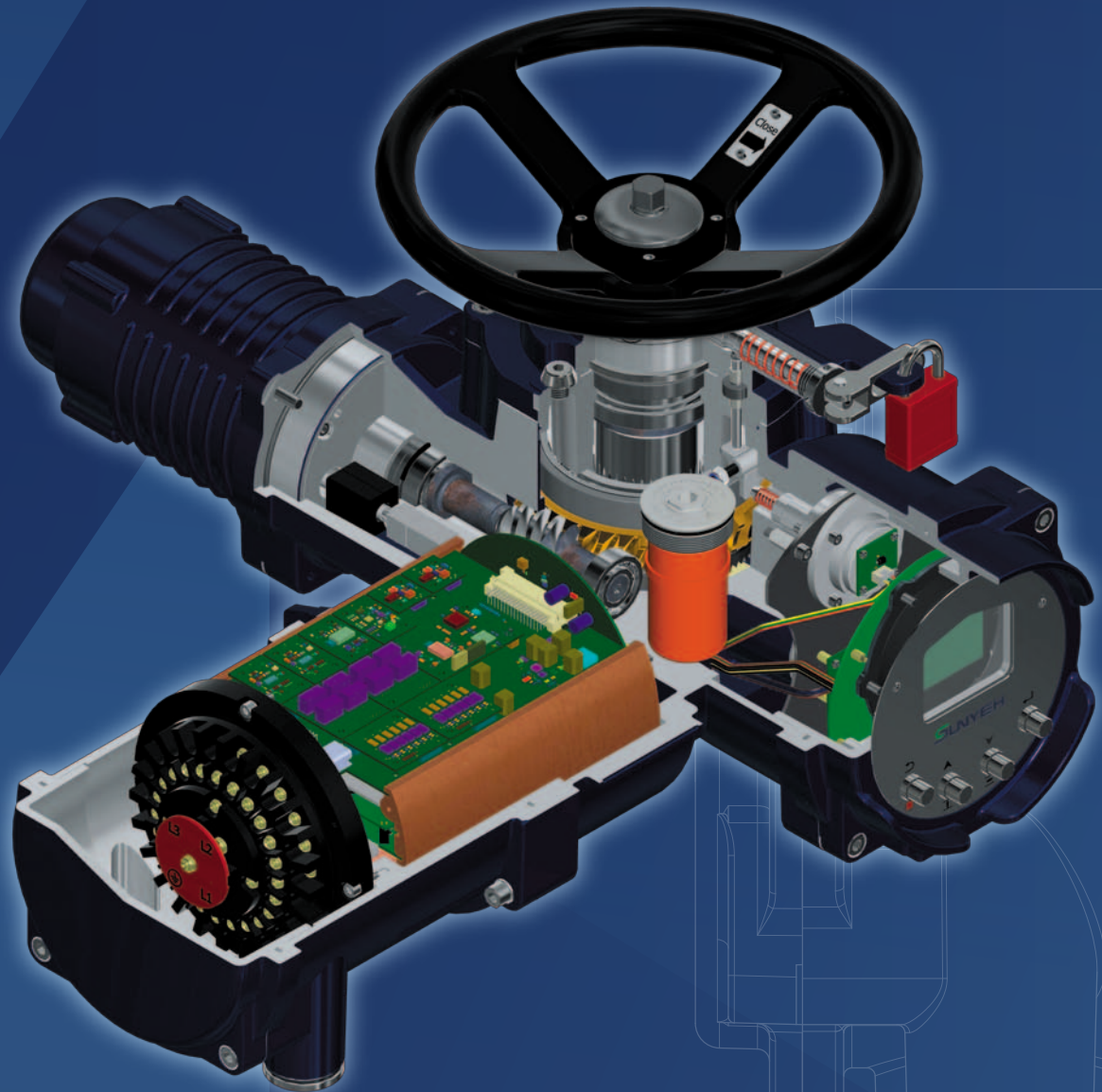
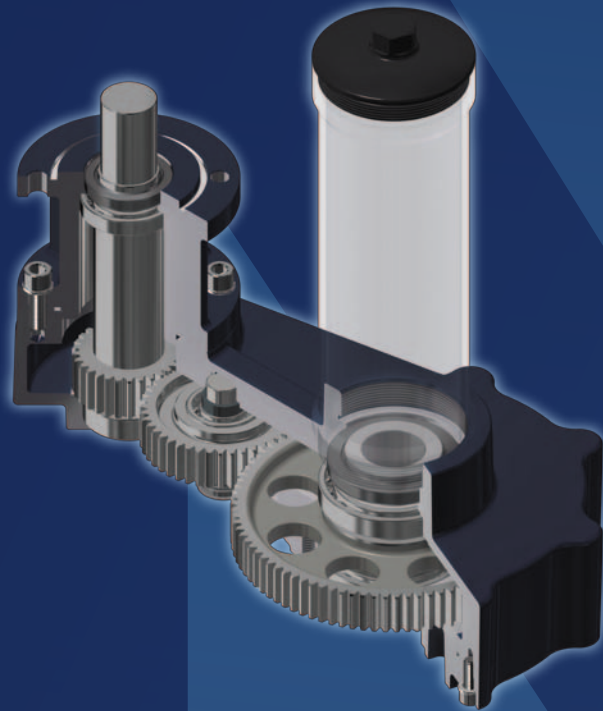


Our sustainable development drives the product line extension to include quarter-turn actuators, spring return fail-safe actuators, linear actuators, multi-turn actuators and explosion-proof actuators. Sun Yeh offers various products that can be widely applied to the control of industrial processes, flow control, water treatment, HVAC, chemical engineering, food processing, etc.

Sun Yeh is dedicated to providing you with high-quality products, which have been certified with CE, CSA, TS, SIL, CCC, ATEX, IECEx, and CNEx approvals, as well as meet RoHS, REACH and China RoHS environmental regulations, in addition to ISO 9001, ISO 14001, ISO 45001, and AEO.



Perfect Solution



M SERIES

MULTI-TURN ELECTRIC ACTUATORS

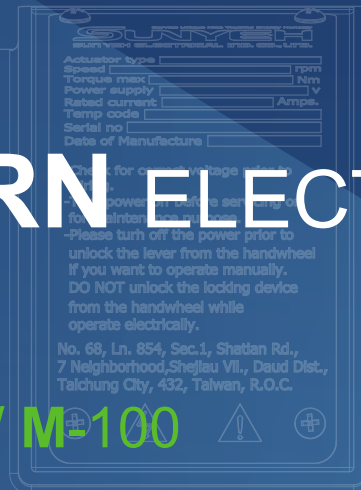
Product Overview

M-41 / M-55 / M-80 / M-100

Sun Yeh M series multi-turn electric actuators are designed to provide output torque from 41 N·m to 100 N·m (363 in·lb to 885 in·lb) and output speed from 15 rpm to 120 rpm which fit with various types of valves. After combining with a gearbox, the maximum output torque increases.

It comes standard with backlit LCD display and reed switches to make operation easily under different light conditions.

The manual override is equipped to enable the automatic operating mode switched to manual operation easily and stably, no matter under normal operation or during power outages.



SUNYEH



Product Features

- Five speeds can be chosen. The output torque remains constant when output speed changes.
- High efficiency BLDC motor technology allows output torque and speed adjustable in both directions.
- Torque overload protection at each end of stroke.
- Double-sealed and IP68 weatherproof.
- Patent obtained in UK, USA, Taiwan, China, Japan, and Germany.
- Setting, monitoring, and diagnosing are possible through local control and APP with Bluetooth.
- Available communication solutions: Modbus RTU RS485, Profibus DP V0.
- Temperature of motor and electronic components is monitored.
- Non-intrusive design allows setting and adjusting without cover removal.
- Multi-language LCD display incorporated with reed switches makes operating, setting, adjusting easy and simple.
- Automatic phase correction and phase loss protection.
- Instantaneous reversal protection.
- Four levels of assigned password protection hierarchical prevent unauthorized changes.

Function

General Function

- Incremental encoder and bluetooth transmission.

Protection Function

- Overload protection
- Motor thermal protection
- Automatic phase correction
- Phase loss protection
- Instantaneous reversal protection
- Automatic self-test and diagnosis
- Auto retry to loosen jammed valve

Valve Protection

- Torque overload protection:
While the actuator cannot withstand the excess torque, the actuator is going to automatically turn off and the valve will stay in the last position.
- The valve stem protection:
The rising stem with a protective sleeve provides dustproof and personal safety.

Service Condition

- Ambient temperature: -20°C to +70°C / -4°F to 158°F
- Relative humidity: 5% to 95%

Standard Specification

Enclosure

- Polyester powder coated aluminum alloy.
Corrosion protection C3 according to ISO 12944-6.
- Waterproof and dustproof enclosure: IP68 (8 m, 120 hrs)
Standard: IEC 60529 Edition 2.1: 2001.

Motor

- BLDC motor and insulation class F.

Position Indicator

- All models are equipped with an easily visible LCD display position indicator.

Duty Cycle

- Conform to EN 15714-2 and IEC 60034-1.
- Class A & B, S2-15 min
- Class C: 1200 starts per hour

Control Type

- On / Off control (digital signals)
- Modulating control
Analog input signals: 0-20 mA, 4-20 mA, 0-5 V, 1-5 V, 0-10 V, 2-10 V
Analog output signals: 0-20 mA, 4-20 mA, 0-5 V, 1-5 V, 0-10 V, 2-10 V
- Communication: Modbus RTU RS485, Profibus DP V0

Digital Input Control Voltage

- Standard: 24 V DC
- Optional: 110 V, 220 V

Digital Output Signal Board (DO)

- Including 4 contacts
Standard: Latching
Optional: Non-Latching

Endstops

- Digital endstops
- Position sensing: Incremental encoder

Manual Override

- Handwheel / electric control switch via lever
When the motor is electrically activated, for safety reasons, the handwheel will not rotate.

Gear Set

- Consists of worm shaft, worm gear and planetary deceleration device.

Lubricating

- Specifications: 75W80

Supply Voltages

- M series motor permits a range of voltages to be connected without modification.
- The voltages are:
220 V AC / 1PH, 50 / 60 Hz
220-415 V AC / 3PH, 50 / 60 Hz

Conduit Entries

- 1 x 1-1/2" NPT, 2 x 1" NPT

APP

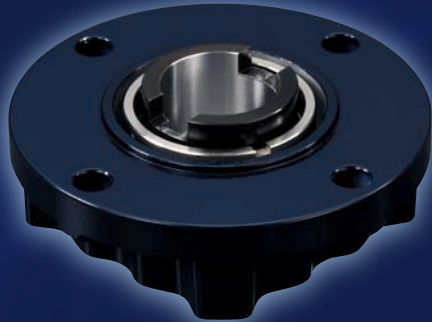
- The multi-turn actuators offer bluetooth technology.
When connected with SUNYEH APP allows remote control, reading parameters, and setting parameters.

SUNYEH APP
(iOS / Android)



Battery

- Specifications:
Non-rechargeable 「Alkaline battery」 : AA
Lithium battery: LS 33600
(Battery is not delivered with the actuator. It is available in retail and specialty shops.)



Non-rising stem



Rising stem

Technical Data

Model	Output Speed	Factory Setting	Non-rising Stem				Rising Stem				Mounting Flange			
			Max Torque		Max Stem Acceptance Diameter		Max Thrust			Max Stem Acceptance Diameter				
			N·m	in·lb	mm	kg	lb	kgf	lbf	kN		mm	kg	lb
M-41	120, 100, 80, 60, 40	40	41	363	35	52	115	4080	8996	40	28	55	121.5	F10
M-55	90, 75, 60, 45, 30	30	55	487										
M-80	60, 50, 40, 30, 20	30	80	708										
M-100	45, 37, 30, 22, 15	30	100	885										

- Five speeds can be chosen. For detailed operation, please refer to the operation manual.

Optional Items

Output Drive Type

- Non-rising stem
- Rising stem

Digital Output Signal Board (DO)

- 4 additional contacts for feedback.

Conduit Entries

- 1 x M40 x 1.5, 2 x M25 x 1.5 (Adapter)

Stem Protection Sleeve

- Provides dust proof for the rising stem.
- Materials: PC
- Size: Ø40 mm, Ø76 mm (250 mm long / each) (Ø40 mm used for actuator and Ø76 mm used for gear box)

Anti-condensation Heater

- A space heater can increase the internal temperature and keep the inside of actuator dry to avoid the moisture causing actuator failure under low temperature or high humidity. It is equipped with a thermostat to switch the anti-condensation heater off when the temperature inside the actuator is over 25±5°C / 77±9°F. Available in 24 V DC, 110 V AC or 220 V AC.

G Series Multi-turn Gearbox

G201 Multi-turn Gearbox														
Model	Output Speed	Factory Setting	Non-rising Stem					Rising Stem					Mounting Flange	
			Max Torque		Max Stem Acceptance Diameter	Weight		Max Thrust			Max Stem Acceptance Diameter	Weight		
			N·m	in·lb	mm	kg	lb	kgf	lbf	kN	mm	kg		lb
M-41	40, 33, 27, 20, 13	13	123	1090	40	22	48.5	7140	15744	70	32	25	55.1	F12
M-55	30, 25, 20, 15, 10	10	165	1460										
M-80	20, 17, 13, 10, 7	10	240	2125										



Non-rising stem

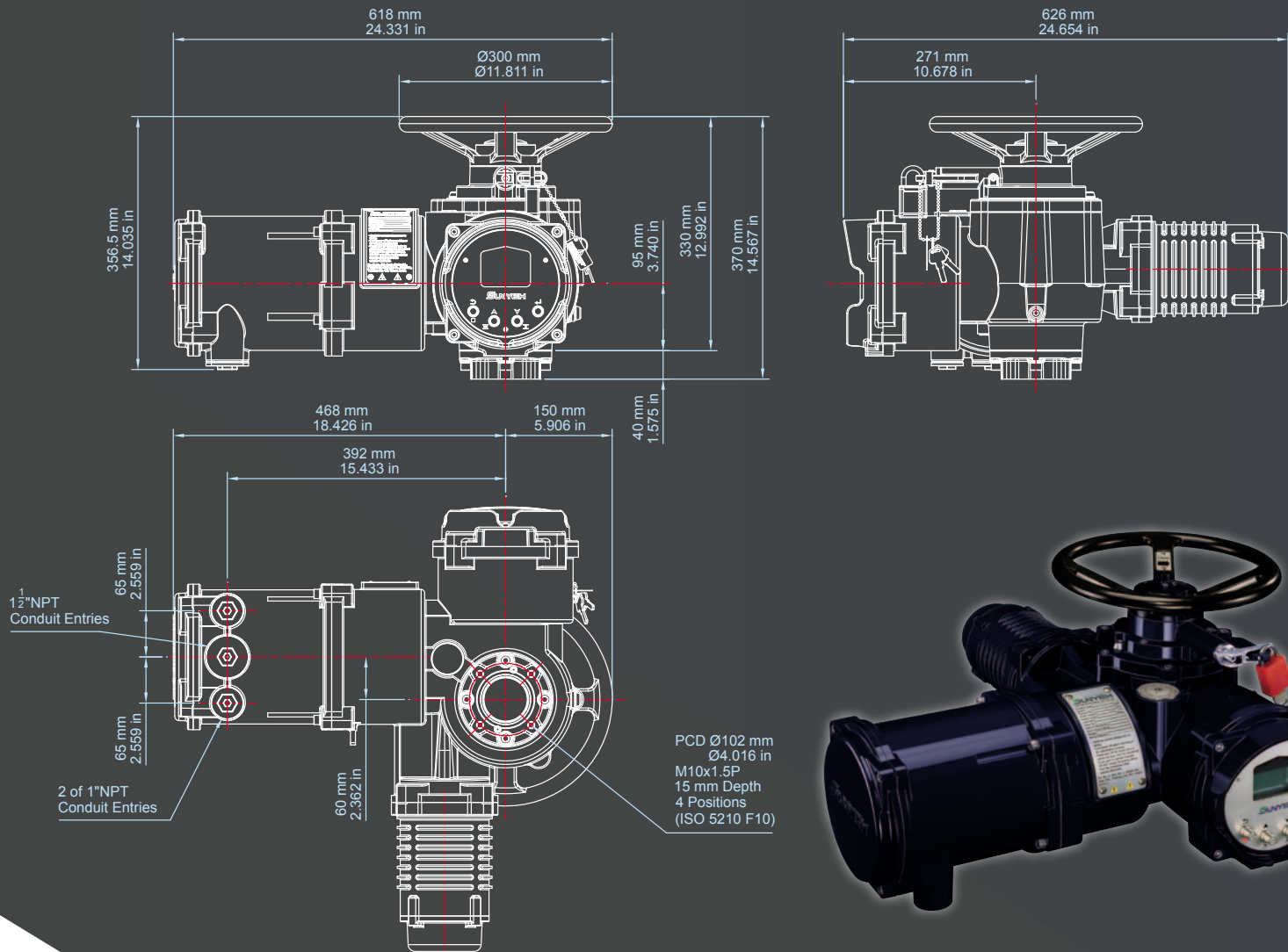
G202 Multi-turn Gearbox														
Model	Output Speed	Factory Setting	Non-rising Stem					Rising Stem					Mounting Flange	
			Max Torque		Max Stem Acceptance Diameter	Weight		Max Thrust			Max Stem Acceptance Diameter	Weight		
			N·m	in·lb	mm	kg	lb	kgf	lbf	kN	mm	kg		lb
M-41	24, 20, 16, 12, 8	8	205	1815	45	25	55.1	10200	22491	100	36	27.5	60.6	F14
M-55	18, 15, 12, 9, 6	6	275	2435										
M-80	12, 10, 8, 6, 4	6	400	3540										



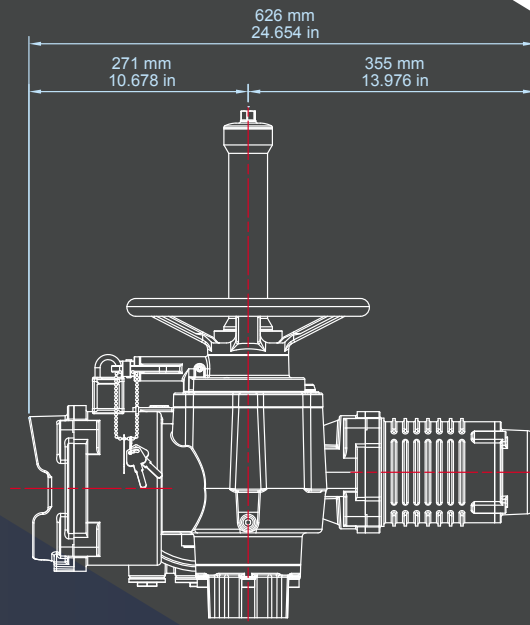
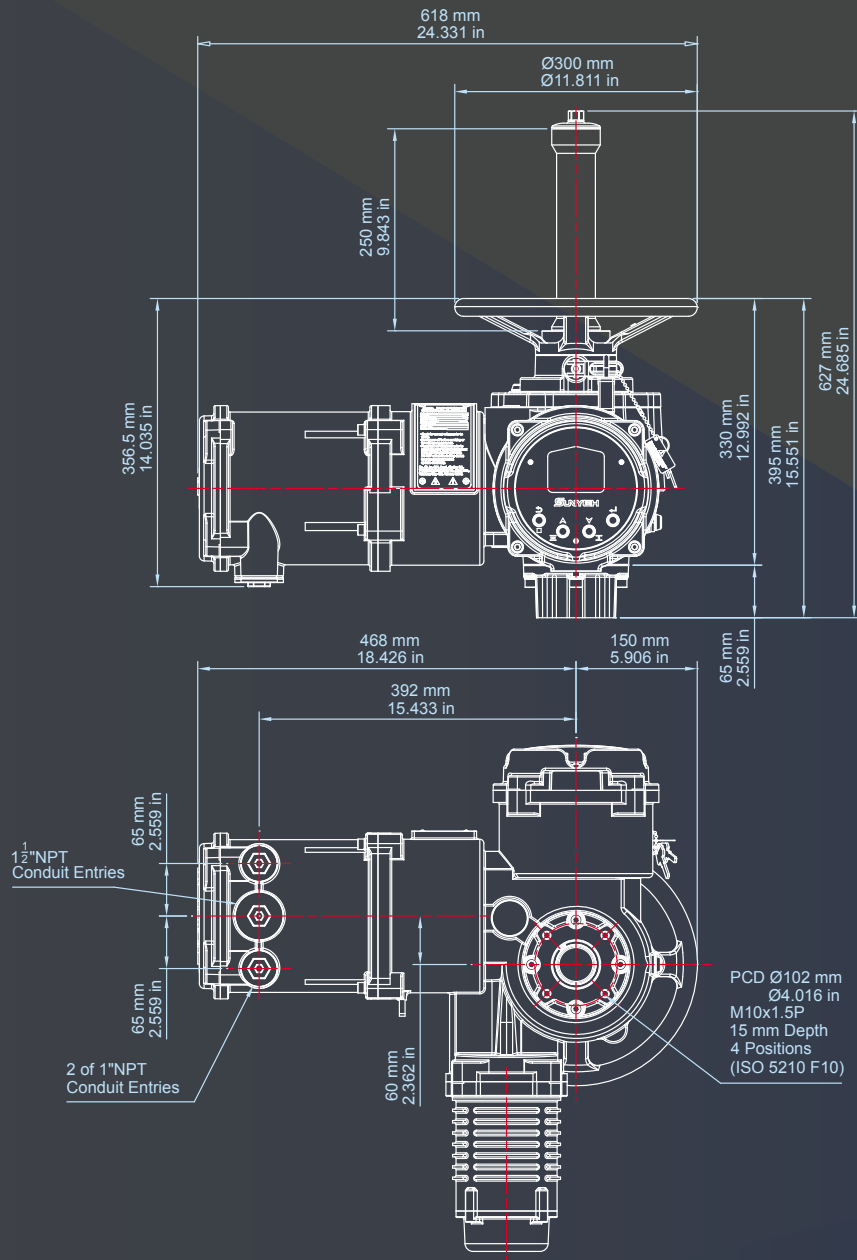
Rising stem

G203 Multi-turn Gearbox														
Model	Output Speed	Factory Setting	Non-rising Stem					Rising Stem					Mounting Flange	
			Max Torque		Max Stem Acceptance Diameter	Weight		Max Thrust			Max Stem Acceptance Diameter	Weight		
			N·m	in·lb	mm	kg	lb	kgf	lbf	kN	mm	kg		lb
M-55	13, 11, 9, 6, 4.3	4.3	385	3410	60	32.5	71.6	15300	33737	150	44	36	79.4	F16
M-80	8.6, 7, 6, 4, 2.8	4	560	4960										
M-100	6.4, 5, 4, 3, 2.1	4	700	6200										

Outline Dimensions



Non-rising Stem



Rising Stem



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