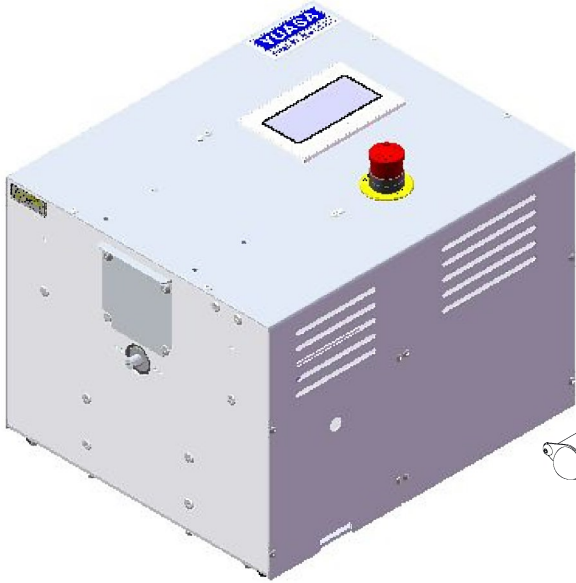
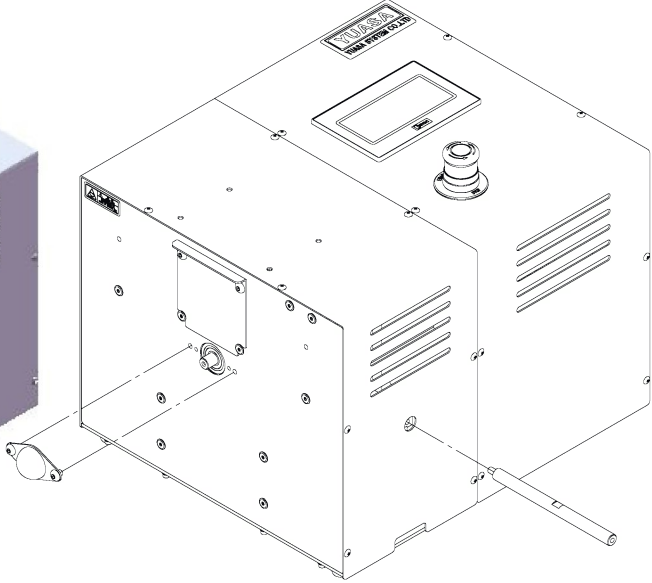
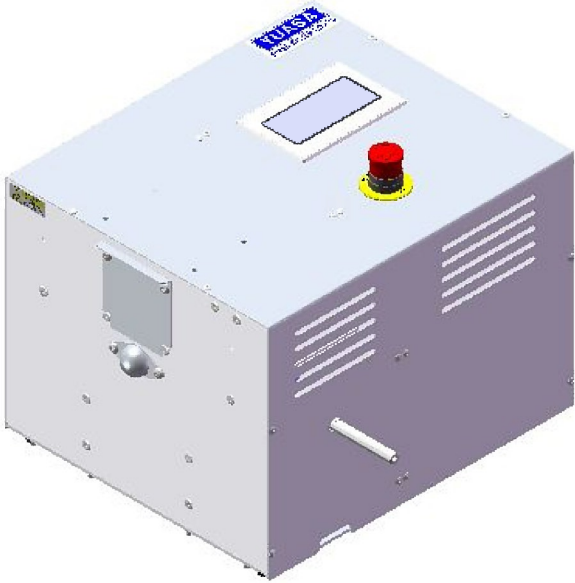




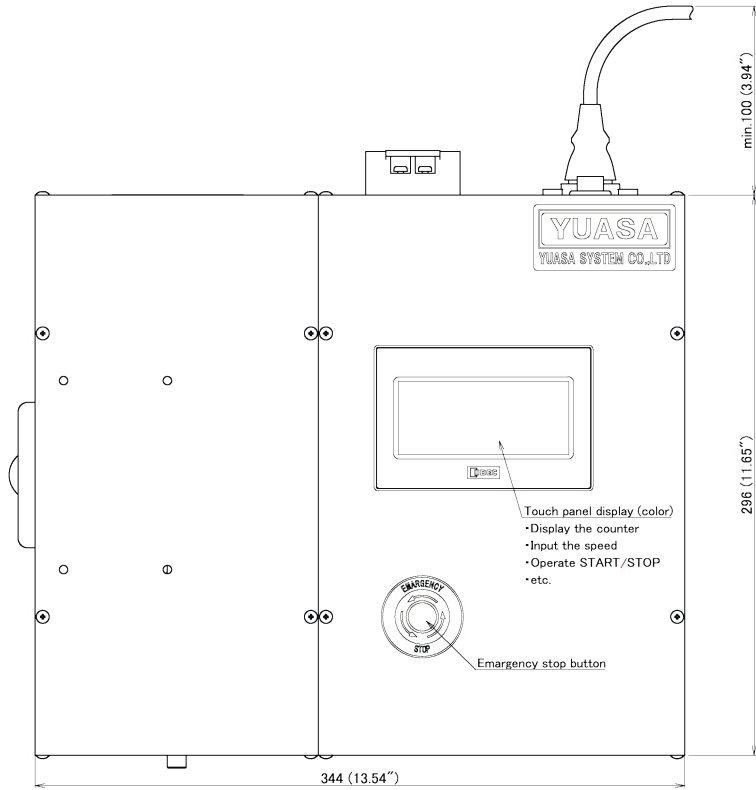
Rotary Reciprocation Mode



Remove (or attach) the shaft-cover and the linear shaft



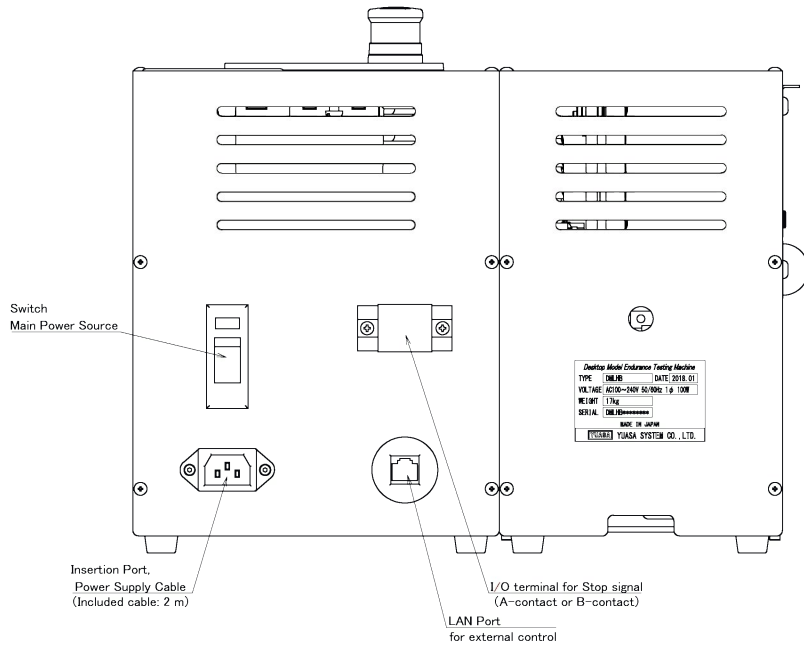
Linear Reciprocation Mode



Touch panel display (color)
• Display the counter
• Input the speed
• Operate START/STOP
• etc.



Emergency stop button

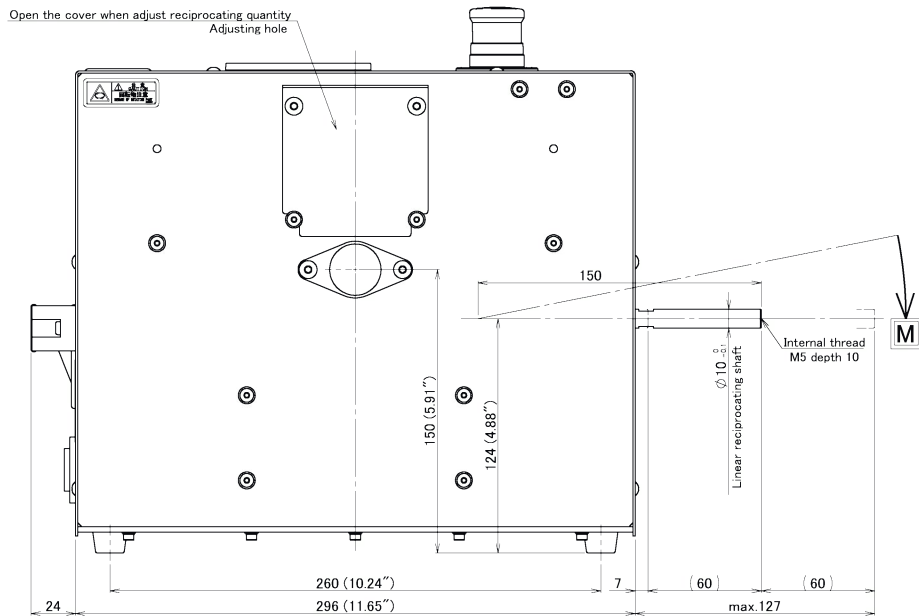


Switch
Main Power Source

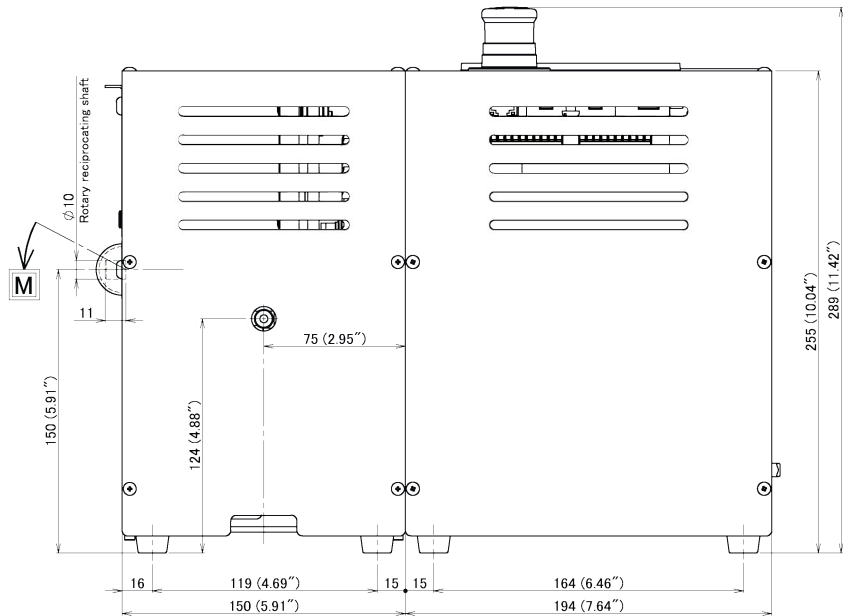
Insertion Port,
Power Supply Cable,
(Included cable: 2 m)

I/O terminal for Stop signal
(A-contact or B-contact)
LAN Port
for external control

Desktop Model Endurance Testing Machine			
TYPE	MODEL	DATE	2018.01
VALUE	ACTUAL-VALUE	NO. OF	1.0
WEIGHT	17kg		
SERIAL	0000000000		
MADE IN JAPAN			
YUASA SYSTEM CO., LTD.			



Open the cover when adjust reciprocating quantity
Adjusting hole



Permissible moment of inertia: I max.

• Confirm "permissible moment of inertia" with formulas below.
• Make sure that moment of inertia (add up jigs and samples) is less than permissible moment of inertia in the testing condition.

$$I_{max} [kg \cdot m^2] = 215000 \div \text{Rec. Speed} [\text{rec/min}]^2 \div \text{Rec. Angle} [\text{deg.}]^2$$

ex.
Moment of inertia : 0.003 kg·m²
Reciprocating speed: PENDING rec/min
Reciprocating angle : ±90 deg.

Moment of inertia < Permissible moment of inertia
 $0.003 < 215000 \div v^2 \div 90^2$
 $v < 94.06 \text{ rec/min}$

Max. Load and Acceleration of the output shaft (in both of moving ends)

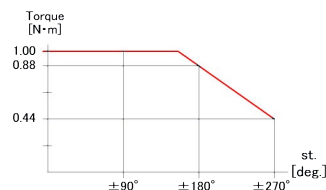
• Confirm the proportion of output with formulas below.
• Make sure that consider hardness of sample, movement resistance and etc. besides acceleration.)

• Reciprocating speed : v [rec/min]
• Reciprocating distance : $\pm L$ [deg.]
• Mass of object that move : m [kg]

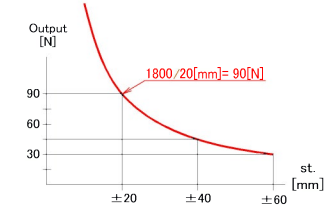
$$\text{max. Acceleration } \langle \alpha_{max} \rangle = L \times v^2 \times 1.1 \times 10^{-5} [\text{m/g}^2]$$
$$\text{max. Load} = \alpha_{max} \times m [\text{N}] < 400 [\text{N}]$$

Permissible Torque

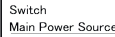
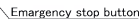
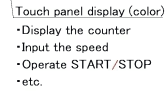
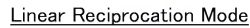
(Center of reciprocating angle)



Output (Center of reciprocating distance)



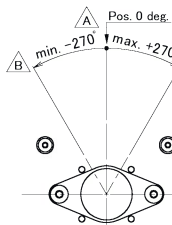
		ROTARY RECIPROCATING MODE		LINEAR RECIPROCATING MODE	
ELECTRICAL POWER		AC100~240V (50/60 Hz) 100VA			
MOTOR UNIT		DC brushless motor [DC24V, 3.5A (maximum), 30W, Gear box 1/20]			
RECIPROCATING SPEED		10~120 rec/min			
RECIPROCATING ANGLE/DISTANCE		0~±270 deg.		0~±120 mm	
PERMISSIBLE TORQUE/OUTPUT		Refer to the chart on the margin. (max. 1.0 N·m)		1800/st. (max. 400 N)	
PERMISSIBLE MOMENT OF INERTIA		Refer to formulas on the margin.		—	
OUTPUT SHAFT STATIC RATED MOMENT		1.5 N·m *Refer to the drawing "[M]".		1.3 N·m *Refer to the drawing "[M]".	
COUNTER		8-digits display (Can set the target number)			
INSTALLATION ENVIRONMENT		Temp. : +5~+40 °C (41~104° F) Humid. : 15~85%RH (No condensation)			
SAFETY INTERLOCK		Safety cover for the testing jig: Covered or Not			
NOTE		*Included tools: Spanner(8x10 mm), T-shaped hex wrench(3mm), Locking latch *Should limit the reciprocating speed and angle (or distance) to protect equipment when it drives the heavy jigs or the hard samples.			
材質 MATERIAL	about 16.5 kg	第3角法 THIRD ANGLE PROJECTION	尺 度 SCALE	名 稱 TITLE	DMLHB Desktop Model Endurance Testing Machine
質量 MASS		作成日付 DATE	1:2		
表面処理 SURFACE PROCESSING		承認 APPROVED	Y. Okazaki		
熱処理 HEAT TREATMENT		検 図 CHECKED DESIGNED	H. Sasaki N. Ando		
				DWG. No.	ET000003S001-0



Insertion Port,
Power Supply Cable
(Included cable: 2 m)

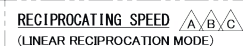
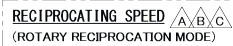
I/O terminal for Stop signal
(A-contact or B-contact)

LAN Port
for external control



$\phi 10^{-0.1}$
Linear reciprocating shaft

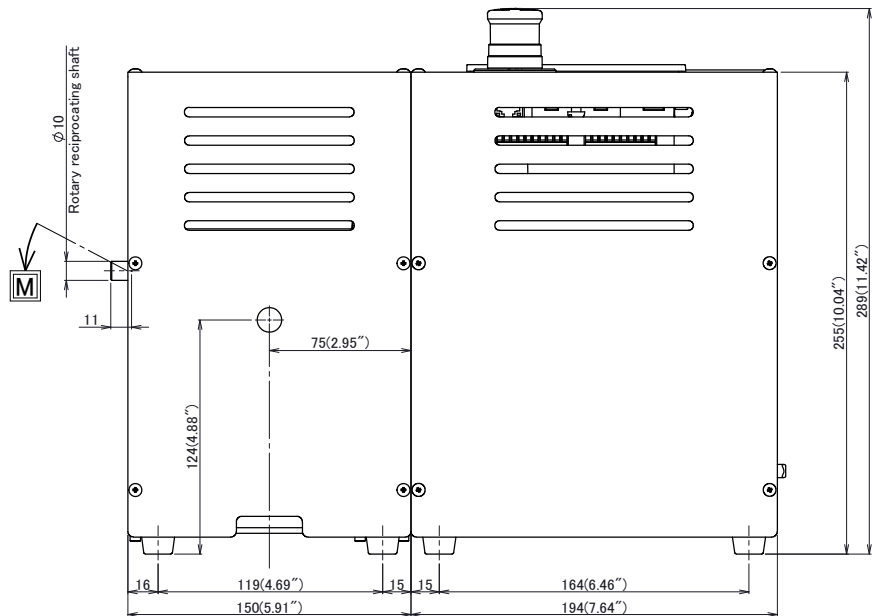
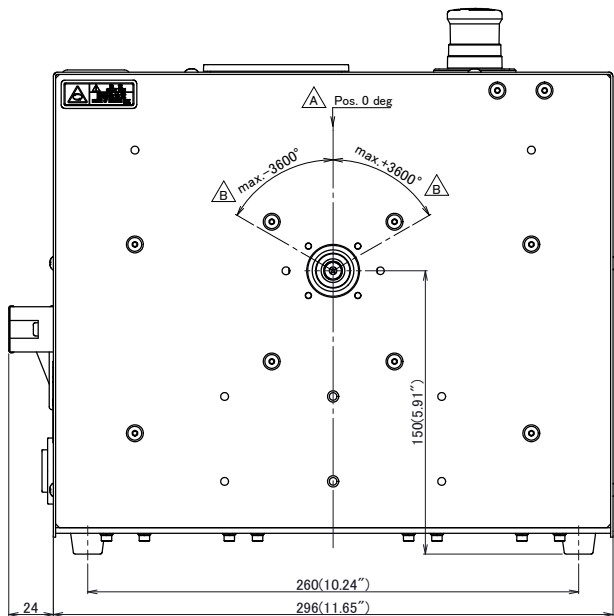
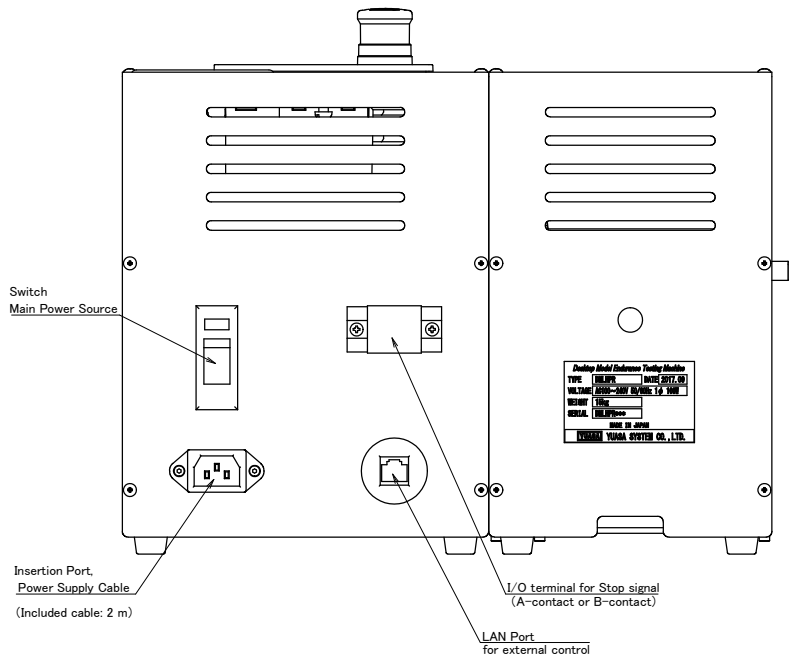
M

A1

Specifications are subject to change without notice.



Rotary Reciprocation Type



改訂 REV	修訂 REVISION RECORD	担当 BY	日付 DATE
A	Add descriptions.	N. Tani	2018/02/27
B	Add descriptions.	N. Tani	2018/03/12

SPECIFICATIONS			
ELECTRICAL POWER	・AC100-240V (50/60 Hz) 100VA		
MOTOR UNIT	・Stepping motor [DC48V, 1.72A(max.), 30W, Gear box 1/20]		
ROTATION SPEED	・5~1280 deg/sec		
RECIPROCATING ANGLE	・0~±3600 deg.		
ANGULAR ACCELERATION	・223 rad/s ² maximum		
PERMISSIBLE TORQUE/OUTPUT	・1.8 N・m		
OUTPUT SHAFT JIG INSTALLATION	・φ10 and length 11		
OUTPUT SHAFT STATIC RATED MOMENT	・1.5 N・m *Refer to the drawing [M].		
COUNTER	・8-digits display (Can set the target number)		
INSTALLATION ENVIRONMENT	・Temp. : +5~+40°C (41~104°F) ・Humi. : 15~85%Rh (No condensation)		
SAFETY INTERLOCK	・Safety cover for the testing jig: Covered or Not		
NOTE	・Can set each moving end freely within the movable area. ・Should limit the reciprocating speed and angle to protect equipment when it drives the heavy jigs or the hard samples.		
材質 MATERIAL	第3角法 THIRD ANGLE PROJECTION	尺 度 SCALE	名 称 TITLE
質量 MASS	13.9 kg	作成日付 DATE	DMLHPR
表面処理 SURFACE PROCESSING		承認 APPROVED	
熱処理 HEAT TREATMENT		検 査 CHECKED	
		設 計 DESIGNED	
DWG. No.			ET000S006-008
			B