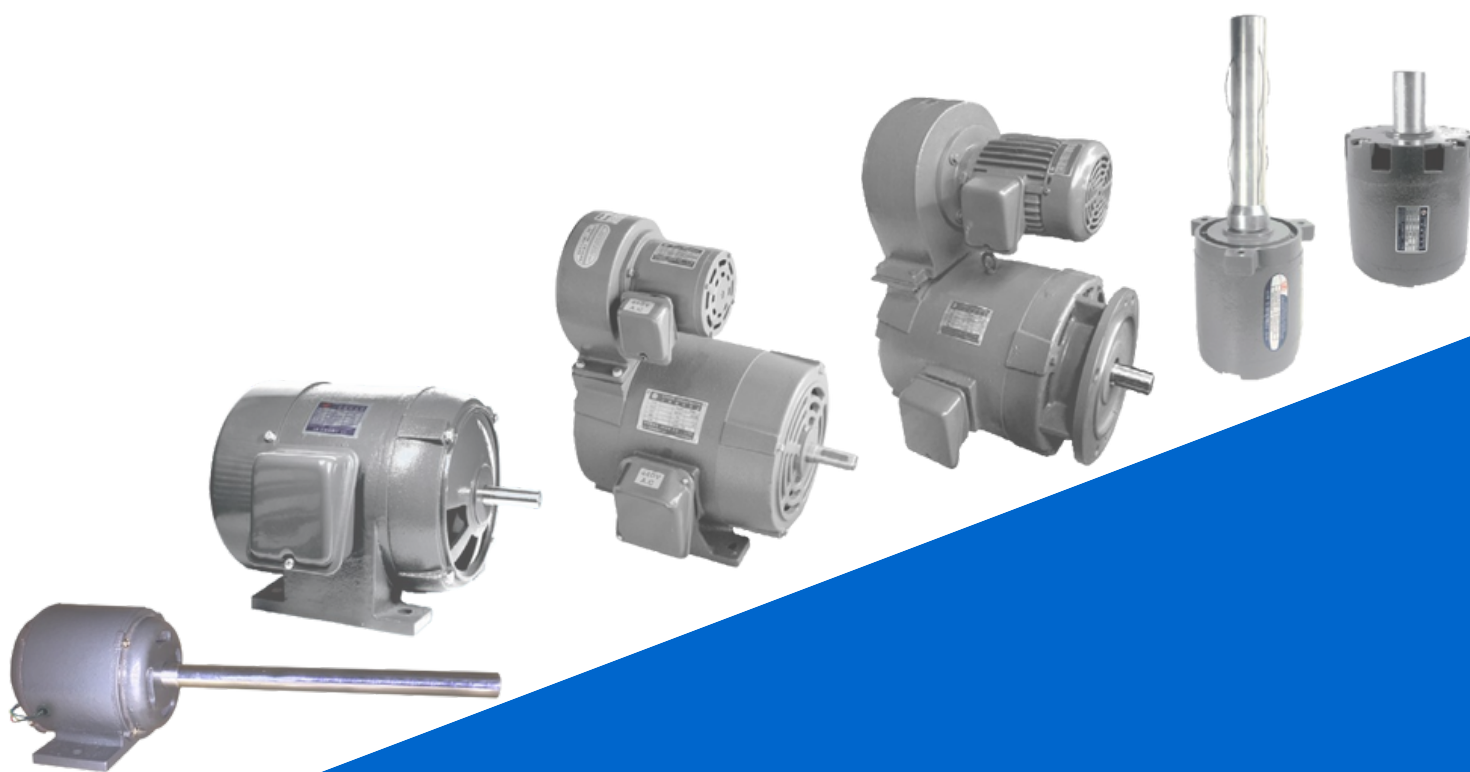




泰利電器實業股份有限公司
TAILI ELECTRIC CORPORATION

CATALOG



TORQUE MOTOR

TL-TM

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About TAILI



泰利電器
實業股份有限公司

TAILI ELECTRIC
CORPORATION

TAILI® is a professional voltage regulation testing equipment manufacturer based in Taiwan, established in Northern Taiwan in 1993. Initially, the company focused on supporting the development of domestic industries and infrastructure, specializing in the research, production, and customization of various types of Variable (Auto)Transformers (VARIAC) also known as Voltage Regulators (VOLTAC).

TAILI is more than a brand name — it represents our core philosophy and corporate culture:



Technology

Driving continuous innovation for efficient and stable transformer technology.

Accuracy

Ensuring precise voltage control and rigorous quality testing.

Innovation

Developing creative and customized solutions to meet diverse industry needs.

Loyalty

Valuing long-term partnerships with customers through trust and reliable service.

Integrity

Upholding professionalism and integrity to build a strong reputation worldwide.

Looking ahead, TAILI® will continue to enhance product technology and service quality, expand internationally, and strive to be a global leader in variable transformers. Thank you for your trust and support — we look forward to a bright future together!



Our product range includes:

➔ Automatic Voltage Regulators (AVR)

(Automatic Voltage Stabilizer)

TL-AVR

➔ Variable Transformers

(Slide Voltage Regulators)

TL-SLIDAC

➔ Induction Voltage Regulators (IVR)

(Induction Voltage Stabilizer)
(Automatic Induction Voltage Stabilizer)

TL-IVR

➔ Power Transformers

(high and low Voltage Transformers, Isolation Transformers, Autotransformers, Customized Transformers)

TL-TR

➔ Puncture / Insulation Tester

TL-LH

➔ Torque motor

(Horizontal Torque Motor)
(Vertical Torque Motor)
(Worm Gear Reducer)

TL-TM





With the rapid development of technology, the booming construction of AI data centers, and the massive demand for electric energy, our products play an indispensable role. Our applications range from equipment load testing to voltage adjustment and stabilization in power equipment systems. At TAILI®, quality is our top priority. We strictly select raw materials and follow standardized production processes to ensure stable and excellent transformer performance. MADE in TAIWAN, our products are certified with EU CE standards (EN/IEC 61558-1, EN/IEC 61558-2-13) to meet international safety and quality standards.

We have supported major domestic and international companies, including those in the United States, Canada, the United Kingdom, Sweden, Japan, Mexico, and Indonesia. We also supply equipment and products to public power utilities and government institutions, including foreign embassies around the world.

OEM/ ODM/ OBM/ R&D

In addition to our long-term dedication to the manufacturing of power equipment, TAILI ELECTRIC CORPORATION continuously invests in the research and development of advanced power electronics technologies. We actively adopt cutting-edge innovations from abroad, integrating them with localized insights to enhance and optimize our in-house designs. Originally known as “泰利電器,” we have built a solid reputation for technical progress and product reliability. Now, under the global brand “TAILI ELECTRIC CORPORATION,” we are expanding internationally to contribute to the advancement of industries and infrastructure worldwide.

We provide comprehensive capabilities in OEM (Original Equipment Manufacturing), ODM (Original Design Manufacturing), OBM (Own Brand Manufacturing), and R&D, making us a trusted partner in the power electronics industry. We specialize in delivering customized voltage regulators, transformers, automatic voltage stabilizers, and a wide range of tailor-made power supply solutions. Whether it's external design, internal structure, controller configuration, or functional upgrades, our expert team ensures every product meets the highest technical and safety standards.

With a strong engineering foundation and cross-industry knowledge, we support customers through every development stage—from technical evaluation and prototype development to mass production and quality assurance. All products are manufactured in compliance with international certifications such as CE, EN/IEC 61558, ensuring global market compatibility.

Looking ahead, we will continue to strengthen our R&D capabilities and expand our range of high-value, innovative power products, solidifying our role as a reliable Taiwan-based power solution provider for global clients.

TL-TM

Introduction

Torque motors(TL-TM) are designed to provide high starting stability, especially in low-speed ranges or under locked rotor conditions. The torque is at its peak at zero speed and gradually decreases as speed increases, maintaining a balanced motor and load performance. Motor rotation speed can be adjusted by varying the supply voltage when the loading torque remains constant. These motors are ideal for continuous winding and unwinding of materials at a consistent speed with controlled tension. They are particularly suited for applications requiring forced static torque during or after operation. Torque motors, crafted by TAILI, are widely utilized in industries where materials need to be wound onto reels, including textiles, paper, rubber, plastic (round wire, flat wire, plastic bags, cling film), metal wire, cable, and printing machinery.

Features

- Robust design with a streamlined and durable construction.
- Features low starting current combined with high starting torque.
- Advanced cooling capability ensures reliable long-duration operation.
- Wide operating range achievable through torque controller integration.

Applications

- Suitable for winding applications (center winding or surface winding), including use in PP & PE monofilament making machines, monofilament extrusion lines, blown film extruders, slitting machines, and circular looms.
- Compatible with high-performance crusher machines.
- Applicable for desizing machines, fabric dyeing, and printing equipment.
- Designed for starting the master motor and controlling braking devices.

Required parameters

Technical Specifications:

- Maximum winding tension, voltage, and frequency.
- Operating speed range (maximum and minimum).
- Minimum winding diameter and maximum finished roll diameter.
- Available retarding motor models and gear ratios.

Notes:

- In principle, 4-pole motors are the most economical choice.
- Conversion: 1 kg·m = 100 kg·cm.
- Approximation: 1 HP 4-pole motor \approx 0.427 kg·m.
- Output range: 0.01 to 3.0 kg·m, available in various models including 2-pole, 4-pole, 6-pole, and 8-pole.

POLE	Sync Speed (rpm)		Actual Operating Speed Range (rpm)	
	50Hz	60Hz	50Hz	60Hz
2	3000	3600	0~2000	0~2400
4	1500	1800	0~1000	0~1200
6	1000	1200	0~670	0~800
8	750	900	0~500	0~600
12	500	600	0~330	0~400

Frame-No.

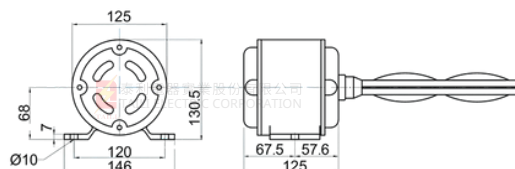
TL-TM

Shaft: Customized according to customer requirements (images for reference only)

Horizontal Torque Motor

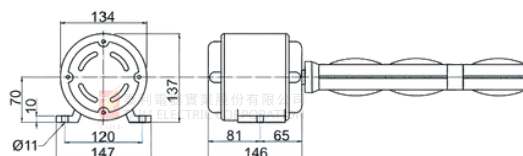
1

Torque Range: 1.2–2 kg·cm



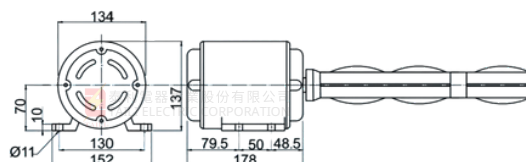
2

Torque Range: 1.2–3 kg·cm



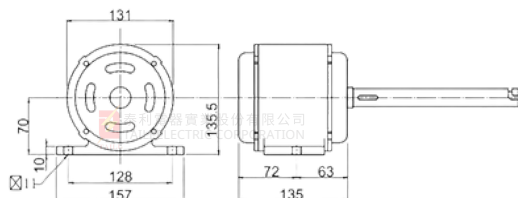
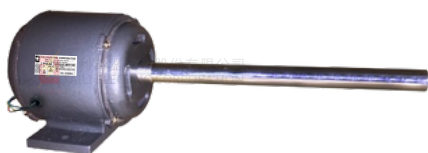
2L

Torque Range: 1.2–5 kg·cm



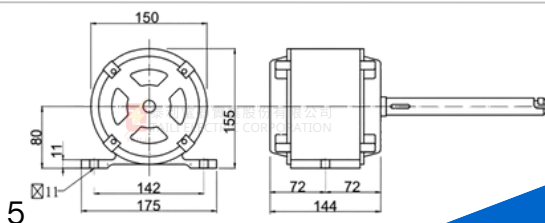
N2

Torque Range: 1.2–2.4 kg·cm



N3

Torque Range: 3–5 kg·cm



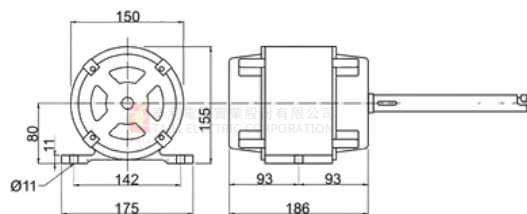
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TL-TM

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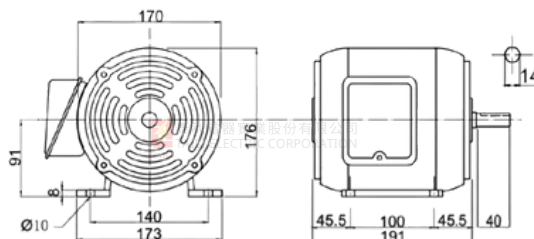
N3L

Torque Range: 3-7.5 kg·cm



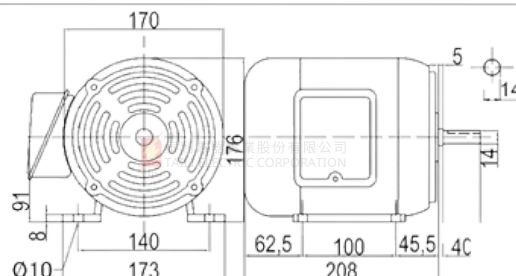
3B

Torque Range: 5-10 kg·cm



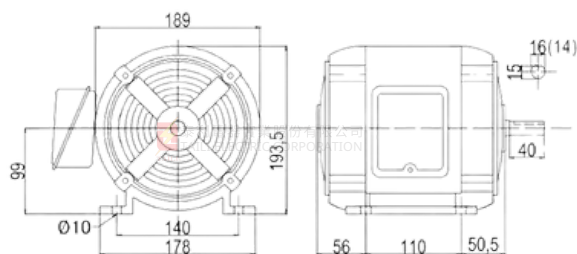
3F

Torque Range: 5-10 kg·cm



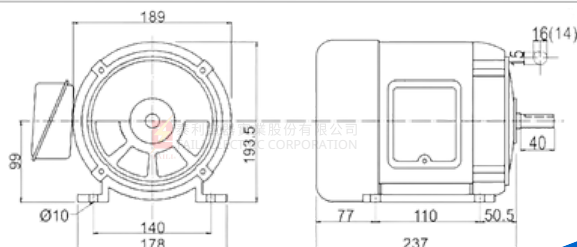
4B

Torque Range: 5-15 kg·cm



4F

Torque Range: 5-15 kg·cm



Frame-No.

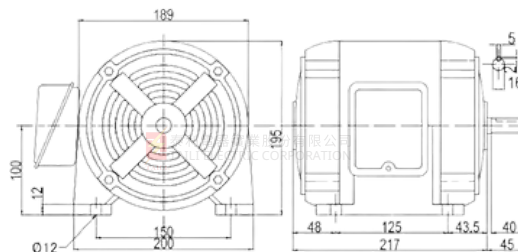
TL-TM

Shaft: Customized according to customer requirements (images for reference only)

5B



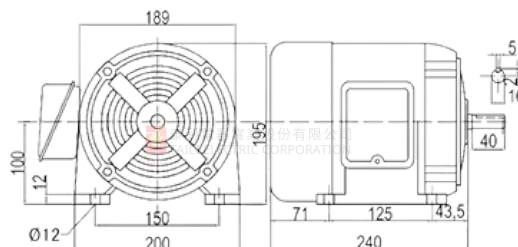
Torque Range: 5-20 kg·cm



5F



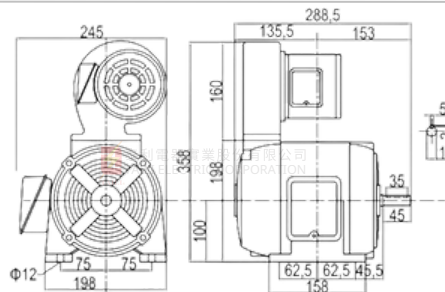
Torque Range: 5-20 kg·cm



5

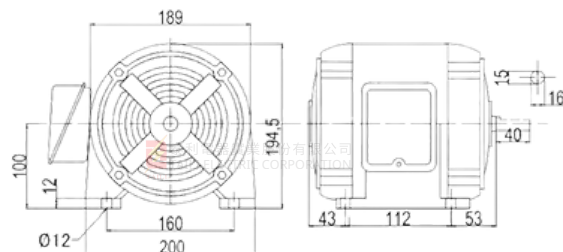


Torque Range: 5-20 kg·cm



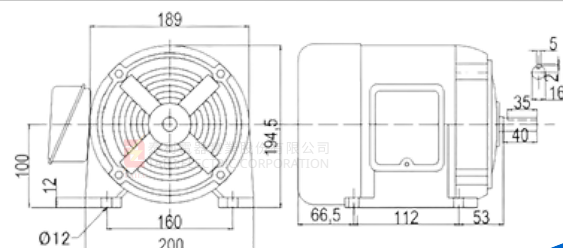
N5B

Torque Range: 5-20 kg·cm



N5F

Torque Range: 5-20 kg·cm



Frame-No.

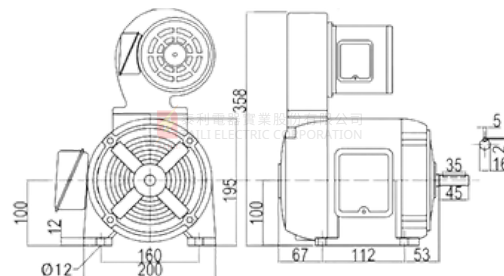
TL-TM

Shaft: Customized according to customer requirements (images for reference only)

N5



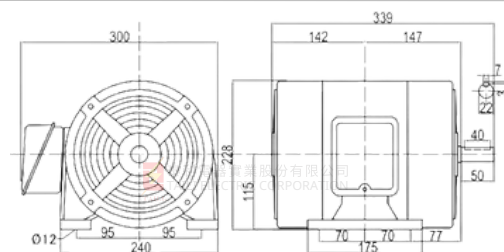
Torque Range: 5-20 kg·cm



6B



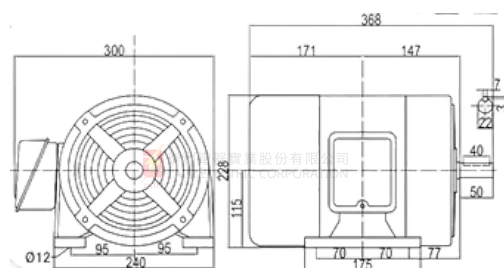
Torque Range: 20-50 kg·cm



6F

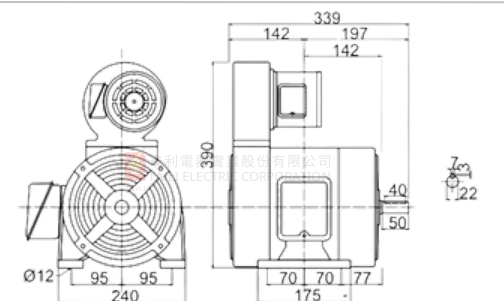


Torque Range: 20-50 kg·cm



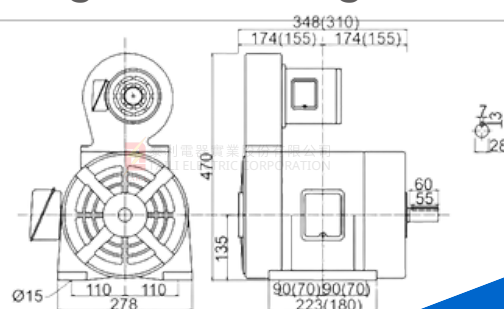
6

Torque Range: 20-75 kg·cm



7L(7)

Torque Range: 75-150 kg·cm



Frame-No.

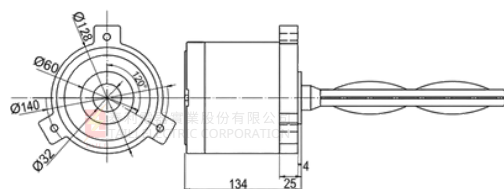
TL-TM

Shaft: Customized according to customer requirements (images for reference only)

Vertical Torque Motor

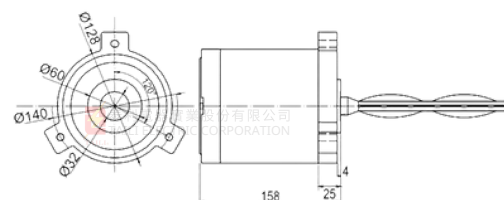
A

Torque Range: 1.2-3 kg·cm



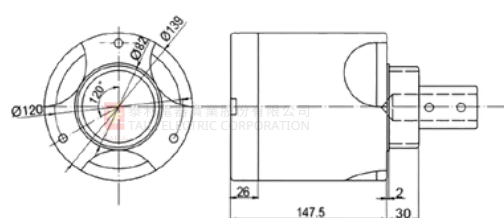
AL

Torque Range: 1.2-5 kg·cm



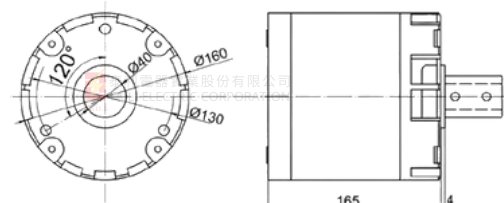
NA

Torque Range: 1.2-3 kg·cm



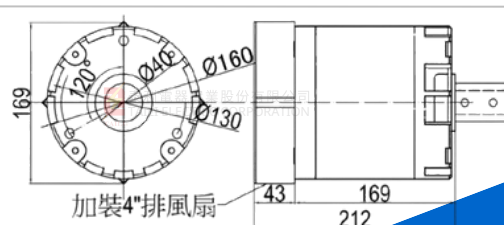
B

Torque Range: 5-10 kg·cm



BF

Torque Range: 5-10 kg·cm



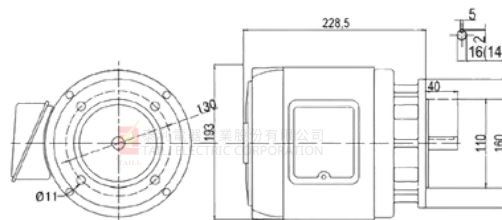
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Shaft: Customized according to customer requirements (images for reference only)

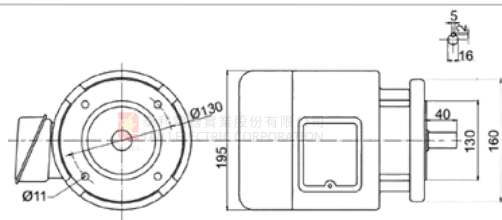
CB

Torque Range: 5-20 kg·cm



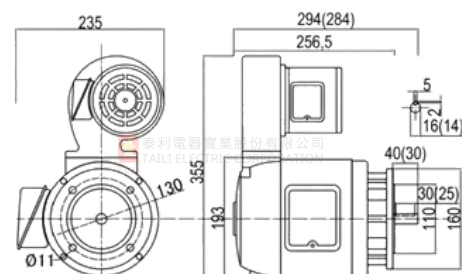
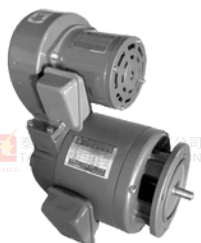
CF

Torque Range: 5-20 kg·cm



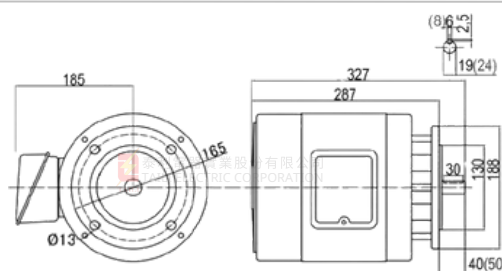
C

Torque Range: 5-20 kg·cm



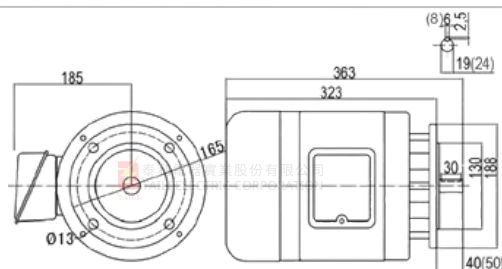
DB

Torque Range: 20-50 kg·cm



DF

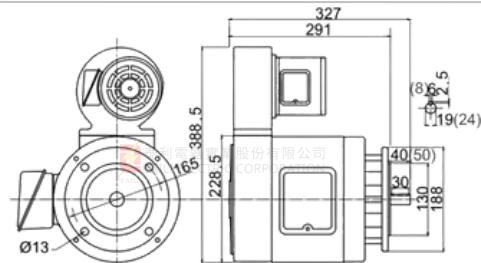
Torque Range: 20-50 kg·cm



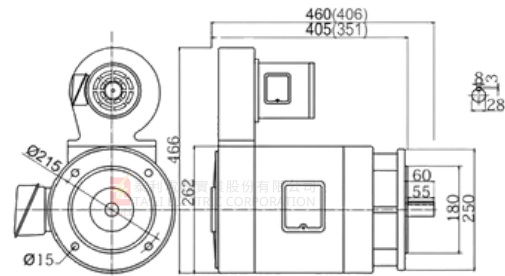
Shaft: Customized according to customer requirements (images for reference only)

D

Torque Range: 20-75 kg·cm


$$EL(E)$$

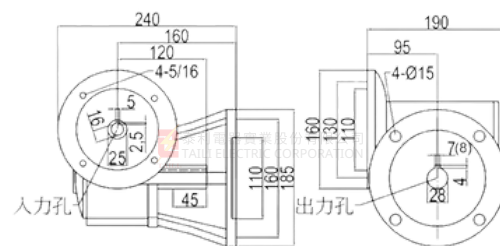
Torque Range: 75-150 kg·cm



Worm Gear Reducer

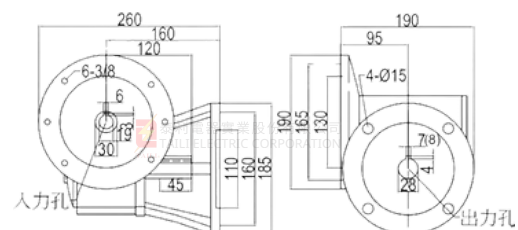
1/2HP-1

Horse Power: 1/2hp



1HP-1

Horse Power: 1hp



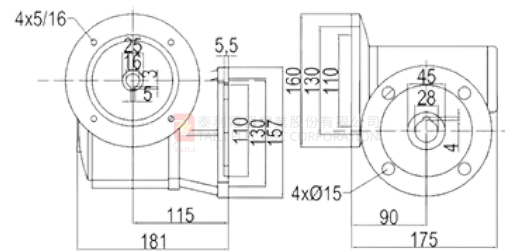
Frame-No.

TL-TM

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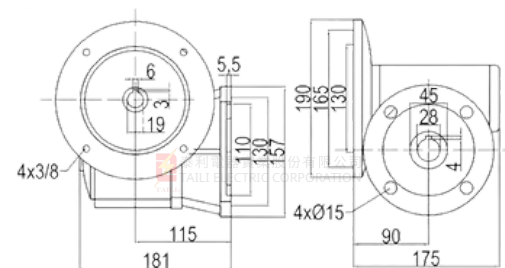
1/2HP-2

Horse Power: 1/2hp



1HP-2

Horse Power: 1hp



TL-TM

Controller

➡ Variable Transformers (Slide Voltage Regulators)

(Slide Voltage Regulators)

➔ Durable (>10yrs)



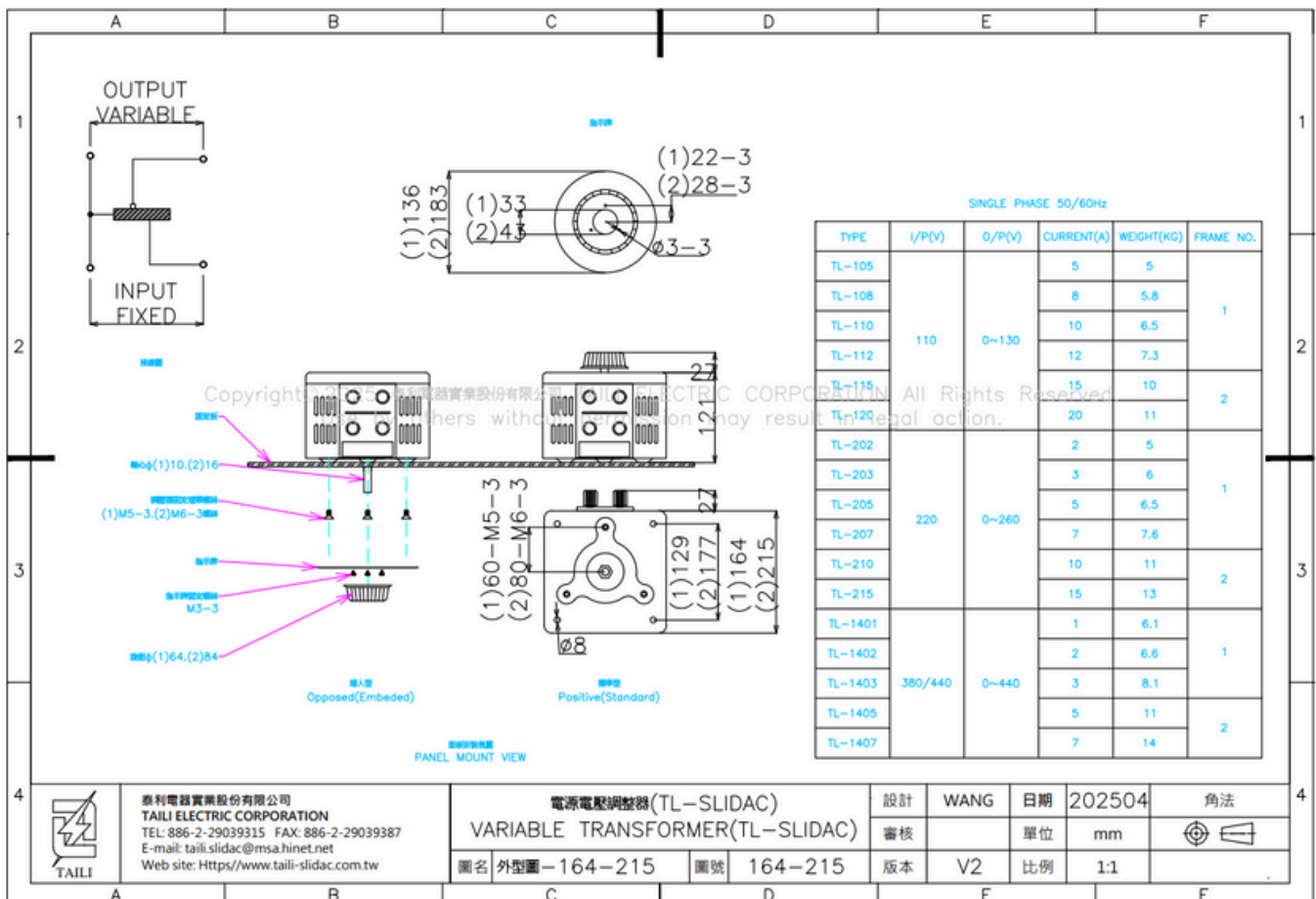
Intuitive

TL-SLIDAC

SINGLE-PHASE



TYPE	I/P(V)	O/P(V)	CURRENT(A)	WEIGHT(KG)
TL-202	200~240	0~I/P*1.16	2	5
TL-203			3	6
TL-205			5	6.5
TL-207			7	7.6
TL-1401	380~480	0~480	1	6.1
TL-1402			2	6.6
TL-1403			3	8.1
TL-1405			5	11
TL-1407			7	13
TL-1410			10	23



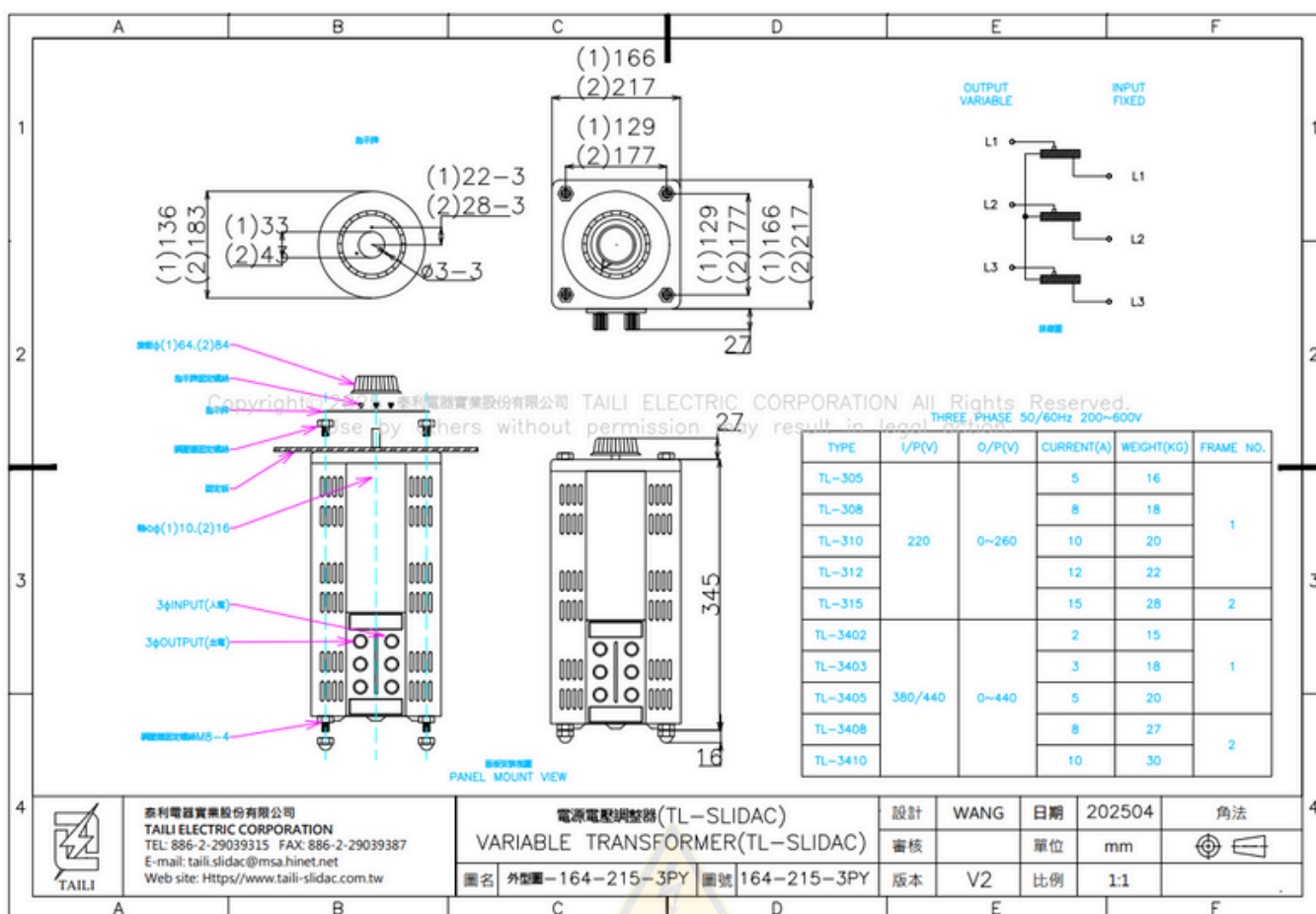
TL-TM

TL-SLIDAC

THREE-PHASE



TYPE	I/P(V)	O/P(V)	CURRENT(A)	WEIGHT(KG)
TL-305	200~240	0~I/P*1.16	5	16
TL-308			8	18
TL-310			10	20
TL-312			12	22
TL-315			15	28
TL-3402	380~480	0~480	2	15
TL-3403			3	18
TL-3405			5	20
TL-3408			8	27



TL-TM

⊕ Electronic Motor Controller

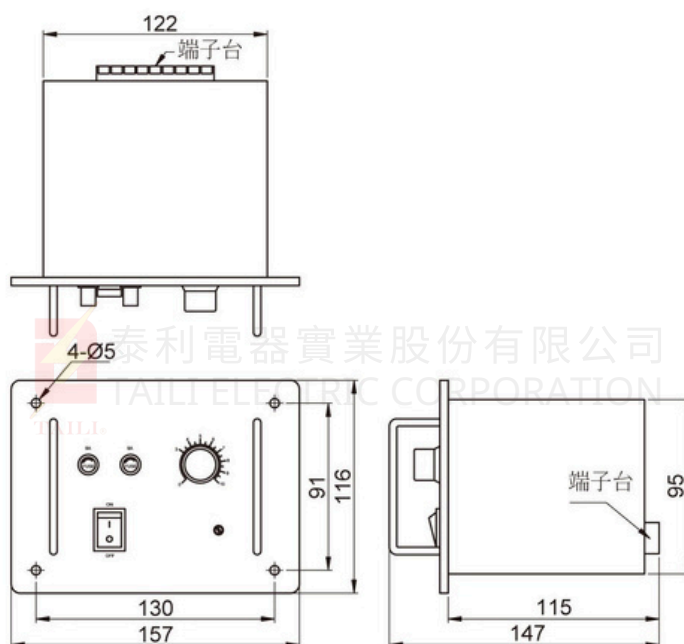
⊕ Compact size

⊕ Lightweight

SINGLE-PHASE



TYPE	ETC-328 ETC-345
Rated Current	5~8A
Speed Range	1~10
Installation Method	Plug-in
Weight(kg)	1



TL-TM

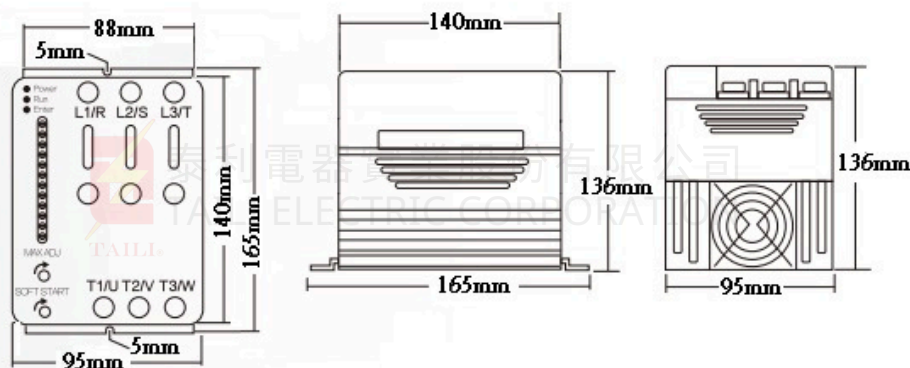
THREE-PHASE



Introductions:

- Power regulator protection features:
 - (1) Source power phase loss detection.
 - (2) Fuse disconnection detection.
 - (3) Overtemperature protection on the controller heat sink.
 - (4) Fault output contact for remote monitoring, contact rating: 240VAC/5A.
 - (5) Fuse overtemperature fault indication.
- The power regulator complies with CE international safety certification standards.
- Equipped with fuse disconnection indicator lamps for R, S, and T phases, and provides fault output contacts for emergency system control.
- Cooling fan operation is temperature-controlled: it starts at 55°C and stops at 45°C, extending fan lifespan by 2-3 times.
- Applications: IR lamps, quartz lamps, molybdenum disilicide heaters, general heaters, torque motor control, shoe-making machinery, plastic blow molding machines, plastic extrusion machines, vacuum deposition equipment, vacuum sputtering equipment, heat treatment furnaces, electric melting furnaces, electric boilers, enamel wire machinery, yarn drawing machines, textile machinery, constant temperature and humidity systems.
- Compact size, simple wiring, and user-friendly operation.

	Discriptions
Main power supply voltage	AC 220V 380~480V $\pm 10\%$
Auxiliary voltage	AC 220V $\pm 15\%$ 50/60Hz
Rated current	20A, 36A, 52A, 68A
Operating frequency	47~63Hz
Output method	Phase control output
Phase input control signal	4-20mA, 0-5V, 1-5V, 0-10V, 2-10V, 16 seconds soft start.
Output voltage range	0~100%
Operating environment	-10°C~50°C Humidity below 90%RH
Insulation resistance	More than 20 M Ω (between power and chassis), more than 20 M Ω (between input signal and chassis)
Dielectric strength	Between power and chassis 2500VAC/1 minute, between power and input signal 1000VAC/1 minute





TORQUE MOTOR

TL-TM

Contact Us

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