

WU-M

Battery-less Absolute

Medium type

24V Pulse Motor

Model Specification Items

WU Series

M Type

M: Medium Type

WA Encoder Type

WA: Battery-less Absolute

PM1 Applicable Controllers

PM1:MSEL

Cable Length

N: None
P: 1m
S: 3m
M: 5m
X□□: Specified Length
R□□: Robot Cable

Options

Refer to Options table below.

* Does not include a controller

* Please refer to P.4 for more information about the model specification items.



* Please refer to P.6 for more information on the installation method and orientation.



When making a selection, it is necessary to calculate the moment of inertia of the operating conditions and to use a model that allows that moment of inertia. Calculate the moment of inertia of the transported object for the B- and T-axes respectively. Please refer to "Model Selection Process (P.7 on)" for more information.

(Note 1) Shows maximum set speed with no load.

(Note 2) When the rotational axes of the B-axis and T-axis are horizontal with respect to the floor surface or when the center of gravity of the transported object is offset from the rotational axis, the unit will be subject to load torque due to the weight of the object. The allowable moment of inertia decreases when load torque is present. Please refer to "Model Selection Process (P.7 on)" for more information.

Actuator Specifications

Model	Axis configuration	Operation range (deg.)	Max. speed ^(Note 1) (deg/s)		Max. payload (kg)	Max. acceleration/deceleration (G)	
			Independent operation	Simultaneous operation of the B- and T-axes		Without load torque ^(Note 2)	With load torque ^(Note 2)
WU-M-WA-PM1-①-②	B-axis (wrist swing)	±105	900	600	2	0.7 G (6865 deg/s ²)	0.3 G (2942 deg/s ²)
	T-axis (wrist rotation)	±360	1200	600		0.7 G (6865 deg/s ²)	0.3 G (2942 deg/s ²)

Legend: ① Cable length ② Options

*1 G = 9800 deg/s²

Cable Length <per axis *1>

Type	Cable code
Standard type	P(1m)
	S(3m)
	M(5m)
Specified length	X06(6m) to X10(10m)
	X11(11m) to X15(15m)
	X16(16m) to X20(20m) *2
Robot cable	R01(1m) to R03(3m)
	R04(4m) to R05(5m)
	R06(6m) to R10(10m)
	R11(11m) to R15(15m)
	R16(16m) to R20(20m) *2

Cable between actuator and controller.

*1 Required for both B- and T-axes. Select the cable length in the model name to have 2 cables attached.

*2 When actuator cable length change "AC1.5" is selected as an option, 18 m (X18, R18) will be the maximum length.

Options

Name	Option Code	Reference page
Cable exit direction (Right)	A1	See P.5, P.16
Cable exit direction (Bottom)	A2	See P.5, P.16
Cable exit direction (Left)	A3	See P.5, P.16
Actuator cable length 1.5 m	AC1.5	See P.5, P.16
Cable (air fitting) in opposite position	CVR	See P.5, P.16
Air fitting	VC	See P.5, P.16
Wiring collar	WCS	See P.5, P.16

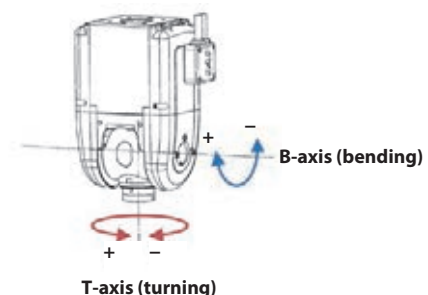
Actuator Specifications

Item	Description	
	B-axis (wrist swing)	T-axis (wrist rotation)
Drive system	Pulse motor + timing belt	Pulse motor + timing belt + bevel gear
Positioning repeatability	±0.015 deg.	±0.15 deg.
Lost motion	0.06 degrees	0.4 degrees
Allowable dynamic thrust load *1	450N	
Allowable dynamic load moment *1	4.2N-m	
Unit weight	2.8kg	
Brake retaining torque *2	2.8N-m	2.8N-m
Ambient operating temperature/humidity	0~40°C, 85% RH or less (Non-condensing)	

*1 Using the unit with a load exceeding the values above leads to reduced service life and/or damage.

*2 Equipped with brake as standard.

Name and Coordinates of Each Axis

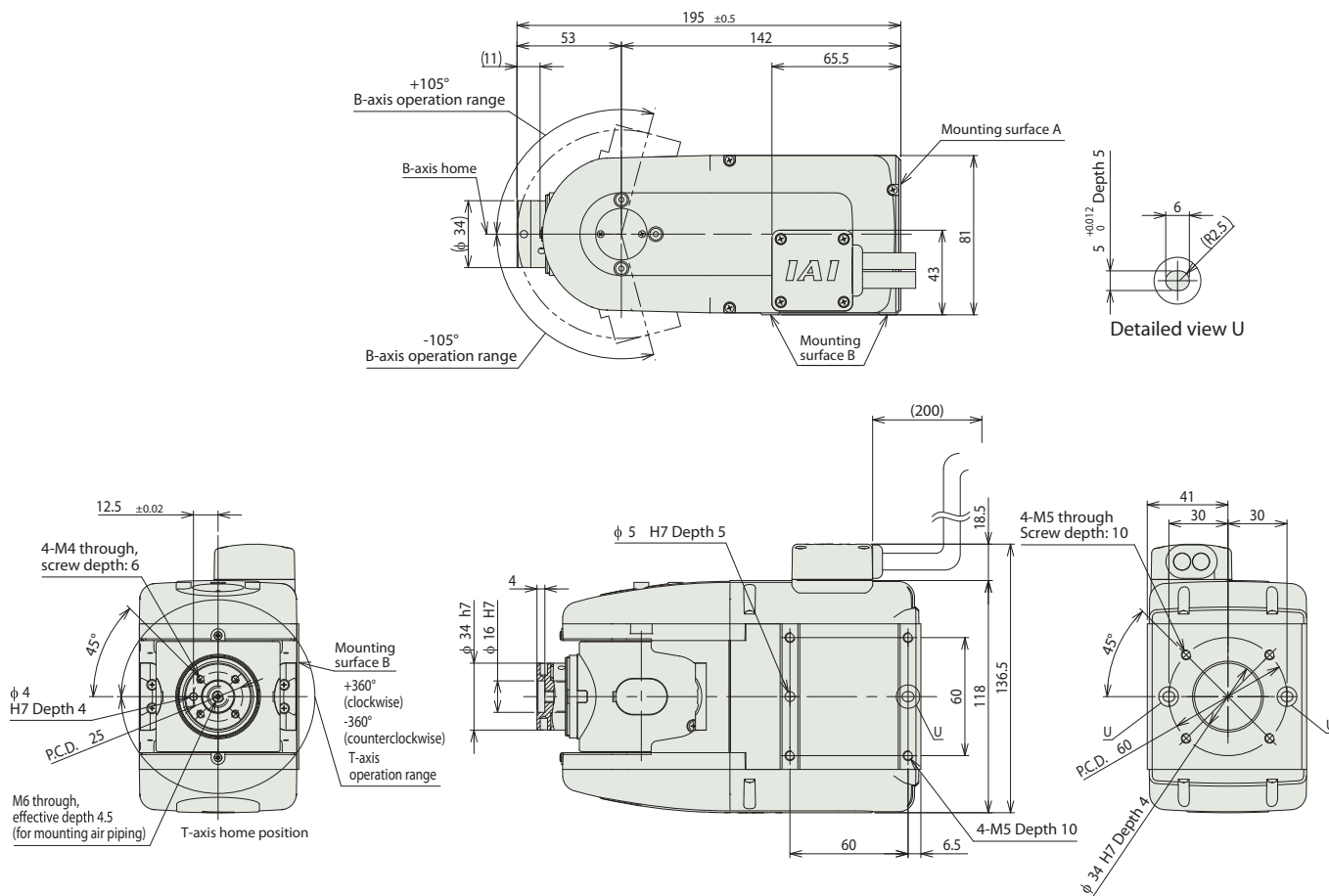


Dimensions

CAD drawings can be downloaded from our website.
www.robocylinder.de

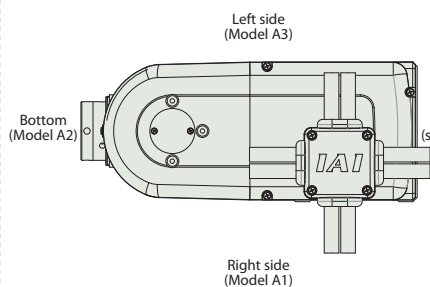
2D
CAD

3D
CAD

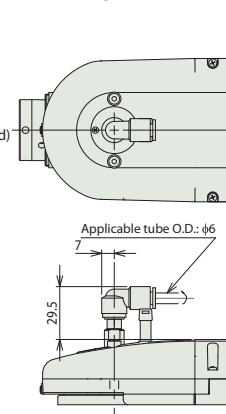


Options

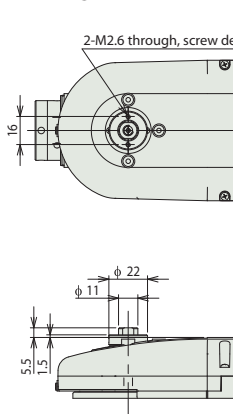
■ Cable exit direction



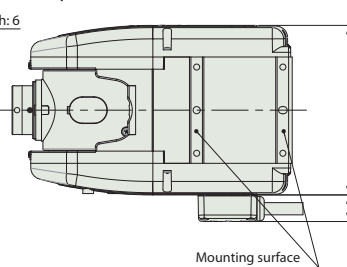
■ Air fitting (model: VC)




■ Wiring collar (model: WCS)



■ Cable (air fitting) in opposite position Model: CVR



Applicable Controllers

Name	External view	Max. number of connectable axes	Power supply voltage	Positioner	Pulse-train	Program	Control method	Maximum number of positioning points	Reference page
MSEL-PC/PG		4	Single phase 100 to 230 V AC	—	—	●	DeviceNet EtherCAT CC-Link EtherNet/IP PROFINET	30000	See P.17