

ELECYLINDER® Wire Cylinder

**EC-WER1
WEGR2**

POINT

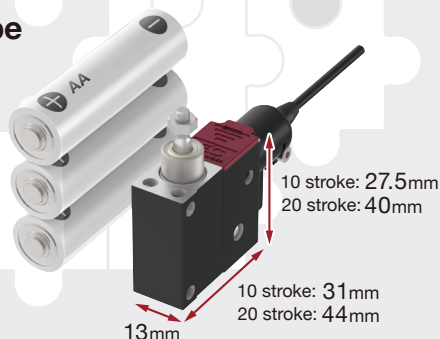
01 Motorized and yet tiny

Size/specs equivalent to
small-diameter air cylinder
(cylinder I.D. Ø6~8)

No speed controller, switch,
or air tube required,
saving even more space

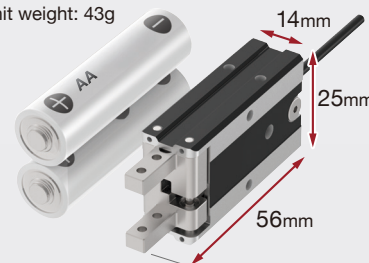
Rod Type

Unit weight
10 stroke: 32g
20 stroke: 48g



Gripper Type

Unit weight: 43g



POINT

02 An industry first! New drive system

Patented

Because the actuator and wire controller are separate...

The heat source can be separated

➔ **Less likely to be affected by heat**

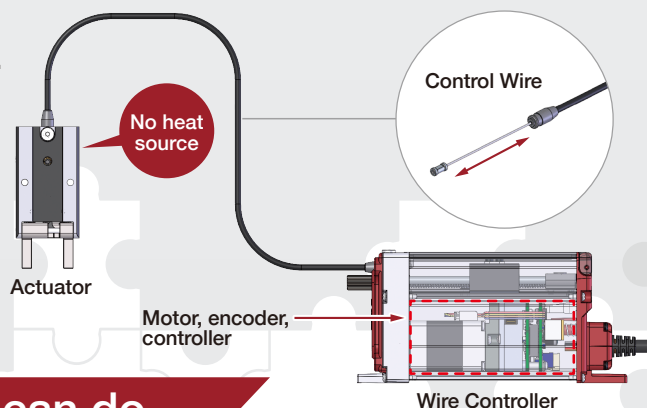
Wire controllers enable adjustment of

Position

Speed

Acceleration /
Deceleration

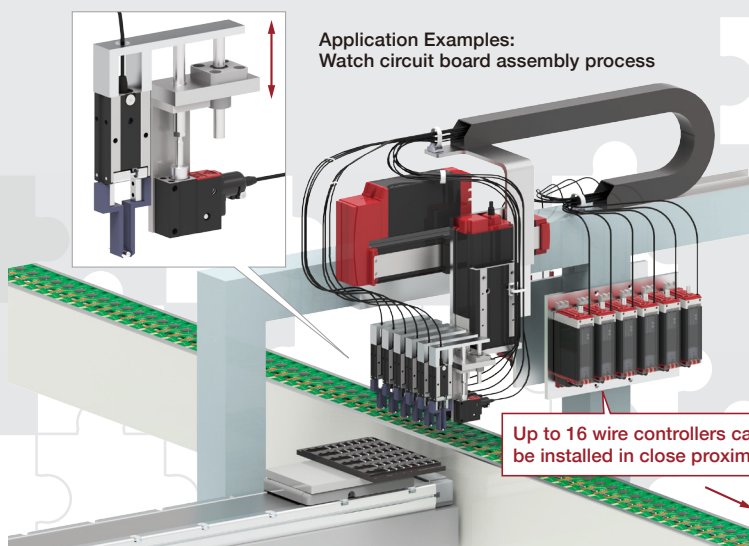
Push force /
Grip force



POINT

03 What motorization can do

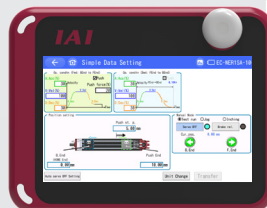
Application Examples:
Watch circuit board assembly process



Numerical setting is possible: **Simple & Accurate**



Setting the push terminal position
enables push (grip) complete/idling decision



Wireless/wired teaching pendant TB-03



Video here ➔



intelligentactuator.com/wire-cylinder-video1

Up to 16 wire controllers can also
be installed in close proximity

Specifications

EC

Series

①

Type

②

Drive specifications
(Single-action
specification)

③

Stroke

④

Control
wire length

⑤

Actuator
cable length

⑥

Power · I/O
cable length

⑦

Options

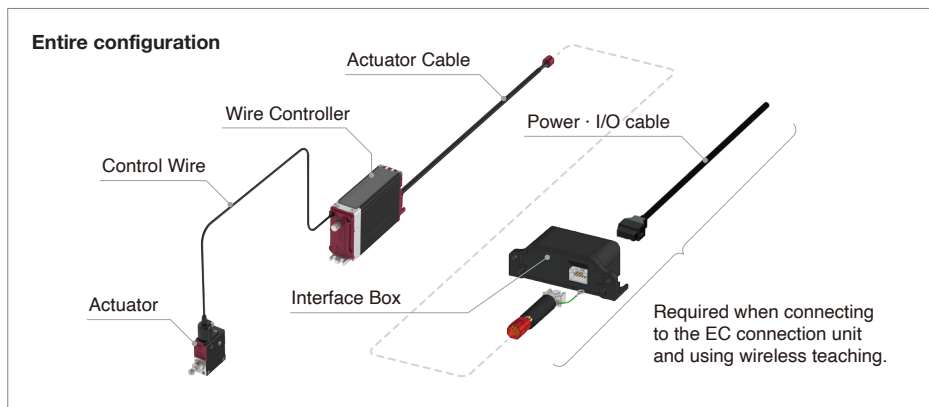
The model number above is a set model number composed of actuator unit, control wire, and wire controller.

Rod Type					Gripper Type		
① Type			WER1		① Type		WEGR2
② Drive specifications			SA		② Drive specifications		EG (O.D. grip specification) IG (I.D. grip specification)
③ Stroke (mm)			10	20	③ Stroke (mm)		4 (One side 2)
Horizontal	Max. payload (kg)		0.75		Max. grip force (N) (both sides) ^{*2}		10
	Max. speed (mm/s)	Set value	100		Max. speed at approach (mm/s)	Set value	100
		Actual speed	91	87		Actual speed	
Vertical	Max. payload (kg)		0.25		Positioning repeatability (mm)		±0.01
	Max. speed (mm/s)	Set value	100		Static allowable moment (N·m)		Ma: 0.38 Mb: 0.38 Mc: 0.74
		Actual speed	91	87	Vertical allowable load (N)		132
Max. push force (N) ^{*1}			11.5	12.29			
Positioning repeatability (mm)			±0.01mm (pressure) ±0.3mm (non-pressure) ±0.05mm (backward end spring recovery)				

^{*1} Reference values with current limit value 100%, stroke end, wire routing length 1m, bending angle 360°, bending radius 25.

^{*2} Total values for both fingers with current limit value 100%, open/close stroke center, grip point distance L = 23mm, wire routing length 1m, bending angle 360°, bending radius 25.

Common Specifications		
④ Control wire length (m)		05 (0.5m) ~ 30 (3m) *every 0.5m
⑤ Actuator cable length (m)		1 ~ 10 *every 1m (When connecting via the interface box, 9m is the maximum length available.)
⑥ Power · I/O cable length (m)		0 (Without cable), (S)1 ~ (S)9 *every 1m, (S): 4-way connector cable (Make sure that the total length along with the actuator cable is 10m or less.)
⑦ Options		Please refer to the catalog for more details.
Wire Controller	Motor Specifications	Stepper motor □20
	Operation life	10 million reciprocal motions



Wire Cylinder Catalog

The product catalog is coming soon!

Demo units are Available!
Please contact IAI if you are interested.

IAI America, Inc.

USA Headquarters & Western Region (Los Angeles): 2690 W. 237th Street, Torrance, CA 90505 (310) 891-6015
Midwest Branch Office (Chicago): 110 East State Parkway, Schaumburg, IL 60173 (847) 908-1400
Southeast Branch Office (Atlanta): 1220 Kennestone Circle, Suite 108, Marietta, GA 30066 (678) 354-9470

www.intelligentactuator.com

JAPAN Headquarters

1210 Iharacho, Shimizu-ku, Shizuoka City, Shizuoka Prefecture, 424-0114, JAPAN

The information contained in this product brochure may change without prior notice due to product improvements.

IAI Industrieroboter GmbH

Ober der Röth 4,
D-65824 Schwalbach am Taunus, Germany

IAI (Shanghai) Co., Ltd.

Shanghai Jiahua Business Center A8-303, 808,
Hongqiao Rd., Shanghai 200030, China

IAI Robot (Thailand) Co., Ltd.

825 Phairokijja Tower 7th Floor, Debaratana Rd.,
Bangna Nuea, Bangna, Bangkok 10260, Thailand