



*Product Catalogue*

# **TOKINARC**



- Semi-Automatic Torches**
- Air-Cooled Robotic Torches**
- Automatic Torches**
- Water-Cooled Robotic Torches**
- TIG Torches**
- Robotic TIG Torches**
- Robotic Peripherals**
- Fume Extractors**

[www.tokinarc.co.jp](http://www.tokinarc.co.jp)



# **Table Of Contents**

<b>Semi-Automatic Torches</b>	<b>2</b>
<b>Air-Cooled Robotic Torches</b>	<b>3</b>
<b>Replacement Parts (Tip, Orifice, Insulator)</b>	<b>5</b>
<b>Replacement Parts (Nozzle)</b>	<b>6</b>
<b>Water-Cooled Robotic Torches</b>	<b>7</b>
<b>Coolant Circulation Systems</b>	<b>8</b>
<b>YMHS Collision Sensor</b>	<b>9</b>
<b>TIG Torches</b>	<b>10</b>
<b>Robotic TIG Torches</b>	<b>11</b>
<b>Robotic Peripherals</b>	
Conduit Cables	13
Nozzle Cleaners	15
Other Products	17
<b>Fume Extractors</b>	<b>18</b>

## TL/CSH SERIES

Basic Models



**TL-20 TL-35 CSH-35 CSH-50**

Type	TL-20/TL-20F TL-20L	TL-35/TL-35K TL-35F/TL-35G	CSH-35/CSH-35K CSH-35F/CSH-35L CSH-35G	CSH-50
Rated Current	A 200	350	350	500
Duty Cycle	%(CO <sub>2</sub> )	40	35	60
	%(MAG)	20	20	35
Applicable Wire Diameter	mm (0.8, 0.9, 1.0) 1.2	(0.8, 0.9, 1.0) 1.2	(0.9, 1.0, 1.4) 1.2	(1.2, 1.4) 1.6
Cooling Method	Air-Cooled	Air-Cooled	Air-Cooled	Air-Cooled
Cable Length	m 3 / 4	3 / 4.5 / 6	3 / 4.5 / 6	3 / 4.5 / 6
Working weight	kg 0.65	1.0	1.1	1.7
Total Weight (when cable length is 3m)	kg 1.9	2.3	2.4	3.6

## TLA/CSHA SERIES

Ultralight Aluminum Models



**TLA-20 TLA-35 CSHA-35 CSHA-40 CSHA-50**

Type	TLA-20	TLA-35	CSHA-35	CSHA-40	CSHA-50
Rated Current	A 200	350	350	400	500
Duty Cycle	%(CO <sub>2</sub> )	40	35	50	50
	%(MAG)	20	20	35	35
Applicable Wire Diameter	mm (0.6, 0.8, 0.9, 1.0) 1.2	(0.8, 0.9, 1.0) 1.2	(0.9, 1.0) 1.2	1.2, 1.4	1.2, 1.4, 1.6
Cooling Method	Air-Cooled	Air-Cooled	Air-Cooled	Air-Cooled	Air-Cooled
Cable Length	m 3 / 4	3 / 4.5 / 6	3 / 4.5 / 6	3 / 4.5 / 6	3 / 4.5 / 6
Working weight	kg 0.35	0.56	0.6	0.82	0.85
Total Weight (when cable length is 3m)	kg 1.79	1.82	1.91	2.26	2.41

Installable on feeders of various manufacturers



Standard installation

Euro installation

P direct installation

## CSA/CSH-50W

Special Torch



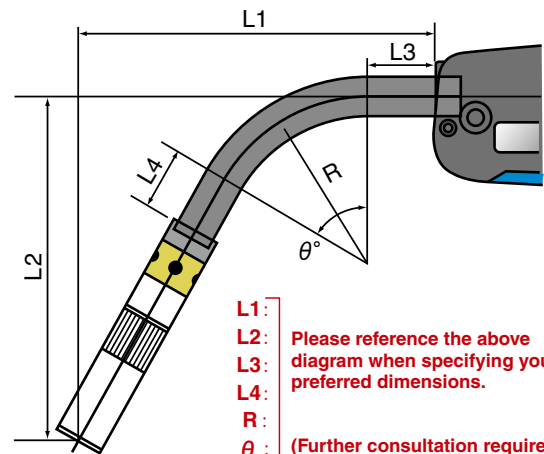
**CSA-252**

**CSH-50WX**

Type	CSA-252	CSH-50WX
Rated Current	A 250(MIG)450(CO <sub>2</sub> )	500
Duty Cycle	% 70(MIG)70(CO <sub>2</sub> )	60(MAG)100(CO <sub>2</sub> )
Applicable Wire Size	mm (1.0) 1.2	1.2, 1.4, 1.6
Cooling Method	Air-Cooled	Water-Cooled
Cable Length	m 3	3, 4, 5
Total Weight (with 3m cable)	kg 3.2	3

## MADE-TO-ORDER TORCH BODIES

We make custom torch bodies to meet any end-user welding conditions.



- L1:**
- L2:** Please reference the above diagram when specifying your preferred dimensions.
- L3:**
- L4:**
- R:**
- θ:** (Further consultation required.)

## Reliable recovery to welding point

Arc Welding Robotic Torch

# TR-308R TR-300R

### Features:

- Equipped with "TR SENSOR", a high precision shock sensor
- Can be mounted to various series of robot
  - Yaskawa Electric AR Series  
To use it on a robot before MA1440, contact us beforehand.
  - To use it on a robot made by other manufacturers, contact us beforehand.

- Extended life of torch cable
  - Improved cable surface and Reduced deterioration from ultraviolet ray
  - Improved cable resistance and reduced wear in robot welding.

### Specification

#### Air-Cooled Robotic Torch

Rated Current : 350Amp. (CO <sub>2</sub> )
Rated Current : 300Amp. (MAG)
Duty Cycle : 60%
Applicable Wire Diameter : 0.8 - 1.2 mm
Cooling Method : Air-Cooled

## ROBOTIC TORCHES FOR MOTOMAN

for Motoman MA1440

### Type MA (with an internally mounted torch cable)

Type MA / without shock sensor  
**YMXA-300R**

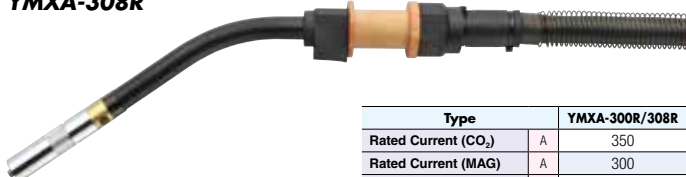


Type MA / With Shock Sensor  
**YMSA-300R**



\*YMXA Bracket Assembly is sold separately.

**YMXA-308R**



Type	YMXA-300R/308R	
Rated Current (CO <sub>2</sub> )	A	350
Rated Current (MAG)	A	300
Duty Cycle	%	60
Applicable Wire Size	mm	0.8 - 1.2
Cooling Method		Air-Cooled

**YMSA-308R**



\*YMXA Bracket Assembly is sold separately.

Type	YMSA-300R/308R	
Rated Current (CO <sub>2</sub> )	A	350
Rated Current (MAG)	A	300
Duty Cycle	%	60
Applicable Wire Size	mm	0.8 - 1.2
Cooling Method		Air-Cooled

**YMSA-250RA**

Air-Cooled Torch for Aluminum Welding



Type	YMSA-250RA	
Rated Current (MAG)	A	250
Duty Cycle	%	60
Applicable Wire Size	mm	1.0 - 1.2
Cooling Method		Air-Cooled

**YMSA-500W**  
Water-Cooled

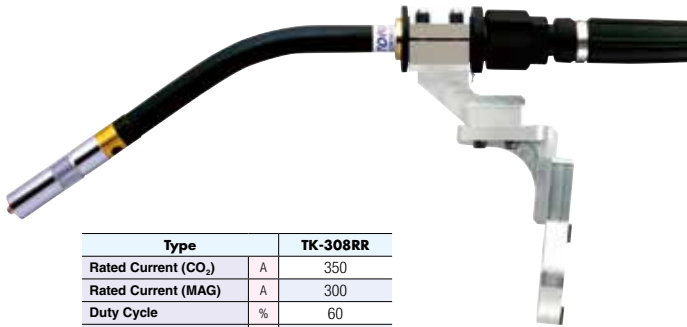
Type	YMSA-500W	
Rated Current (CO <sub>2</sub> )	A	500
Rated Current (MAG)	A	450
Duty Cycle	%	80
Applicable Wire Size	mm	1.2 - 1.6
Cooling Method		Water-Cooled

\*Nozzle 16mm and Wire 1.6mm (available for other options, ask sales)

## ROBOTIC TORCHES FOR MOTOMAN

for Motoman MA1440

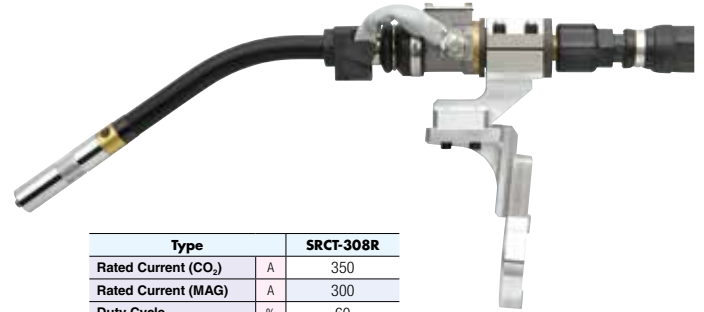
Type MH / Without Shock Sensor  
TK-308RR+YMH Bracket Assembly



Type	TK-308RR	
Rated Current (CO <sub>2</sub> )	A	350
Rated Current (MAG)	A	300
Duty Cycle	%	60
Applicable Wire Size	mm	0.8 – 1.2
Cooling Method		Air-Cooled

• Using the YMH bracket assembly allows you to use TK-308RR.

Type MH / With Shock Sensor  
SRCT-308R+YMH Bracket Assembly



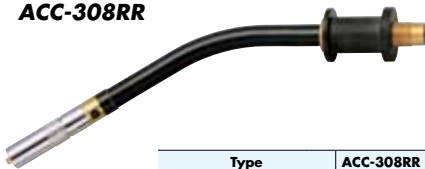
Type	SRCT-308R	
Rated Current (CO <sub>2</sub> )	A	350
Rated Current (MAG)	A	300
Duty Cycle	%	60
Applicable Wire Size	mm	0.8 – 1.2
Cooling Method		Air-Cooled

• Using the YMH bracket assembly allows you to use SRCT-308R.

## ACC/TK SERIES

High Advanced Robotic Torches

High Accuracy Robotic Torch  
ACC-308RR



- Offers triple the shock resistance of conventional products.
- Outstanding dimensional accuracy shortens the torch replacement time!

Type	ACC-308RR	
Rated Current (CO <sub>2</sub> )	A	350
Rated Current (MAG)	A	300
Duty Cycle	%	60
Applicable Wire Size	mm	0.8 – 1.2
Dimensional Accuracy	X	264.3 ± 0.3
	Y	116.5 ± 0.4
		35° ± 4.0
Cooling Method		Air-Cooled
Cable Length	m	0.8 – 5

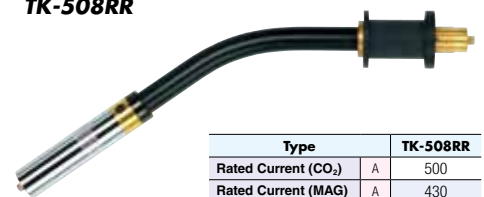
High Accuracy Robotic Torch  
ACC-308RX



- Replaceable Type of ACC-308RR

Type	ACC-308RX	
Rated Current (CO <sub>2</sub> )	A	350
Rated Current (MAG)	A	300
Duty Cycle	%	60
Applicable Wire Size	mm	0.8 – 1.2
Cooling Method		Air-Cooled
Cable Length	m	0.8 – 5

TK-508RR



- Air-Cooled 500A Standard Type

Type	TK-508RR	
Rated Current (CO <sub>2</sub> )	A	500
Rated Current (MAG)	A	430
Duty Cycle	%	60
Applicable Wire Size	mm	1.2 – 1.6
Cooling Method		Air-Cooled
Cable Length	m	0.8 – 5

## AUTOMATIC TORCHES

A-350S



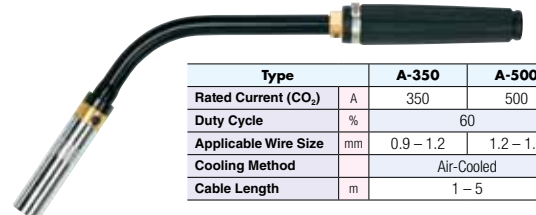
A-500S



A-350R



A-500R



Type	A-350	A-500	
Rated Current (CO <sub>2</sub> )	A	350	500
Duty Cycle	%	60	
Applicable Wire Size	mm	0.9 – 1.2	1.2 – 1.6
Cooling Method		Air-Cooled	
Cable Length	m	1 – 5	

D-350S



D-500S



D-350R



D-500R

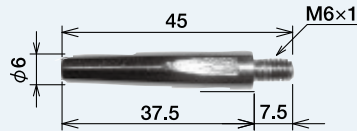


Type	D-350	D-500	
Rated Current (CO <sub>2</sub> )	A	350	500
Duty Cycle	%	60	
Applicable Wire Size	mm	0.9 – 1.2	1.2 – 1.6
Cooling Method		Air-Cooled	
Cable Length	m	1 – 5	

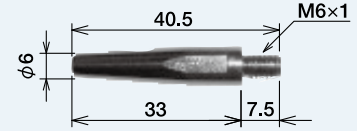
## N/D TIP

- CuCrZr
- Suitable for both Semi-Automatic & Robotic Welding

● N / N for Aluminum Welding / N P  
● N for Flux Cored Welding



● D / D for Aluminum Welding / D P  
● D for Flux Cored Welding



Type	Size	Token Part No.	P Part No.	D Part No.
N	0.6	002016	TET00601S TET00624	—
	0.8	002005	TET00841 TET00842	K980C02 K980C23 L7250C01
	0.9	002001	TET00958 TET00942 TET00959	K980C03 K980C24 L7250C02
	1.0	002002	TET01067 TET01055 TET01068	K980C04 K980C25 L7250C03
	1.2	002003	TET01296 TET12005 TET01248 TET01297 TET12003	K980C05 K980C26 L7250C04
	1.4	002017	TET01447 TET01426 TET01448	K980C06 K980C27 L7250C05
	1.6	002004	TET01691 TET01669 TET01692	K980C07 K980C28 L7250C06
	2.0	002020	TET02047	—

Type	Size	Token Part No.	P Part No.	D Part No.
D	0.6	023040	TET00625	—
	0.8	023007	TET00843 TET00844	K980B90 K980C29 L7250B01
	0.9	023008	TET00962 TET00944 TET00963	K980B91 K980C30 L7250B02
	1.0	023009	TET01071 TET01057 TET01072	K980B92 K980C31 L7250B03
	1.2	023010	TET12007 TET12008 TET01265 TET12010 TET12011	K980B93 K980C32 L7250B04
	1.4	023041	TET01451 TET01435 TET01452	K980B94 K980C33 L7250B05
	1.6	023011	TET01695 TET01678 TET01696	K980B95 K980C34 L7250B06

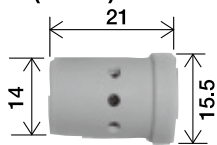
## REPLACEMENT PARTS

Various Selections for Customers' Needs

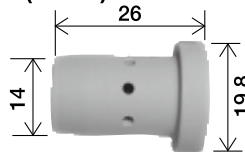


## ORIFICE

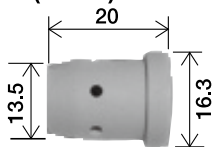
N S(350A)



N L(500A)



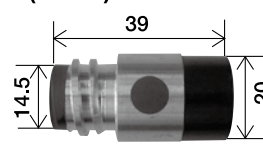
D S(350A)



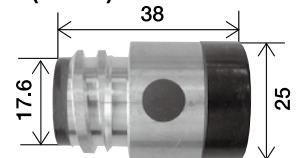
Type	Size	Token Part No.	P Part No.	D Part No.
N350A	S	003002	TGR01001	U4167G02
N500A	L	003001	TGR00902	U4173G02
D350A	S	023014	—	U2437H01

## INSULATOR

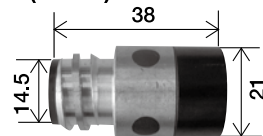
N S(350A)



N L(500A)



D S(350A)

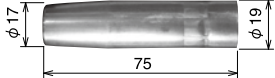


Type	Size	Token Part No.	P Part No.	D Part No.
N350A	S	004002	TFZ35101	U4167L00
N500A	L	004001	TFZ50107	U4173L00
D350A	S	023015	—	U608T00

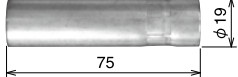
## NOZZLE

### 200A Insulated

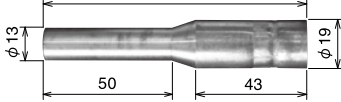
038040 TL-18, 20 Nozzle 13mm  
Bore:  $\phi$  13



038041 TL-18, 20 Straight Nozzle  
Bore:  $\phi$  16



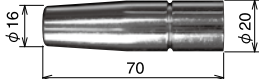
038042 TL-18, 20 Long Nozzle  
Bore:  $\phi$  10



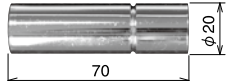
※Use the nozzle in combination with a long tip

### D 350A

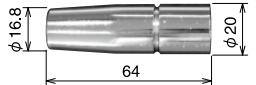
023012 D Nozzle No.8 12mm  
Bore:  $\phi$  12



023013 D Nozzle No.10 16mm  
Bore:  $\phi$  16

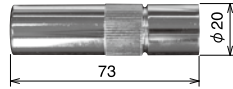


023501 DSRC Nozzle  
Bore:  $\phi$  13

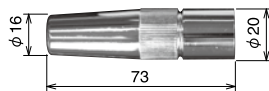


### N 350A

001002 N Nozzle 16mm  
Bore:  $\phi$  16



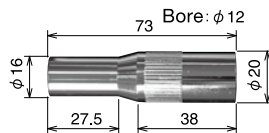
001003 N Nozzle 12mm  
Bore:  $\phi$  12



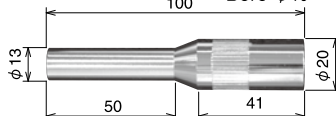
001008 N Nozzle 18mm  
Bore:  $\phi$  18



001014 Step Down Nozzle  
Bore:  $\phi$  12

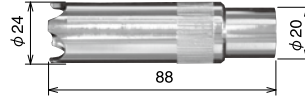


001004 N Small Dia Long Nozzle  
Bore:  $\phi$  10

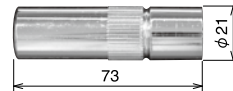


※Use the nozzle in combination with a long tip

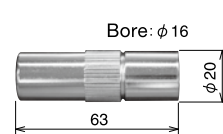
001007 N 350A Arc Spot Nozzle  
Bore:  $\phi$  20



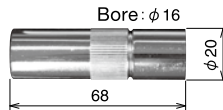
001009 N Thick Nozzle 16mm  
Bore:  $\phi$  16



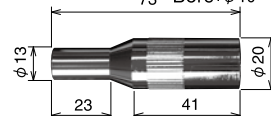
001013 N Nozzle 16mm 63L 350A  
Bore:  $\phi$  16



033203 HR-350 Nozzle 16mm/  
N Nozzle 16mm 68L  
Bore:  $\phi$  16



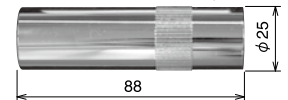
001016 N Small Dia Nozzle 73L  
Bore:  $\phi$  10



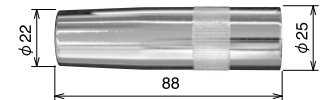
※Use the nozzle in combination with a rocket tip

### N 500A

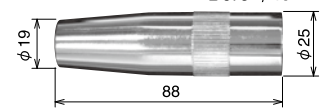
001001 N Nozzle 19mm 500A  
Bore:  $\phi$  19



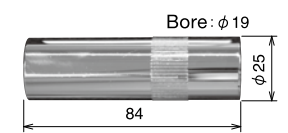
001010 N Nozzle 16mm 500A  
Bore:  $\phi$  16



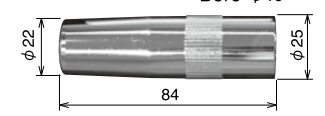
001005 N Nozzle 13mm 500A  
Bore:  $\phi$  13



001012 N Nozzle 19mm 500A 84L  
Bore:  $\phi$  19



001015 N Nozzle 16mm 500A 84L  
Bore:  $\phi$  16



Nozzle		Size			Part No.		
Type	Description	ID	OD	Length	Tokin	P Part No.	D Part No.
180A 200A Insulated	TL-18, 20 Nozzle 13mm	13	17	75	038040	TGN01208	U4186L00 U5342N00
	TL-18, 20 Straight Nozzle	16	19	75	038041	TGN01506	U4186P00 U5342P00
	TL-18, 20 Long Nozzle	10	13	102	038042	TGN01026	U4186R00
N 350A	N Nozzle 16mm	16	20	73	001002	TGN00043	U4167G01
	N Nozzle 12mm	12	16	73	001003	TGN00044	U4167H01
	N Nozzle 18mm	18	25	73	001008	TGN00111	U4167H02
	Step Down Nozzle	12	16	73	001014	TGN00105	-
	N Small Dia Long Nozzle	10	13	100	001004	TGN01001	U4167H04
	N 350A Arc Spot Nozzle	20	24	88	001007	TGN02001	U4167H03
	N Thick Nozzle	16	21	73	001009	TGN00038	U4167H16
	N Nozzle 16mm 63L 350A	16	21	63	001013	TGN01663	-
	HR-350 Nozzle 16mm/ N Nozzle 16mm 68L	16	20	68	033203	-	-
N Small Dia Nozzle 73L	10	13	73	001016	-	-	
D 350A	D Nozzle No.8 12mm	12	16	70	023012	-	U608N01
	D Nozzle No.10 16mm	16	20	70	023013	-	U608N02 U2437J04
	DSRC Nozzle	13	16.8	64	023501	-	L6380F03
N 500A	N Nozzle 19mm 500A	19	25	88	001001	TGN00055	U4173G01
	N Nozzle 16mm 500A	16	22	88	001010	TGN00057	U4173H01
	N Nozzle 13mm 500A	13	19	88	001005	TGN00064	-
	N Nozzle 19mm 500A 84L	19	25	84	001012	TGN00050 TGN00056	-
	N Nozzle 16mm 500A 84L	16	22	84	001015	TGN00058 TGN00065	-

## WX SERIES

The ultimate in water-cooled robotic torches

**WX702S**

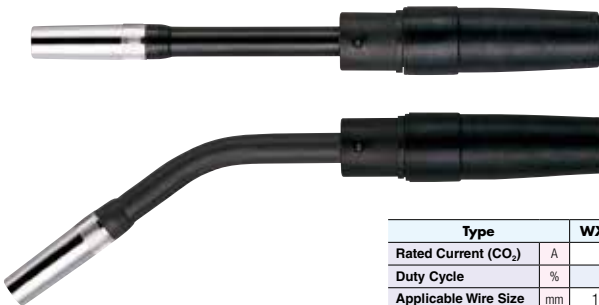


**WX702R**



Type	WX702S/R	
Rated Current (CO <sub>2</sub> )	A	700
Rated Current (MAG)	A	600
Duty Cycle (CO <sub>2</sub> )	%	80
Duty Cycle(MAG)	%	70
Applicable Wire Size	mm	1.4 – 1.6
Cooling Method	Water-Cooled	
Cable Length	m	1 – 5

**WX500S/R**



Type	WX500S/R	
Rated Current (CO <sub>2</sub> )	A	500
Duty Cycle	%	100
Applicable Wire Size	mm	1.2 – 1.6
Cooling Method	Water-Cooled	
Cable Length	m	1 – 5

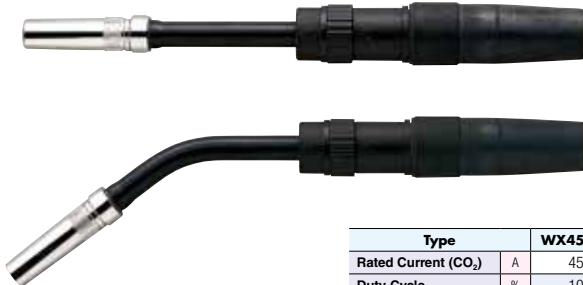
- Water-Cooled 500A Standard Type

**WX450S/R**



Type	WX450S/R	
Rated Current (CO <sub>2</sub> )	A	500
Duty Cycle	%	80
Applicable Wire Size	mm	1.2 – 1.6
Cooling Method	Water-Cooled	
Cable Length	m	1 – 3

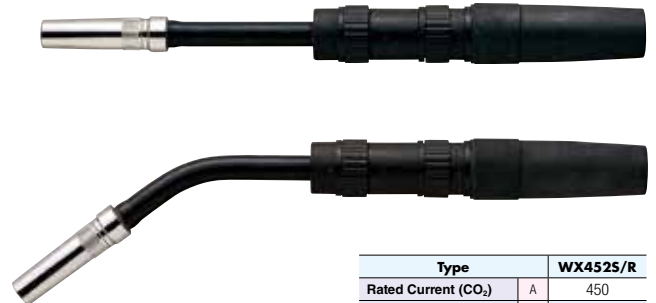
**WX451S/R**



Type	WX451S/R	
Rated Current (CO <sub>2</sub> )	A	450
Duty Cycle	%	100
Applicable Wire Size	mm	1.2 – 1.6
Cooling Method	Water-Cooled	
Cable Length	m	1 – 5

- 100% duty cycle at 450A Can be separated into two assemblies: torch body and cable.

**WX452S/R**



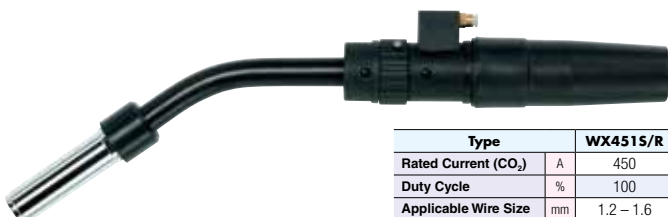
Type	WX452S/R	
Rated Current (CO <sub>2</sub> )	A	450
Duty Cycle	%	100
Applicable Wire Size	mm	1.2 – 1.6
Cooling Method	Water-Cooled	
Cable Length	m	1 – 5

- 100% duty cycle at 450A Can be separated into three assemblies: torch body, clamp and cable.

**WX451S Water-Cooled Nozzle**



**WX451R Water-Cooled Nozzle with Wire Clamp**

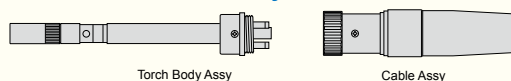


Type	WX451S/R	
Rated Current (CO <sub>2</sub> )	A	450
Duty Cycle	%	100
Applicable Wire Size	mm	1.2 – 1.6
Cooling Method	Water-Cooled	
Cable Length	m	1 – 5

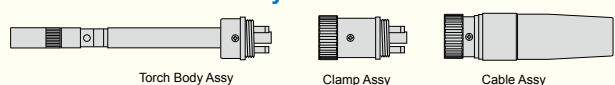
- Water-Cooled Nozzle features effects of minimizing spatter build-up and increasing the durability of contact tip.

### WX Series Quick Detachable System

#### ▼ WX451S Detachable System



#### ▼ WX452S Detachable System



### Benefits of WX Series Quick Detachable System

To replace a part in ordinary systems, you have to remove the entire torch from the robot. However, on our Quick Detachable System you only remove the section containing the part you want to replace.



## TK-308RW

Air-Cooled Nozzle Spec. or Water-Cooled Nozzle

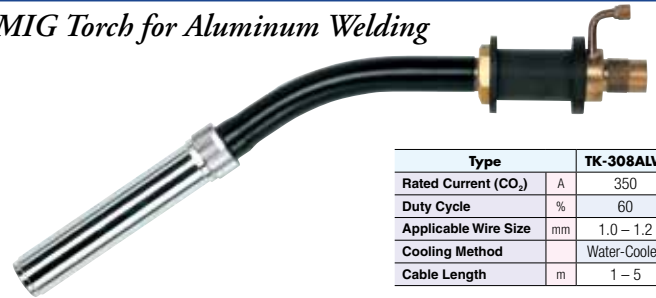


Type		TK-308RW
Rated Current (CO <sub>2</sub> )	A	500
Duty Cycle	%	80
Applicable Wire Size	mm	1.2 - 1.6
Cooling Method		Water-Cooled
Cable Length	m	1 - 5

- TK-308RR Water-Cooled Type
- Can be replaced without altering the TK-308RR teaching point.

## TK-308ALW

MIG Torch for Aluminum Welding



Type		TK-308ALW
Rated Current (CO <sub>2</sub> )	A	350
Duty Cycle	%	60
Applicable Wire Size	mm	1.0 - 1.2
Cooling Method		Water-Cooled
Cable Length	m	1 - 5

- External water inlet and outlet enables easy maintenance.
- Unique designed tip body provides stable gas shielding.

## Thermo-chiller equipped coolant circulation system

### WR-200TC



Body Front

- Equipped with high-lift pump. Approximate discharge pressure of 0.4MPa.
- Temperature setting range between 5°C and 40°C (±0.1°C temperature stability)
- Operating conditions can be monitored by way of the digital indication on the control panel
- Particle filter is provided at the return outlet of the circulating fluid, thus preventing problems caused by dirty circulating fluid
- Equipped with heating function to prevent freezing
- Compact design allows installation in tight space

Type	WR-200TC
Supply voltage	AC200V (single phase)
Frequency	50/60Hz
Power consumption	1.1/1.4KVA
Discharge pressure	0.4Mpa
Discharge flow rate (* 1)	2.1-2.2L/min
Cooling capacity	1700/1900W
Tank capacity	Approx. 5L
Unit Weight (* 2)	51kg
Exterior dimensions (W×D×H)	377×500(+280)×615
Flow rate (body only)	4.1-4.2L/min
Flow rate (torch head + hose 10m)	2.1-2.2L/min

(\*1) With water-cooled torch connected: 60Hz  
(\*2) Cooling water mass not included

## Coolant circulation system

### WR-100 (046500)



Body Front

- Compact body and superior cooling performance realizing 35kcal/min of heat value
- Pump portion is completely insulated
- Water tank is separate and independent, facilitating water replacement
- Excels in serviceability, reducing cleaning work load

Type	WR-100	
Supply voltage	50/60Hz	Single phase AC200V
Power consumption	W	200/240
Discharge pressure	MPa	0.3
Discharge flow rate (* 1)	L/min	2.1 - 2.2
Heat discharge	Kca/min	35
Tank capacity	L	10
Unit Weight (* 2)	kg	22

(\*1) With water-cooled torch connected: 60Hz  
(\*2) Cooling water mass not included

## Water-Cooled Nozzle and Wire Clamp

### WX451/452 Standard Nozzle

Upgraded



Water-Cooled Nozzle

### Clamp Assy



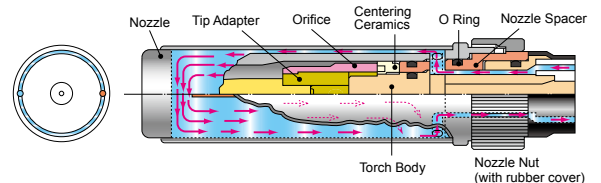
### Wire Clamp Spec.



**Advantage**  
Wire stick-out is strictly controlled during sensing so as not to change with robot movement. So sensing can function in an optimal state.

\*If you need a wire clamp, please specify it when placing initial order.

### Water-Cooled Nozzle



### Advantage

Cooling effect is greatly enhanced by cooling water flowing through the nozzle end. Spatter accumulation is reduced at the same time.

### How to replace

Just remove nozzle adapter then replace nozzle and orifice with Water-Cooled Nozzle and orifice.

\*For further details please see the TK-308RW in page 11.

### Optional

Carbon Water-Cooled Nozzle (Made-to-order)



Disassembled

Realizing high rigidity and high precision  
A high grade Collision sensor optimal for tough use environments

## High Grade Collision Sensor

### Features:

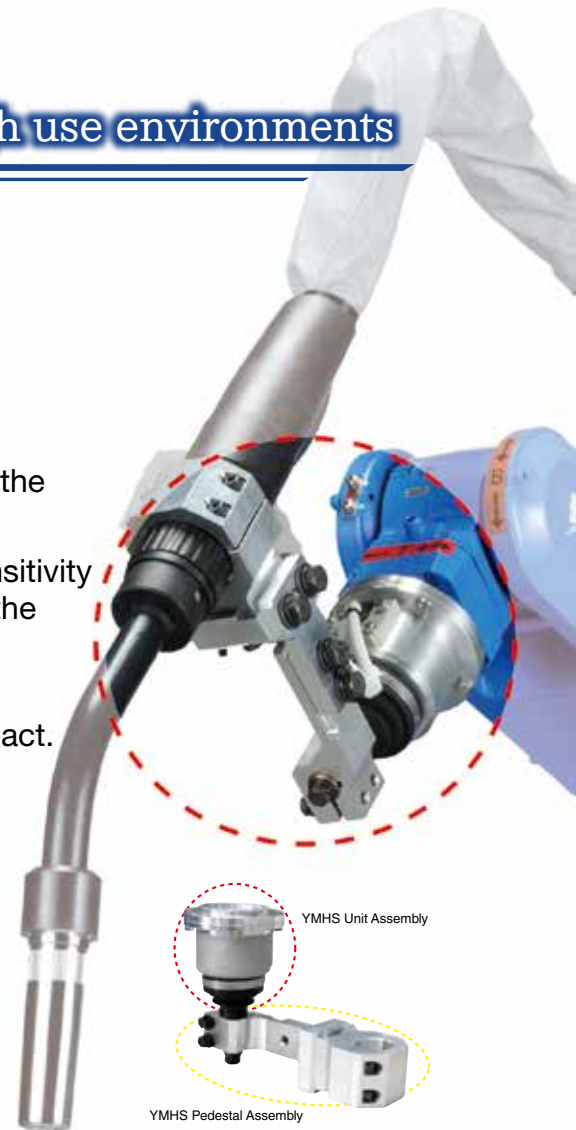
- Detects shocks from all directions.
- Despite its high rigidity, it is designed for optimal lost motion to alleviate torch deformation on impact and minimize damage to the robot.
- Impact detection of interference objects is set to an optimal sensitivity level in order to protect the robot; as such, it does not impede the robot's normal movements such as high-speed air cuts.
- Due to its highly rigid and high precision nature, it offers high duplicability, which shortens the recovery time following an impact.
- Because the torch clamp portion has been changed, it can use torches of varying diameters, such as for air-cooled or water-cooled applicators. (\*1)
- By replacing the flange portion, it can be used regardless of the type of robot (\*2)

\*1 For use with a Tokin torch. (Contact us before using a torch made by another manufacturer.)

\*2 The standard specs are for the HP /MH series robots made by Yaskawa Electric.

To use it on a robot made by other manufacturers, contact us beforehand.

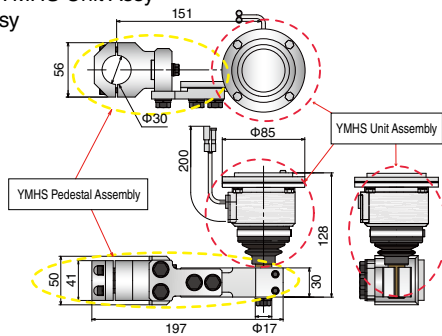
(At times, it might not be possible to mount it on a robot made by other manufacturers.)



YMHS Unit Assembly  
YMHS Pedestal Assembly

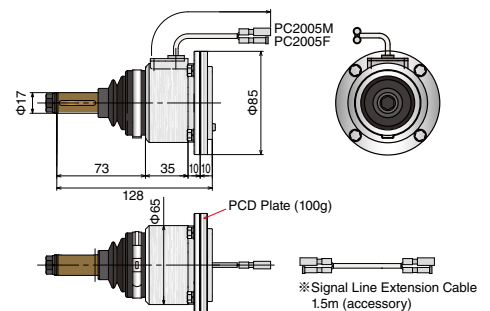
### YMHS Unit Assembly + YMHS Pedestal Assembly

Please use assembled YMHS Unit Assy and YMHS Pedestal Assy



### YMHS unit Assembly YMHS00001 900g

The standard specs are for the HP/MH Robot series robots made by Yaskawa Electric.

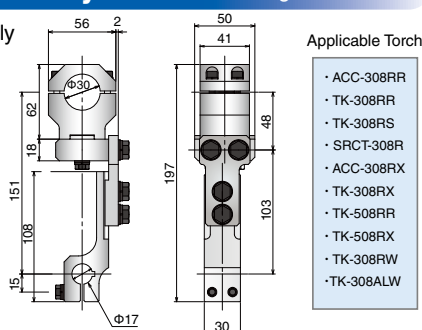


Other Robots can be used with an applicable PCD plate. (ask us for more information in case of using other Robots.)

### YMHS unit Assembly YMHS00005 620g

YMHS Pedestal Assembly for MH6-Φ30

For mounting Tokin308 (TK-308) Torch series. Torch of the pedestal Φ30 can be mounted.

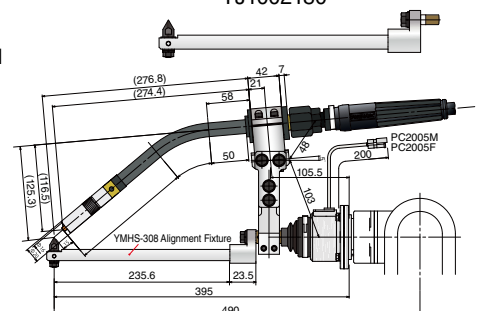


### Option

YMHS-308 Alignment Fixture

YJ1002180

Gauge dedicated to adjust the Tool Center Point when replacing the Torch.



## TA/FX/FXS SERIES

Various Models for Specific Work Pieces



**TA-9,FX-9,TA20**

Type		TA-9, FX-9	TA-20
Rated Current	A	125	250
Applicable Tungsten Size	mm	0.5 – 2.4	0.5 – 3.2
Cooling Method		Air-Cooled	Water-Cooled
Weight (without P/C)	g	105	99



**TA-24,24W**

Type		TA-24	TA-24W
Rated Current	A	80	180
Applicable Tungsten Size	mm	0.5 – 1.0	0.5 – 2.4
Cooling Method		Air-Cooled	Water-Cooled
Weight (without P/C)	g	66	80



**TA-280**

Type		TA-280
Rated Current	A	325
Applicable Tungsten Size	mm	0.5 – 3.2
Cooling Method		Water-Cooled
Weight (without P/C)	g	117



**TA-17,FX-17**

Type		TA-17, FX-17
Rated Current	A	150
Applicable Tungsten Size	mm	1.6 – 3.2
Cooling Method		Air-Cooled
Weight (without P/C)	g	192



**TA-9P,20P**

Type		TA-9P	TA-20P
Rated Current	A	125	250
Applicable Tungsten Size	mm	0.5 – 2.4	0.5 – 3.2
Cooling Method		Air-Cooled	Water-Cooled
Weight (without P/C)	g	105	105



**TA-18SC**

Type		TA-18SC
Rated Current	A	400
Applicable Tungsten Size	mm	0.5 – 4.0
Cooling Method		Water-Cooled
Weight (without P/C)	g	265



**TA-26,FX-26**

Type		TA-26, FX-26
Rated Current	A	200
Applicable Tungsten Size	mm	1.6 – 4.0
Cooling Method		Air-Cooled
Weight (without P/C)	g	270



**TA-18**

Type		TA-18
Rated Current	A	350
Applicable Tungsten Size	mm	1.6 – 4.0
Cooling Method		Water-Cooled
Weight (without P/C)	g	236



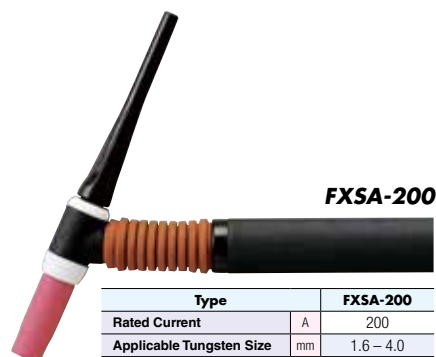
**FX-25**

Type		FX-25
Rated Current	A	200
Applicable Tungsten Size	mm	0.5 – 2.4
Cooling Method		Water-Cooled
Weight (without P/C)	g	160



**FXSA-150**

Type		FXSA-150
Rated Current	A	150
Applicable Tungsten Size	mm	0.6 – 4.0
Cooling Method		Air-Cooled
Weight (without P/C)	g	192



**FXSA-200**

Type		FXSA-200
Rated Current	A	200
Applicable Tungsten Size	mm	1.6 – 4.0
Cooling Method		Air-Cooled
Weight (without P/C)	g	270



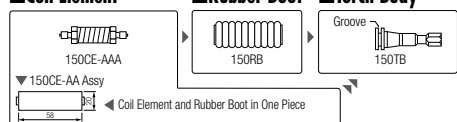
**FXSW-225**

Type		FXSW-225
Rated Current	A	225
Applicable Tungsten Size	mm	1.6 – 4.0
Cooling Method		Water-Cooled
Weight (without P/C)	g	236

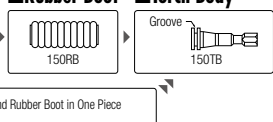
### Head



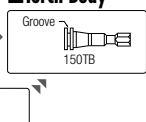
### Coil Element



### Rubber Boot



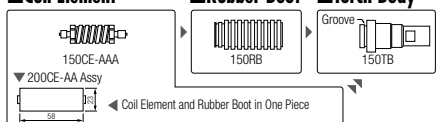
### Torch Body



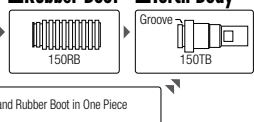
### Head



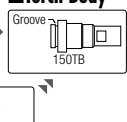
### Coil Element



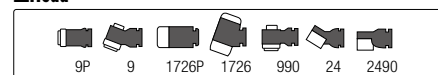
### Rubber Boot



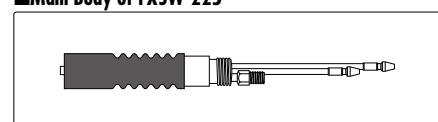
### Torch Body



### Head



### Main Body of FXSW-225



## NEW ROBOTIC TIG TORCHES **TA-203/TA-303** SERIES



**TA-203CDA (Long torch body)**

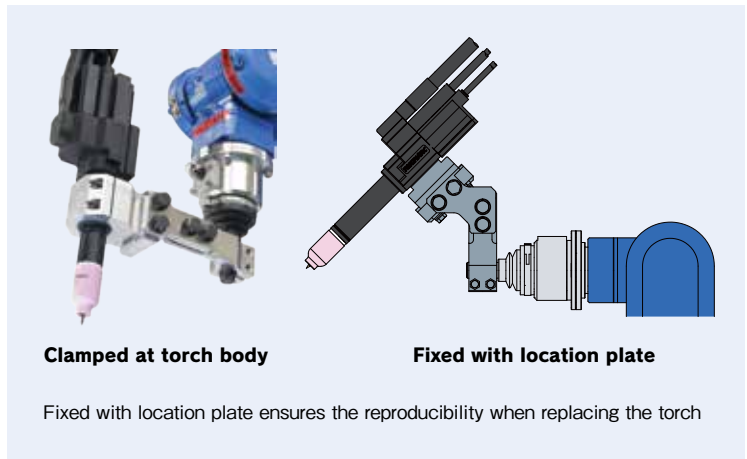


**TA-303CDW (Short torch body)**

### Features:

- Two types of mounting to the robot (refer to right)
- Specifications are easily interchangeable between TA-203CDA (Air Cooled) and TA-303CDW (Water Cooled)
- Two types of torch body length (long or short) available
- Complete insulation
- Reduce the time for tungsten electrode exchanges with built-in air cylinder.

\* Each torch has compatible tip parts



**TA-203CDA**

Type	For robot welding	
Rated Current	A	200
Duty Cycle	%	60
Tungsten diameter	mm	1.6, 2.4, 3.2
Electrode chucking	Double acting air cylinder	
Cooling Method	Air-Cooled	
Cable Length	m	6.8

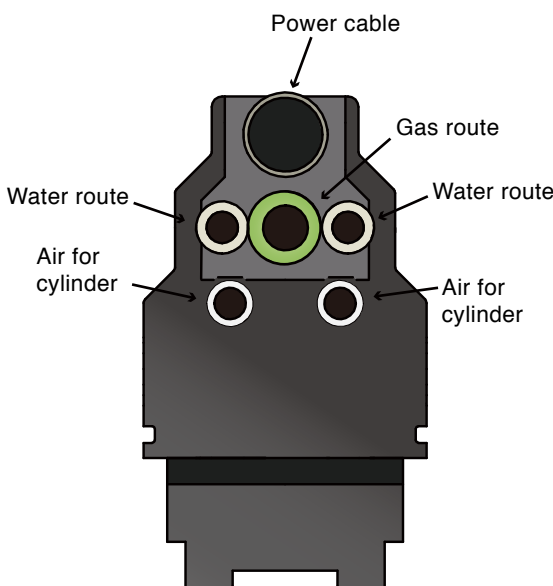
**TA-303CDW**

Type	For robot welding	
Rated Current	A	300
Duty Cycle	%	100
Tungsten diameter	mm	2.4, 3.2
Electrode chucking	Double acting air cylinder	
Cooling Method	Water-Cooled	
Cable Length	m	6.8

**TA-500CDW**

Type	For robot welding	
Rated Current	A	500
Duty Cycle	%	100
Tungsten diameter	mm	3.2, 4.0
Electrode chucking	Double acting air cylinder	
Cooling Method	Water-Cooled	
Cable Length	m	6.8

## Specifications are easily interchangeable between **TA-203CDA(Air-Cooled)** and **TA-303CDW(Water-Cooled)**.



Backside of TA-203 (Without water hose)



Backside of TA-303 (With water hose)

**Because TA-203 and TA-303 share parts on the main body, can be used either as a Water-Cooled or Air-Cooled by switching between a water hose or an air hose.**

\* Cooling water circulation device must be used if used as a Water-Cooled torch, and always confirm that cool water is circulating.

\* When using as a Air-Cooled torch, shut off the water route and protect it so that no foreign objects enter the water route.

When using as a Water-Cooled torch, a one-touch hose fitting is required.

(In its initial settings, TA-203 comes with a plug for stopping off the water route. TA-303 comes with a one-touch hose fitting to attach a water hose.)

## ROBOTIC TIG SERIES

### TA-500HW



- 500A/Water-Cooled/100% duty cycle
- Built-in pneumatic cylinder makes replacing the tungsten electrode easy.
- Reliable gas shielding by gas lens

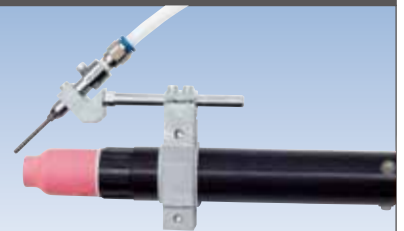
### TA-500CDW



Type		500HW	500CDW
Rated Current	A	500	500
Duty Cycle	%	100	100
Applicable Tungsten Size	mm	3.2, 4.0	3.2, 4.0
Cable Length	m	6, 8	6, 8
Cooling Method		Water-Cooled	Water-Cooled
Cylinder		-	Double-Acting Type

\*Standard model: Gaslens Nozzle No.10 and Electrode 4.0mm

### Filler unit for TA-500



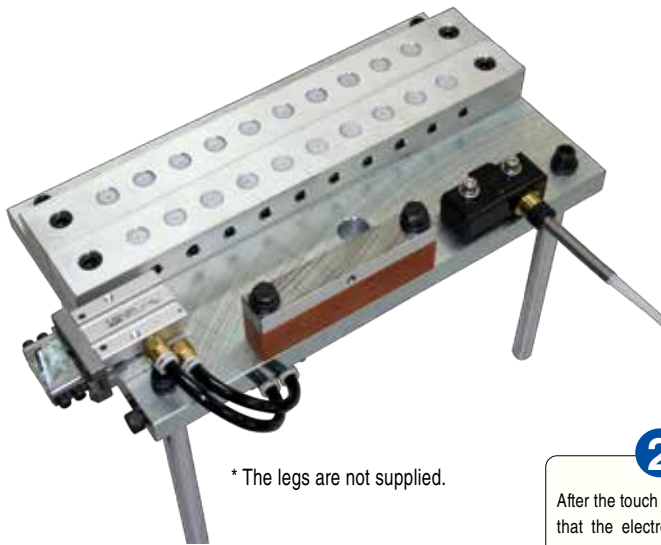
#### Insertion angle (30°/45°) selectable

- \* Standard Spec.: insertion Angle 45° and wire 1.2mm
- \* The filler unit is available as an option.
- \* The filler unit does not include a flexible conduit.
- Please specify the length that you need when ordering.

## TUNGSTEN CHANGER

### Automatic Changing of Tungsten Electrodes on the Robot Made Possible

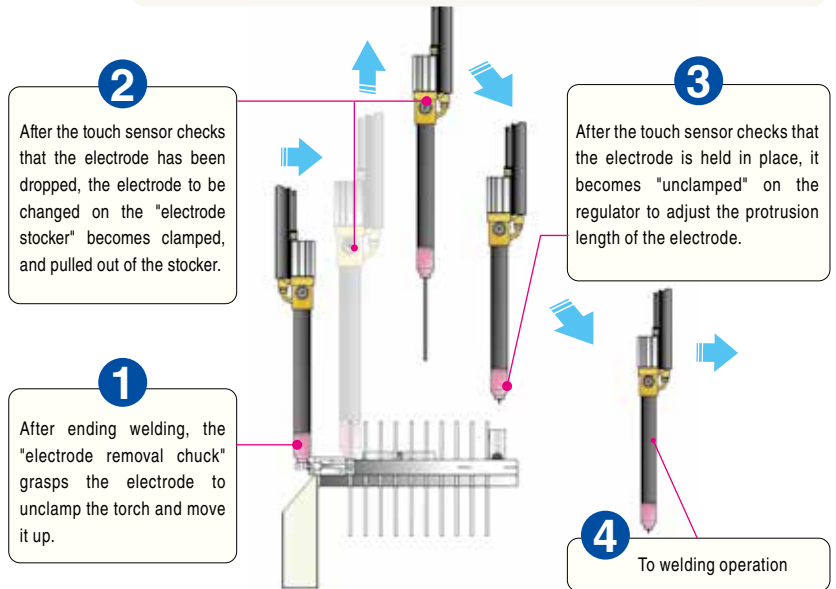
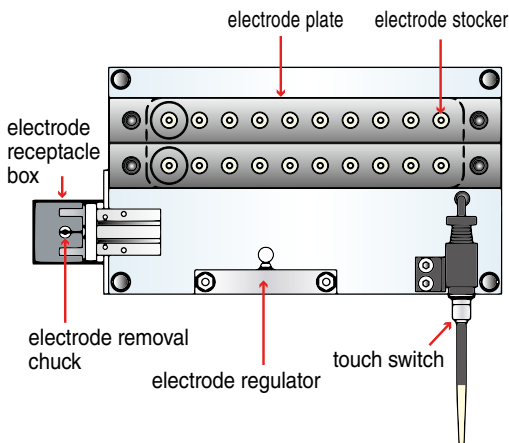
Using in combination with the Tokin TIG torch with a builtin air cylinder (which clamps and unclamps the electrode by actuating the air cylinder located behind the torch body), it can automatically change tungsten electrodes.



\* The legs are not supplied.

#### Features

- Simple configuration consisting of a tungsten electrode stand, chuck, and sensor
- Shortens the time for changing tungsten electrodes, thus saving manpower
- Enables the protrusion length to be kept constant when changing tungsten electrodes



### Various Types of Tungsten Electrodes

#### Tungsten with 1.5% lanthanum (WL15)



Nonferrous metals other than aluminum, iron

#### Tungsten with 2% cerium (WC20)



Nonferrous metals, iron

#### Pure tungsten (wf)



For aluminum only

## ROLLER-TYPE FLEXIBLE CONDUIT : SMART-GLIDE

Maintenance time for wire changing has been greatly reduced by the revised structural design of the internal roller.

**Outstanding wire feeding realized through minimum friction resistance.**

Years of accrued knowledge from selling roller-type flexible conduit and listening to end user feedback went into this design. These combined resources together with our product development inspired the new user-friendly and affordable model "Smart-Glide". This conduit was carefully designed to reduce wire feeding instability, wire sediment build-up, and other issues commonly seen in production lines.

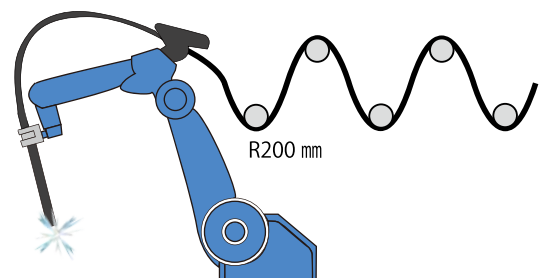
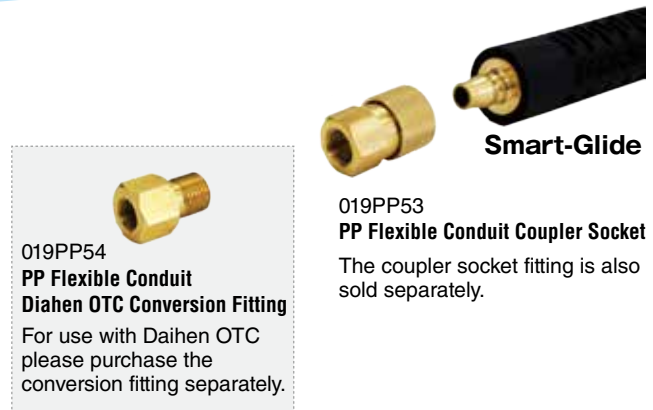
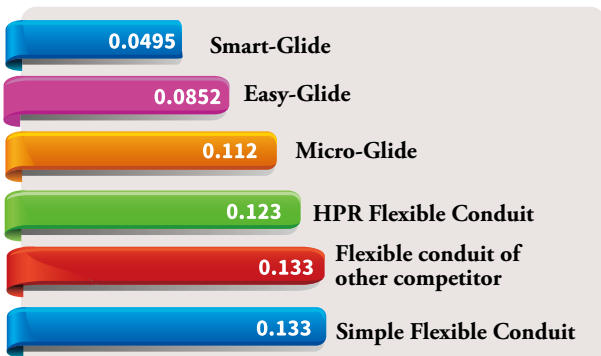


### Optimal for the following welding conditions:

- ▶ If the equipment layout is tight and requires several curves in the conduit.
- ▶ If the wire path is long and wire changing is a demand on time.
- ▶ If wire changing is often required due to reoccurring sediment buildup.
- ▶ If the robot cell space is extremely confined.

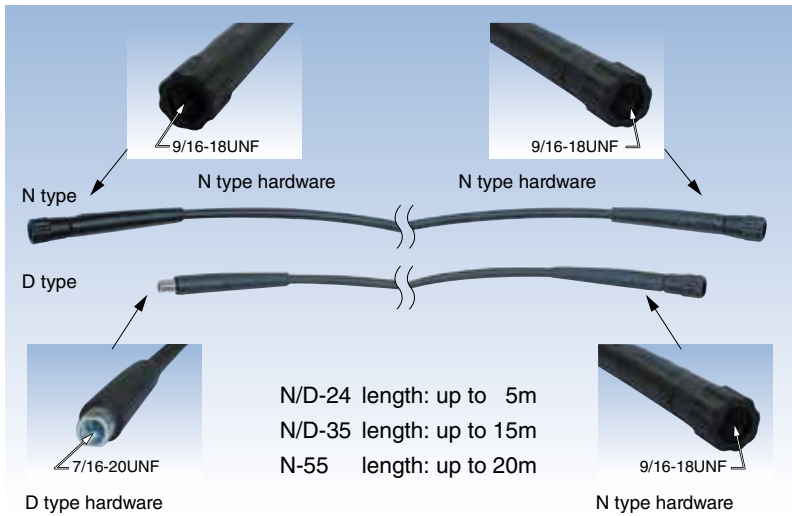
### Minimized Wire Feeding Resistance

Test Conditions: Measured the wire tensile force per 600mm diameter unit of each 3m conduit.

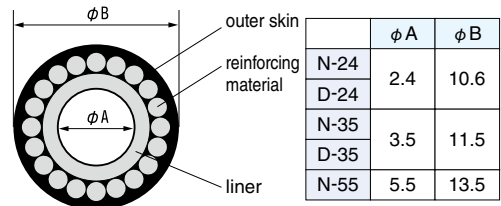


Weight(per/m)	0.51kg	
Maximum Usable Length	20m	
Recommended Bend Radius	Insertion point	R250mm
	Feeding path	R200mm
Applicable Wire Diameter	$\phi$ 0.9~ $\phi$ 1.6	

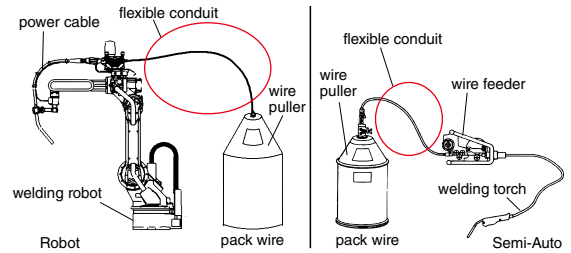
## FLEXIBLE CONDUIT N-24, D-24, N-35, D-35, N-55



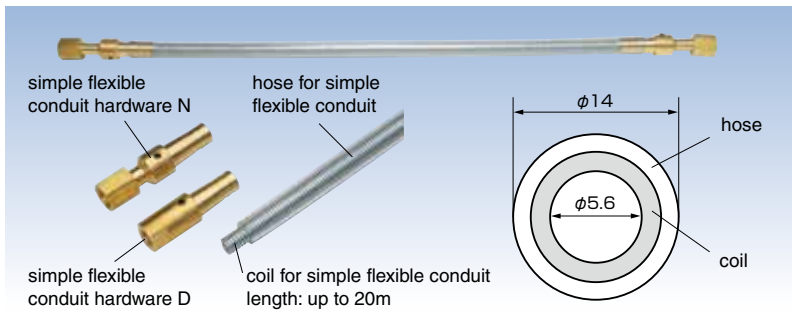
Inside image of Flexible Conduit



Use positions of Flexible Conduit

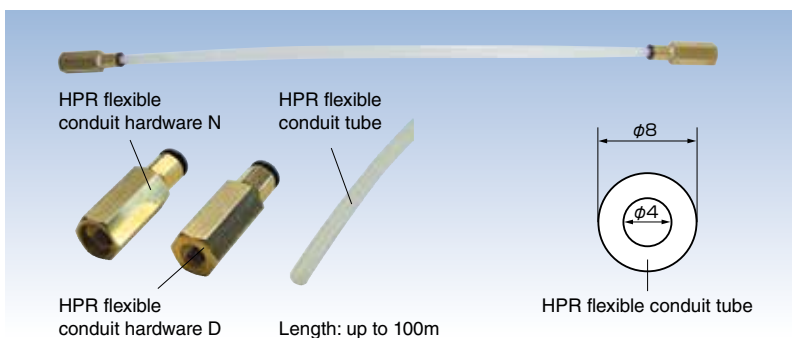


## SIMPLE FLEXIBLE CONDUIT



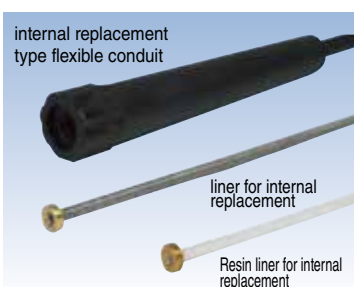
- A combination of hardware (both ends) + coil spring + outer skin hose can be assembled on site.
- Parts can be separated, enabling a worn coil or hose to be replaced.

## HPR FLEXIBLE CONDUIT



- Simply constructed of hardware (both ends) + HPR tube only, it can be assembled easily by anyone.
- Made of a ultra-high molecular material that excels in impact resistance and wear resistance, the tube has low friction resistance and improved feeding performance.
- Its length can be set at will, enabling it to be installed to suit the available space on site.
- Aluminum wire can be used.

## INTERNAL REPLACEMENT TYPE FLEXIBLE CONDUIT



Types of Internal Replacement Type Flexible Conduits

N internal replacement type flexible conduit up to 5m	Liner	for ~ $\phi 1.2$
	Liner	for ~ $\phi 1.6$
	Resin liner	for ~ $\phi 1.2$
	Resin liner	for ~ $\phi 1.6$
D internal replacement type flexible conduit up to 5m	Liner	for ~ $\phi 1.2$
	Liner	for ~ $\phi 1.6$
	Resin liner	for ~ $\phi 1.2$
	Resin liner	for ~ $\phi 1.6$

- Optimally used in a wide range of applications from feeders to torches, these conduits stabilize the feeding of wires through the use of liners.
- By replacing the internal liner, the flexible conduit can be used in various applications including iron, aluminum, and other uses.
- The liner replacement type can reduce operation costs.

## TKS-R SERIES

### Models According to End User Needs

#### TKS-RC - Direct Command Type -

A direct signal connection to the control panel allows for reliable stable command.

#### TKS-RS - Proximity Sensor Type -

Since the internal proximity sensor detects when the nozzle is getting close and automatically activates, only robot teaching is required for operation.

### ■ Ratings and Specifications

Size (Length x Width x Height)	327x255x904mm
Applicable Nozzle Inner Diameters	φ12、φ13、φ16、φ19
Input Power Source	AC100-240V/DC24V
Operating Voltage	DC24V
Operating Wattage	12.5W
Unclamp Signal Output	AC/DC5-240V (10W Max.)
Air Pressure	0.5 ~ 0.6MPa
Temperature	0 ~ 55°C
Relative Humidity	35 ~ 85%RH
Weight	25kg

### Features

- Both nozzle cleaning and anti-spatter spraying are performed in the same location saving time.
- With one input signal from the internal programmable logic controller (PLC) the whole operation from the nozzle clamp to the anti-spatter spraying is performed in series.
- Using an ultra-hard reamer and air motor the spatter is firmly removed.



Nozzle cleaner (Ultra-Hard Reamer)  
Anti-Spatter Sprayer

- A speciality steel cutting blade allows for long operating life and stability.



- Equipped with a large access panel making maintenance and troubleshooting easy.



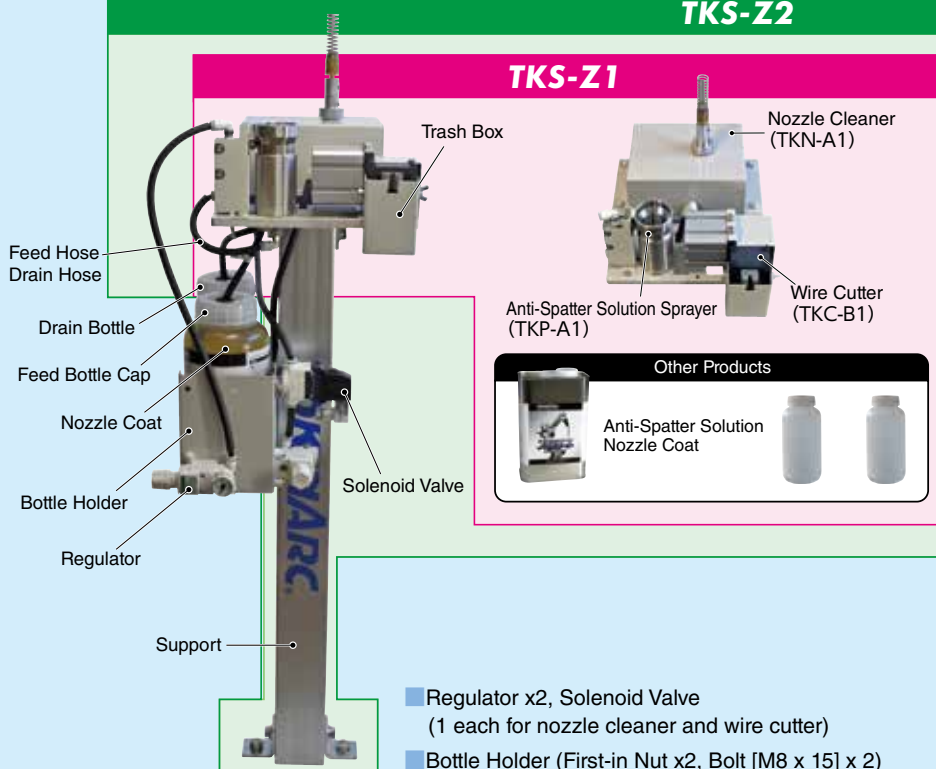
## TKS-Z SERIES (0462Z\*) (\*Fits type numbers 1-3)

It consists of a nozzle cleaner (TKN-A1), in which the signals from the robot turn the solenoid valve ON/OFF, allowing the pneumatic force to turn the spring, thus removing the spatter; a compact wire cutter (TKC-B1), and an anti-spatter solution sprayer (TKP-A1). It is the standard type nozzle cleaning station that accommodates a wide range of conditions.

### TKS-Z3

#### TKS-Z2

#### TKS-Z1



- Support (up to 90cm)  
Support length can be specified by user (in 10cm increments).

#### Support Set

- Aluminum Frame x 1
- Bracket x 6
- Nut x 6
- Bolt (M8 x 20) x 6 (M8 x 15) x 3

- Regulator x2, Solenoid Valve (1 each for nozzle cleaner and wire cutter)
- Bottle Holder (First-in Nut x2, Bolt [M8 x 15] x 2)



## ANTI-SPATTER SOLUTION SPRAYER

**TKP-A1**  
(046260)

**Nozzle Coat**  
(046114)



- Sprays a fine mist of anti-spatter solution to apply a thin uniform coating to the interior surface of the nozzle. This nozzle coating dries right after welding due to nozzle heat to form an anti-spatter coating.
- Anti-spatter solution can be sprayed in optimum quantities to prevent wasted fluid
- Supports nozzles with external dimensions in range from 16mm through 26mm.

\*The dedicated anti-spatter solution "Nozzle Coat" is required when using the above device. (Unit comes with 1 bottle)

\*Regulator and bottle holder are available as an option.

## WIRE CUTTER

**TKC-A2** (046250)

**TKC-B1** (046256)



- Cutting blade is designed by principle of leverage and made of highly durable material, allowing 40,000 cuts or more on one side. (Both sides of cutting blade are usable.)

\*Number of cuts varies according to usage of location. Thus, the data on number of cuts was obtained from actual testing under certain conditions and does not imply guarantee.  
\*Solenoid valve is available as an option.

## NOZZLE CLEANER

**TKN-A1**  
(046200)



- Easy installation provided by a simple structure of air piping drive force.
- Various cleaning heads are available for different nozzle sizes.

## ANTI-SPATTER SOLUTION

### NOZZLE COAT



- When Nozzle Coat is sprayed by the sprayer, the post-welding heat of the nozzle dries it quickly and forms anti-spatter film on the nozzle surface. This film allows the spatter to be removed with a weak force from the nozzle.

## HANDY TIP CHANGER (046703)

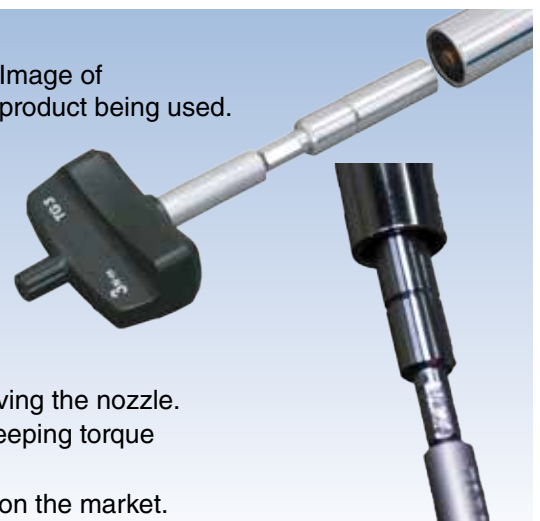
Allows for fast attaching and detaching of tips with the nozzle still in place.



Handy Tip Changer is designed for nozzles with an inner diameter of 12mm or wider.

(046703)

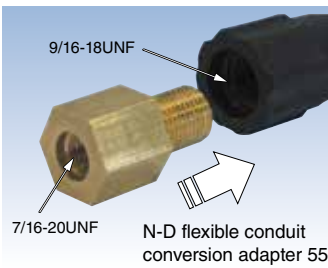
Image of product being used.



### Notable Features

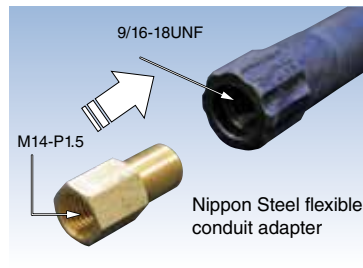
- Tip replacement is made possible even without removing the nozzle.
- Tips are installed with the proper torque every time keeping torque management easy.
- Compatible with all 6.35mm (1/4 inch) torque drivers on the market. The recommended torque range is between 2.5N·m~3N·m.

## CONVERSION ADAPTERS



**021012**  
N-D Flexible Conduit Conversion Adapter 55  
(converts N type → D type)  
● Adapter for ø5.5 inner diameter

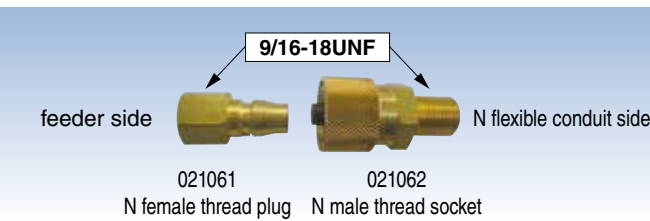
**021011**  
N-D Flexible Conduit Conversion Adapter 35  
(converts N type → D type)  
● Adapter for ø3.5 inner diameter



**021015**  
Nippon Steel Flexible Conduit Conversion Adapter  
(converts N type → Nippon Steel type)

● Puller for Nippon Steel Sumikin  
This hardware is for attaching an N flexible conduit to (thread pitch M14-P1.5).

## QUICK JOINTS



- Placing the joint between the feeder and the flexible conduit enables the flexible conduit to be removed or installed at a touch.
- The joint can be used also on a puller.

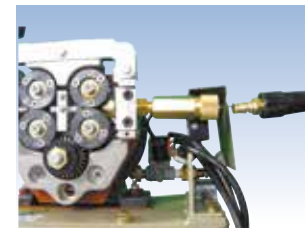
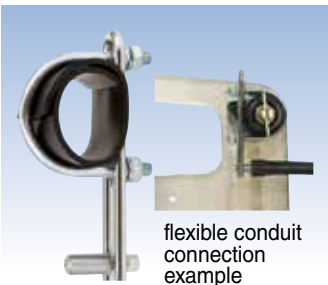


Image of Joint Connected to Feeder Side

\* A reverse male-female type for N type flexible conduit is also available.

## PACK-WIRE PULLING TOOL

(047800)



Pack-Wire Pulling Tool

- Attaches to spool shaft for semi-automatic welder
- Attachable to N Flexible Conduit Cable

## PACK-WIRE PULLING APPARATUS

(047801)



Pack-Wire Pulling Apparatus

- Plastic Dome Cover outer contour 510mm to 515mm
- For 250Kg Pack Wire

\* Comes with Hardware Set

## FLEXIBLE CABLE SUPPORT

(047805)

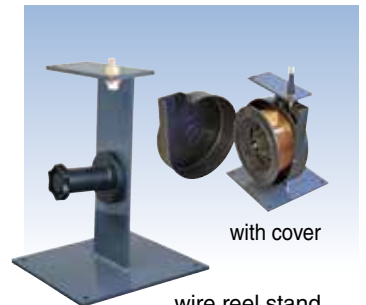


Flexible Cable Support

- Installs above pack wire extractor to support the flexible conduit
- Install the flexible conduit with a clamping band or similar item.

## WIRE REEL STAND

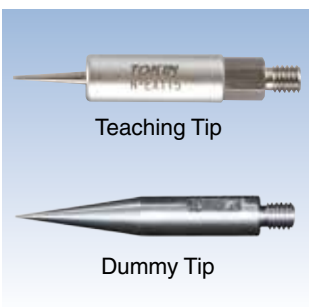
**REEL STAND** (TM4-116)  
**REEL STAND with cover** (TM4-116C)



wire reel stand

- This stand is for use when using spool wire instead of pack wire.

## TEACHING TIP / DUMMY TIP



Teaching Tip

Dummy Tip

Size	Teaching Tip	Dummy Tip
N-EXT10	DTT000N10	—
N-EXT12	DTT000N12	DT0000N12
N-EXT15	DTT000N15	DT0000N15
N-EXT20	—	DT0000N20
N-EXT25	—	DT0000N25
D-EXT10	DTT000D10	—
D-EXT12	DTT000D12	DT0000D12
D-EXT15	DTT000D15	DT0000D15
D-EXT20	—	DT0000D20
D-EXT25	—	DT0000D25

### Teaching Tips

- Movable tips for test operation of a teaching robot.

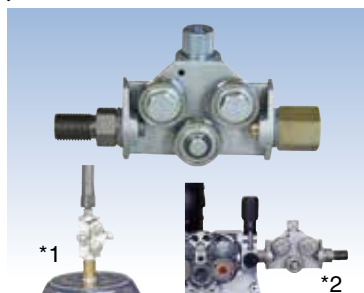
### Dummy Tip

- Stainless steel tips used for torch calibration.

## WIRE STRAIGHTENER

*Wire Straightener WS-3 Unit Assy* (047810)  
*for YASKAWA ELECTRIC CO. Wire Feeder* (047811)

100V (046270)  
200V (046271)

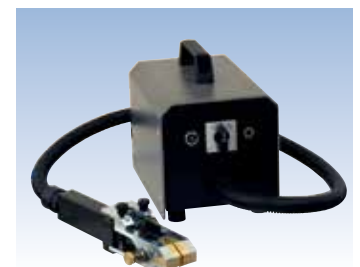


- Utilizes power of corrective roller to straighten bends in wire and suppress position deviations caused by wire to a minimum.

### Figure:

- \*1. Installing on Plastic Dome Cover.
- \*2. Installing on Wire Feeder.

## BUTT WELDER



- Simple flawless butt welding for anybody by pushing the button.
- In the range of 0.8 to 1.6mm wire diameter

## FUME EXTRACTOR WF SERIES

**WF-180**



**WF-130**



**WF-120**



**TOKINARC WF-300 WELDING FUME COLLECTOR**

• Eliminate the hazardous welding fume at welding point. Recommended to be used with a fume extractor torch.

• Equipped with the same brushless motor as WF-180. (It can be used approximately 8000 hours, instead of approximately 700 hours on WF-120.)

• An original sputter trap shuts out burned sputter.

Type	WF-180
Rated Input Voltage	200V (3 phase)
Maximum Air Flow	3.1m <sup>3</sup> /min
Maximum Pressure	23.5kpa
Rated Current	5.0A
Maximum Output	1,000W
Filter	1
Noise Level	75dB(A)
Weight	80kg
Dimensions	H1,000×W360×L660(mm)

Type	WF-130
Rated Input Voltage	200V (3 phase)
Maximum Air Flow	3.1m <sup>3</sup> /min
Maximum Pressure	23.5kpa
Rated Current	5.0A
Maximum Output	1,000W
Filter	1
Noise Level	75dB(A)
Weight	80kg
Dimensions	H661×W300×L686(mm)

Type	WF-120
Rated Input Voltage	200V
Maximum Air Flow	3.0m <sup>3</sup> /min
Maximum Pressure	21.6kpa
Rated Current	5.3A
Maximum Output	1,000W
Filter	Small Filter × 1
Noise Level	75dB(A)
Weight	30kg
Dimensions	H550×W300×L583(mm)

Type	WF-300
Rated Input Voltage	200V (3 phase)
Motor Power	0.75kW
Maximum Air Flow	8m <sup>3</sup> /min
Maximum Pressure	2.16kpa
Filter	1
Noise Level	75dB(A)
Weight	64kg
Dimensions	H1,060×W490×L600(mm)

## ROBOTIC FUME EXTRACTOR TORCH

## FUME EXTRACTOR TORCH



**F-308RR**



**WXF-500R**



Type	CF-27J	CF-37J	CF-37J	CFL-20	CFL-35
Suction Nozzle	φ26	φ26	φ30	φ26	φ26

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