

TIG Welding Torches

TOKINARC®
TOKIN CORPORATION

- TA, CS, FX Series ■ ROBOTIC AND AUTOMATIC Series
- TUNGSTEN ELECTRODES CHANGER ■ TUNGSTEN ELECTRODES



www.tokinarc.co.jp

TOKIN CORPORATION

AIR COOLED MODELS

TA-24

TORCH FOR USING
AT SMALL SPACE

Rated current (DC)	A	80
Weight (without P/C)	g	66
Applicable tungsten size	mm	0.5-2.4
Cable length	m	4, 8, 10, 15

Standard Spec.: Nozzle No. 6 and
Electrode 2.4mm
* Parts are common with TA-24W.

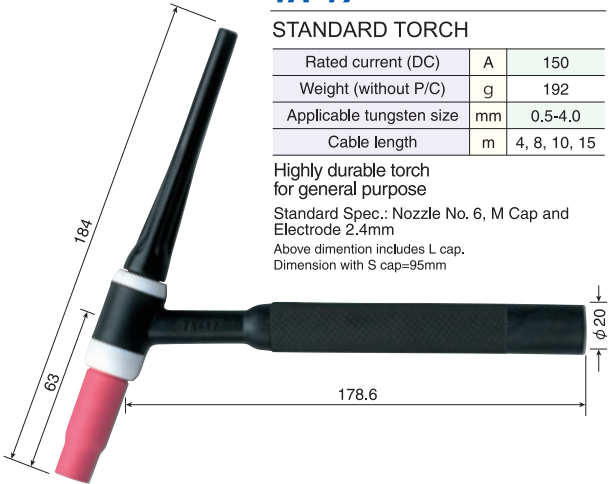


TA-17

STANDARD TORCH

Rated current (DC)	A	150
Weight (without P/C)	g	192
Applicable tungsten size	mm	0.5-4.0
Cable length	m	4, 8, 10, 15

Highly durable torch
for general purpose
Standard Spec.: Nozzle No. 6, M Cap and
Electrode 2.4mm
Above dimension includes L cap.
Dimension with S cap=95mm

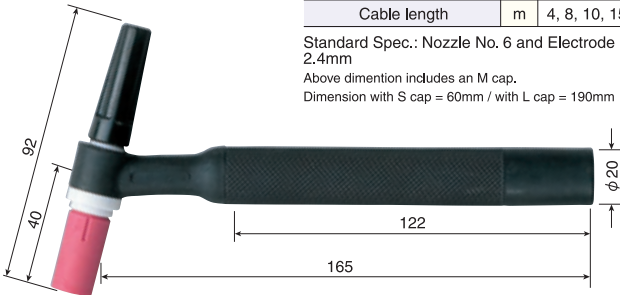


TA-9

LIGHT WEIGHT TORCH
FOR THIN MATERIAL

Rated current (DC)	A	125
Weight (without P/C)	g	105
Applicable tungsten size	mm	0.5-3.2
Cable length	m	4, 8, 10, 15

Standard Spec.: Nozzle No. 6 and Electrode
2.4mm
Above dimension includes an M cap.
Dimension with S cap = 60mm / with L cap = 190mm



TA-17P

PENCIL TYPE TORCH
FOR 350A

Rated current (DC)	A	150
Weight (without P/C)	g	192
Applicable tungsten size	mm	0.5-4.0
Cable length	m	4, 8, 10, 15

Standard Spec.: Nozzle No. 6 and Electrode
2.4mm

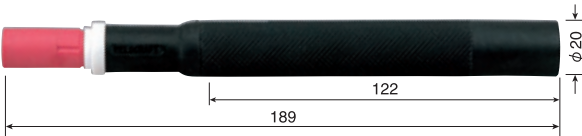


TA-9P

PENCIL TYPE TORCH
FOR THIN MATERIAL

Rated current (DC)	A	125
Weight (without P/C)	g	105
Applicable tungsten size	mm	0.5-3.2
Cable length	m	4, 8, 10, 15

Standard Spec.: Nozzle No. 6 and
Electrode 2.4mm
* Parts are common with TA-9.

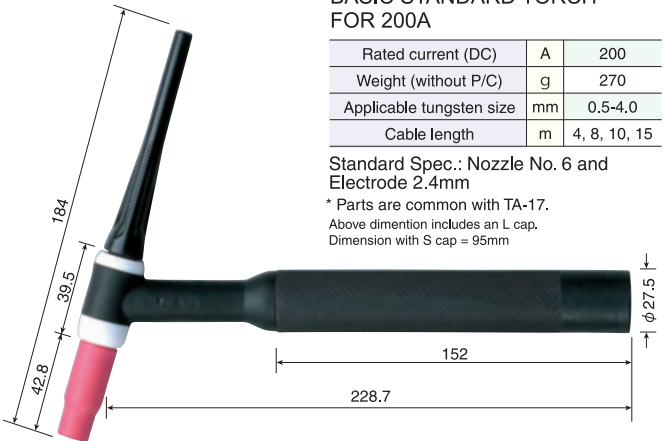


TA-26

BASIC STANDARD TORCH
FOR 200A

Rated current (DC)	A	200
Weight (without P/C)	g	270
Applicable tungsten size	mm	0.5-4.0
Cable length	m	4, 8, 10, 15

Standard Spec.: Nozzle No. 6 and
Electrode 2.4mm
* Parts are common with TA-17.
Above dimension includes an L cap.
Dimension with S cap = 95mm



WATER COOLED MODELS

TA-24W

WATER-COOLED TORCH
FOR USING AT SMALL SPACE

Rated current (DC)	A	180
Weight (without P/C)	g	80
Applicable tungsten size	mm	0.5-2.4
Cable length	m	3.8, 7.6

The head angle is 60°.
Standard Spec.: Nozzle No. 6 and Electrode 2.4mm



TA-20

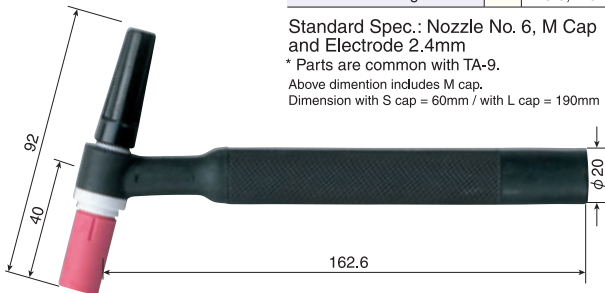
COMPACT & LIGHTWEIGHT
WATER-COOLED TORCH

Rated current (DC)	A	250
Weight (without P/C)	g	99
Applicable tungsten size	mm	0.5-3.2
Cable length	m	3.8, 7.6

Standard Spec.: Nozzle No. 6, M Cap and Electrode 2.4mm

* Parts are common with TA-9.

Above dimension includes M cap.
Dimension with S cap = 60mm / with L cap = 190mm



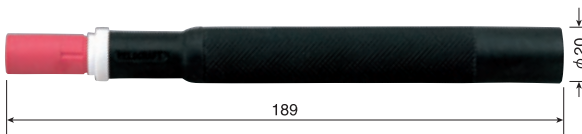
TA-20P

COMPACT, LIGHTWEIGHT,
AND PENCIL TYPE
WATER-COOLED TORCH

Rated current (DC)	A	225
Weight (without P/C)	g	105
Applicable tungsten size	mm	0.5-3.2
Cable length	m	3.8, 7.6

Standard Spec.: Nozzle No. 6, M Cap and Electrode 2.4mm

* Parts are common with TA-9.



TA-18

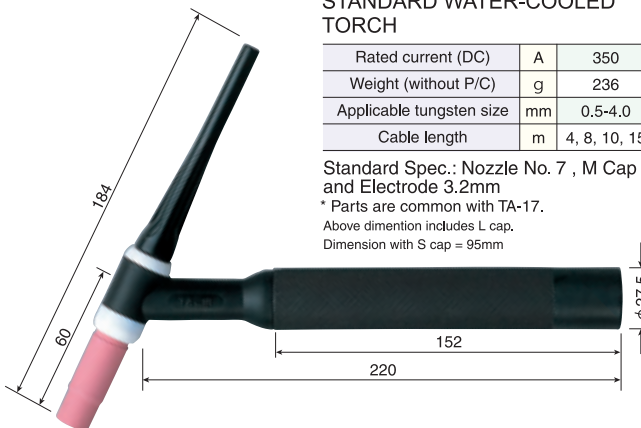
STANDARD WATER-COOLED
TORCH

Rated current (DC)	A	350
Weight (without P/C)	g	236
Applicable tungsten size	mm	0.5-4.0
Cable length	m	4, 8, 10, 15

Standard Spec.: Nozzle No. 7, M Cap and Electrode 3.2mm

* Parts are common with TA-17.

Above dimension includes L cap.
Dimension with S cap = 95mm

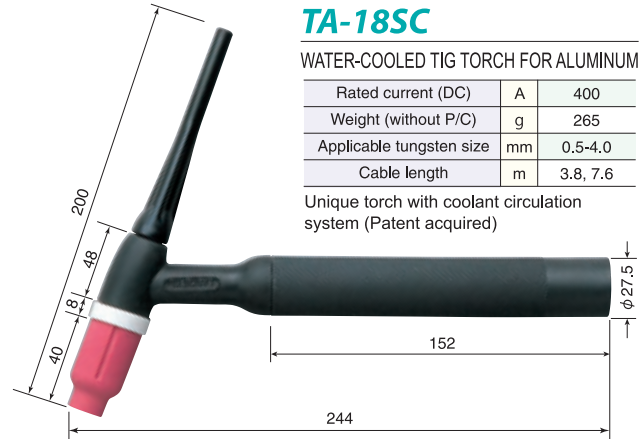


TA-18SC

WATER-COOLED TIG TORCH FOR ALUMINUM

Rated current (DC)	A	400
Weight (without P/C)	g	265
Applicable tungsten size	mm	0.5-4.0
Cable length	m	3.8, 7.6

Unique torch with coolant circulation system (Patent acquired)

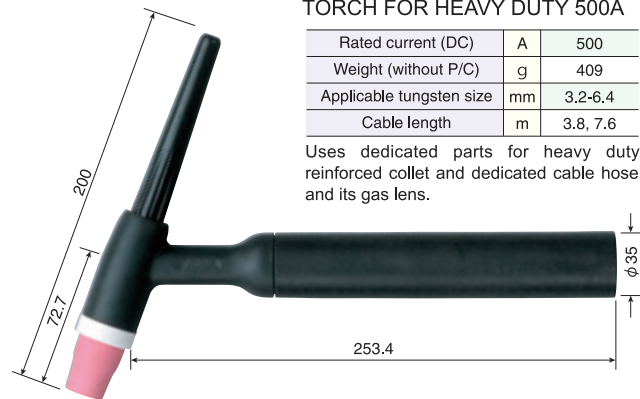


TA-12

TORCH FOR HEAVY DUTY 500A

Rated current (DC)	A	500
Weight (without P/C)	g	409
Applicable tungsten size	mm	3.2-6.4
Cable length	m	3.8, 7.6

Uses dedicated parts for heavy duty, reinforced collet and dedicated cable hose, and its gas lens.



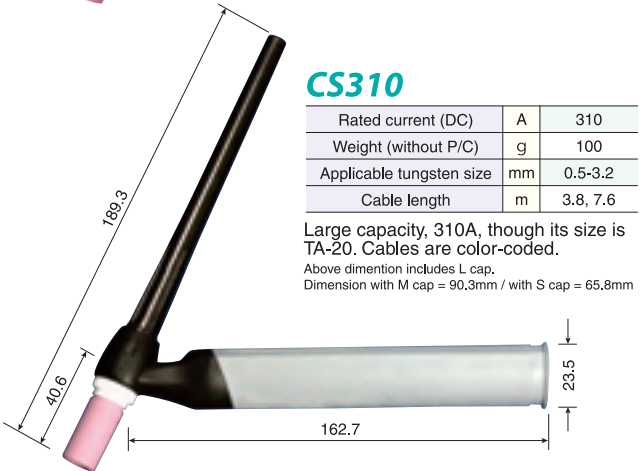
CS310

Rated current (DC)	A	310
Weight (without P/C)	g	100
Applicable tungsten size	mm	0.5-3.2
Cable length	m	3.8, 7.6

Large capacity, 310A, though its size is TA-20. Cables are color-coded.

Above dimension includes L cap.

Dimension with M cap = 90.3mm / with S cap = 65.8mm

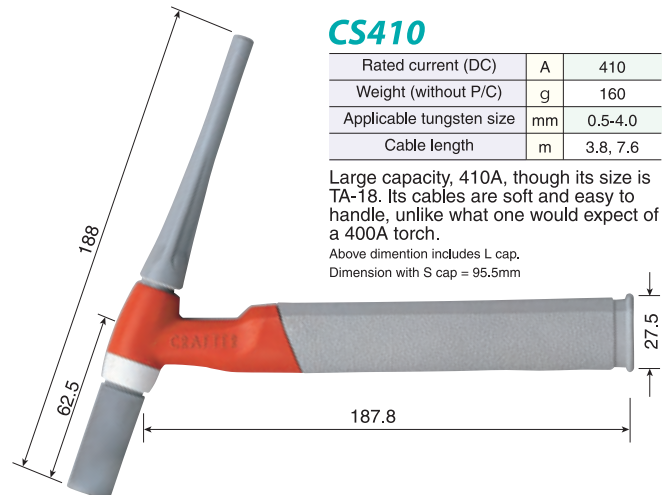


CS410

Rated current (DC)	A	410
Weight (without P/C)	g	160
Applicable tungsten size	mm	0.5-4.0
Cable length	m	3.8, 7.6

Large capacity, 410A, though its size is TA-18. Its cables are soft and easy to handle, unlike what one would expect of a 400A torch.

Above dimension includes L cap.
Dimension with S cap = 95.5mm



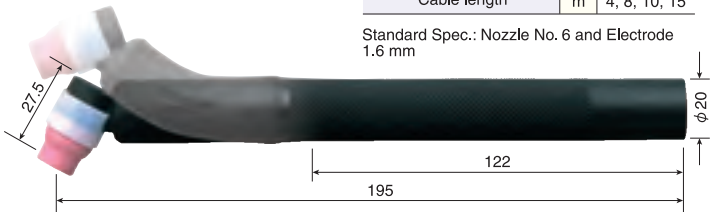
For improvement purposes, the parts specifications, dimensions, and design are subject to change without notice.

FX Torch Series AIR-COOLED FLEXIBLE TORCH

FX-24

Rated current (DC)	A	80
Weight (without P/C)	g	66
Applicable tungsten size	mm	0.5-2.4
Cable length	m	4, 8, 10, 15

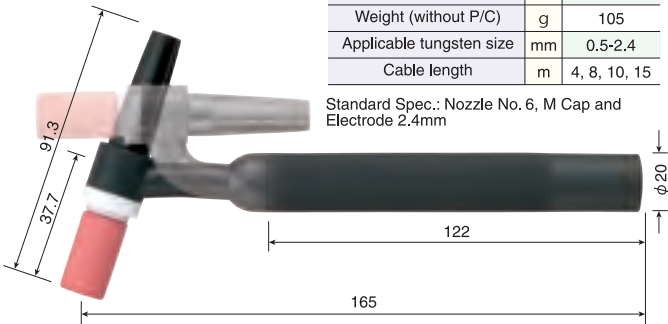
Standard Spec.: Nozzle No. 6 and Electrode 1.6 mm



FX-9

Rated current (DC)	A	125
Weight (without P/C)	g	105
Applicable tungsten size	mm	0.5-2.4
Cable length	m	4, 8, 10, 15

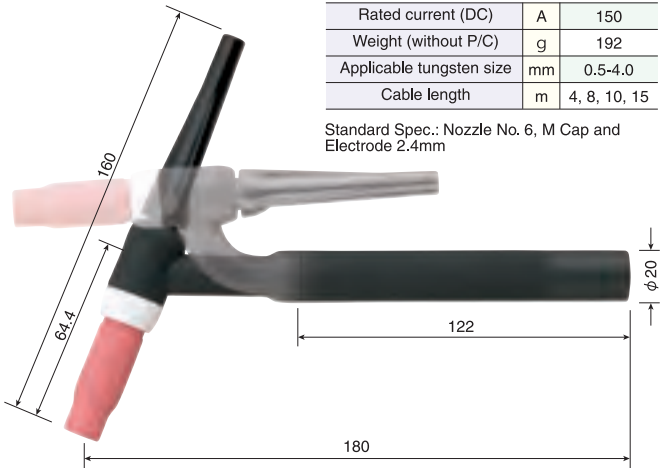
Standard Spec.: Nozzle No. 6, M Cap and Electrode 2.4mm



FX-17

Rated current (DC)	A	150
Weight (without P/C)	g	192
Applicable tungsten size	mm	0.5-4.0
Cable length	m	4, 8, 10, 15

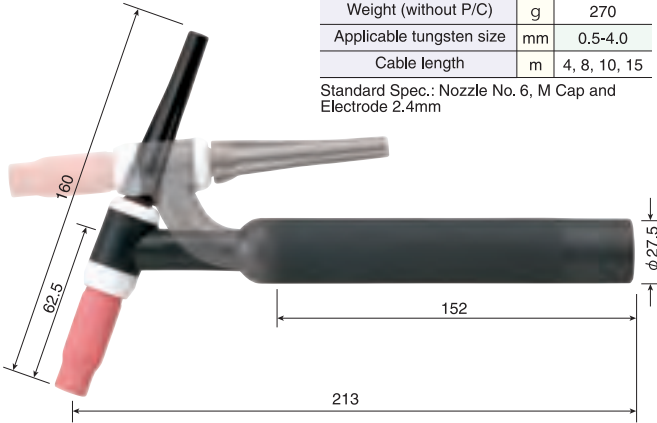
Standard Spec.: Nozzle No. 6, M Cap and Electrode 2.4mm



FX-26

Rated current (DC)	A	200
Weight (without P/C)	g	270
Applicable tungsten size	mm	0.5-4.0
Cable length	m	4, 8, 10, 15

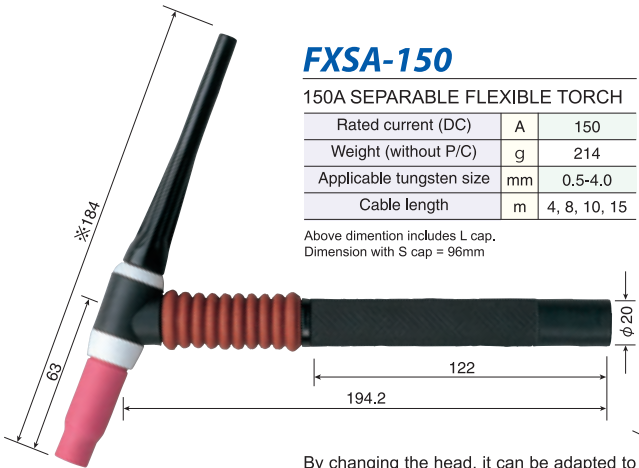
Standard Spec.: Nozzle No. 6, M Cap and Electrode 2.4mm



FXSA-150

150A SEPARABLE FLEXIBLE TORCH		
Rated current (DC)	A	150
Weight (without P/C)	g	214
Applicable tungsten size	mm	0.5-4.0
Cable length	m	4, 8, 10, 15

Above dimension includes L cap.
Dimension with S cap = 96mm



By changing the head, it can be adapted to various types of torches.
A multi-purpose, flexible type torch.

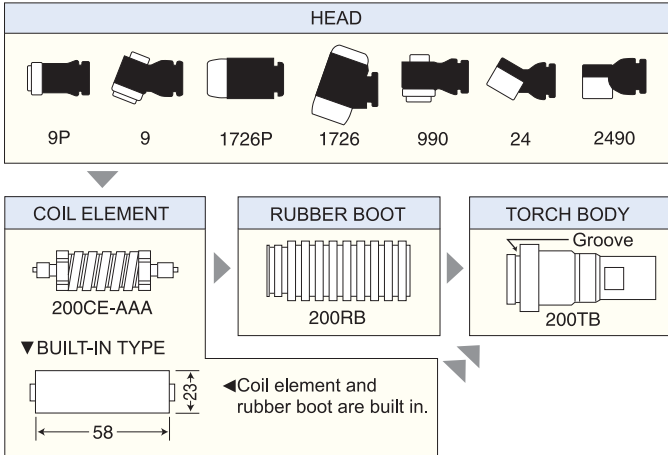
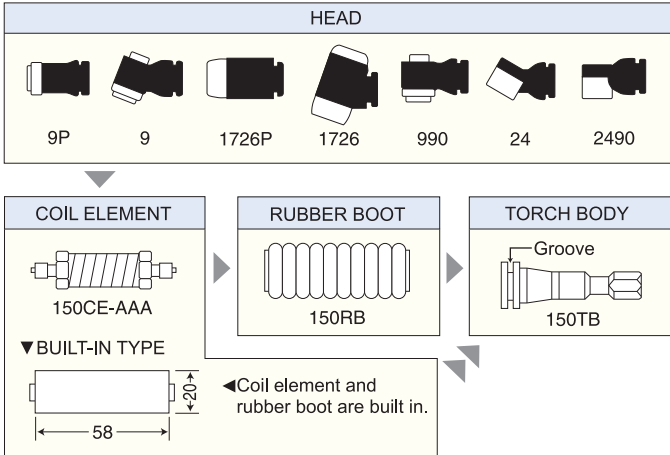
FXSA-200

200A SEPARABLE FLEXIBLE TORCH		
Rated current (DC)	A	200
Weight (without P/C)	g	318
Applicable tungsten size	mm	0.5-4.0
Cable length	m	4, 8, 10, 15

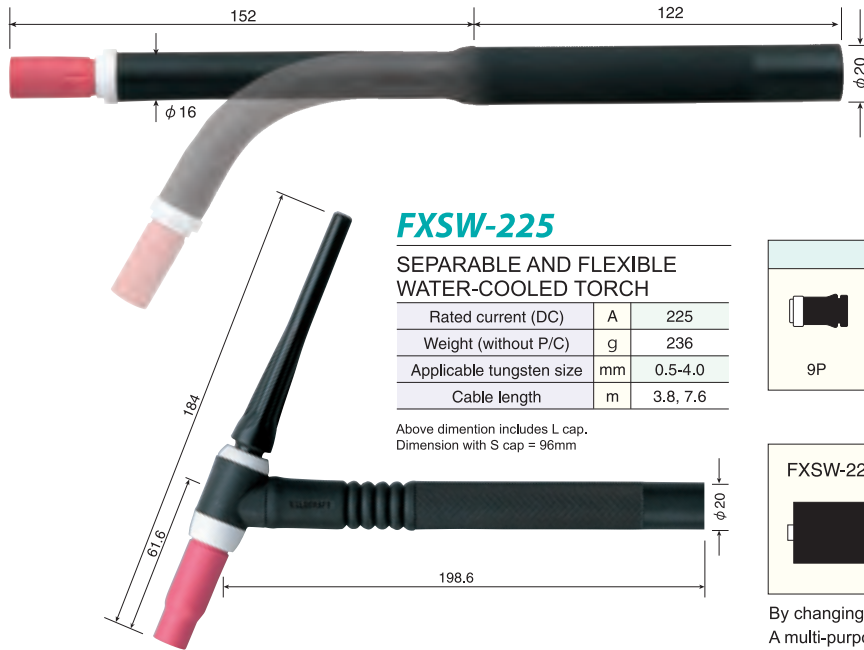
Above dimension includes L cap.
Dimension with S cap = 96mm



By changing the head, it can be adapted to various types of torches.
A multi-purpose, flexible type torch.



FX Torch Series WATER-COOLED FLEXIBLE TORCH



FXSW-225

SEPARABLE AND FLEXIBLE WATER-COOLED TORCH

Rated current (DC)	A	225
Weight (without P/C)	g	236
Applicable tungsten size	mm	0.5-4.0
Cable length	m	3.8, 7.6

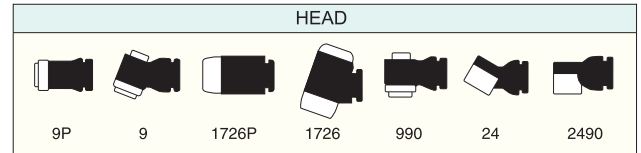
Above dimension includes L cap.
Dimension with S cap = 96mm

FX-25

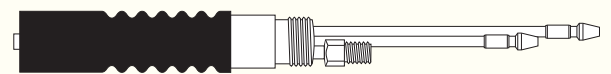
COMPACT, FLEXIBLE, AND PENCIL TYPE WATER-COOLED TORCH

Rated current (DC)	A	200
Weight (without P/C)	g	160
Applicable tungsten size	mm	0.5-3.2
Cable length	m	3.8, 7.6

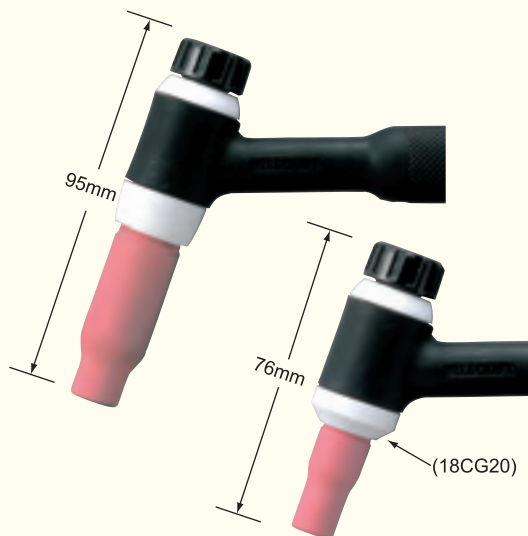
Standard Spec.: Nozzle No. 6, M Cap and Electrode 2.4mm



FXSW-225 BODY



By changing the head, it can be adapted to various types of torches.
A multi-purpose, flexible water-cooled torch.



For those who consider the torch head to be too long:

STUBBY COLLET

Applicable torch	Appearance	Parts No.	Size	
			Inch	mm
TA-17,18,18P, 26,CS410		10N22S	.040	1.0
		10N23S	1/16	1.6
		10N24S	3/32	2.4
		10N25S	1/8	3.2

STUBBY COLLET BODY (Please order with nozzle gasket 18CG20 together)

TA-17,18,18P, 26,CS410		17CB20	The Stubby collet body can be used for all sizes of the above Stubby collets.	
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For using torches model of TA-17, 18, or 26, please remove the cup gasket and attach a nozzle gasket (18CG20). This will allow you to attach a stubby collet, collet body, and a nozzle for TA-9. As a result, the torch head can be shortened as shown on the right.

COOLANT CIRCULATION SYSTEM WR-100 (046500)



Features: Features: Its compact body and superior cooling performance contribute to attaining a thermal value of 35 kcal/min. The pump and the body are insulated inside the circulation system. Thus, it can eliminate any negative influences during arc starting. Because no priming water is needed, the amount of labor for replacing water is dramatically reduced. The water tank is separate and independent type, facilitating water replacement. Superior serviceability to reduce the amount of labor for cleaning



Product Specifications

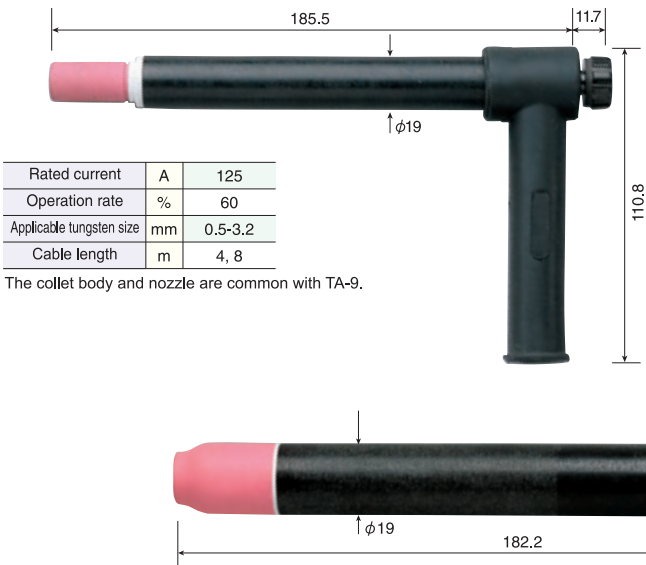
Model type	WR-100	
Power source voltage	50/60Hz	Single-phase AC200V
Power consumption	W	200/240
Discharge pressure	MPa	0.3
Discharge flow rate (*1)	L/min	2.1-2.2
Heat dissipation	Kcal/min	35
Tank capacity	L	10
Unit weight (*2)	kg	22

(*1) Water-cooled torch connected: 60Hz
(*2) Coolant mass excluded

AIR COOLED TORCH FOR AUTOMATIC WELDING MACHINES

TA-23A

COMPACT AIR COOLED TORCH
FOR AUTOMATIC WELDING MACHINES



TA-125HA

GAS LENS TYPE TORCH
OF POSITIVE SHIELDING EFFECT

Rated current	A	125
Operation rate	%	60
Applicable tungsten size	mm	1.6-3.2
Cable length	m	4, 8, 10, 15

The collet body and nozzle are common with TA-9.

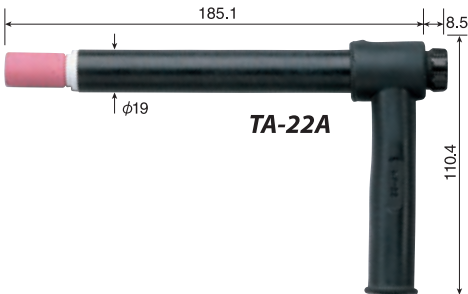


WATER COOLED TORCH FOR AUTOMATIC WELDING MACHINES

TA-22A

COMPACT TORCH WITH REINFORCED
CABLE AND WATER HOSE.

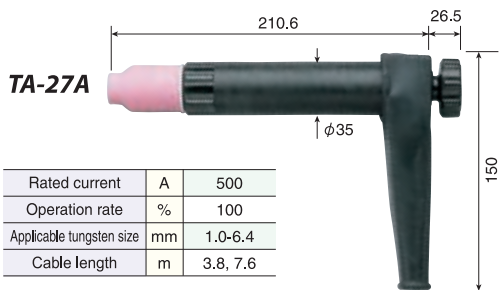
The collet body and nozzle are common with TA-9.



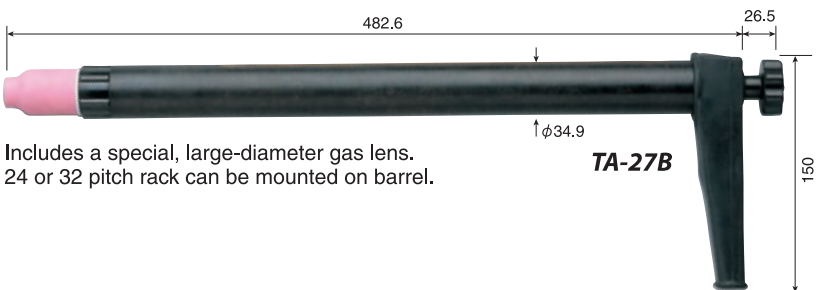
Rated current	A	250
Operation rate	%	100
Applicable tungsten size	mm	0.5-3.2
Cable length	m	3.8, 7.6

TA-27A, TA-27B

STANDARD WATER COOLED TORCH
FOR AUTOMATIC WELDING MACHINES



Rated current	A	500
Operation rate	%	100
Applicable tungsten size	mm	1.0-6.4
Cable length	m	3.8, 7.6



Includes a special, large-diameter gas lens.
24 or 32 pitch rack can be mounted on barrel.

TA-18P

500A WATER-COOLED PENCIL TYPE TORCH
24 or 32 pitch rack can be mounted on barrel.

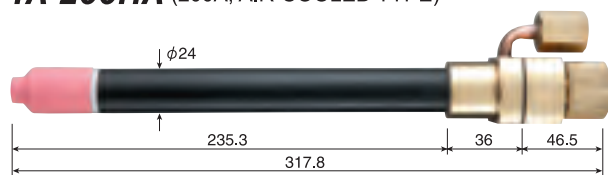
* Parts are common with TA-17.



Rated current	A	500
Operation rate	%	100
Applicable tungsten size	mm	0.5-4.0
Cable length	m	3.8, 7.6

ROBOTIC TIG TORCH

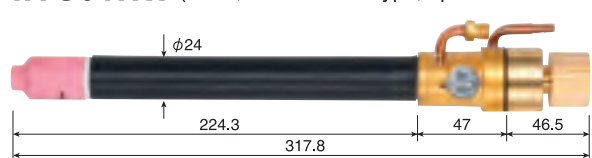
TA-200HA (200A, AIR-COOLED TYPE)



TA-200CDA (200A, AIR-COOLED TYPE)



TA-301HW (300A, water-cooled type, operation rate 100%)



TA-301CDW (300A, water-cooled type, operation rate 100%)



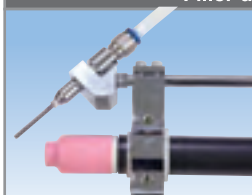
Features

- Built-in air cylinder makes replacing the tungsten electrode easy.
- Standard model is gas lens type, achieving a positive shielding effect.
- Gas lens type can be changed to ceramic nozzle type.

Model type	200HA	200CDA	301HW	301CDW
Rated current	A 200	200	300	300
Operation rate	% 60	60	100	100
Applicable tungsten size	mm 1.6, 2.4, 3.2	1.6, 2.4, 3.2	2.4, 3.2	2.4, 3.2
Cable length	m 6, 8	6, 8	6, 8	6, 8
Cooling method	Air-Cooled	Air-Cooled	Water-Cooled	Water-Cooled
Cylinder	—	Double-acting type	—	Double-acting type

200A Standard Spec.: Gas Lens, Nozzle No. 6 and Electrode 2.4mm
300A Standard Spec.: Gas Lens, Nozzle No. 6 and Electrode 3.2mm

Filler unit for TA-301

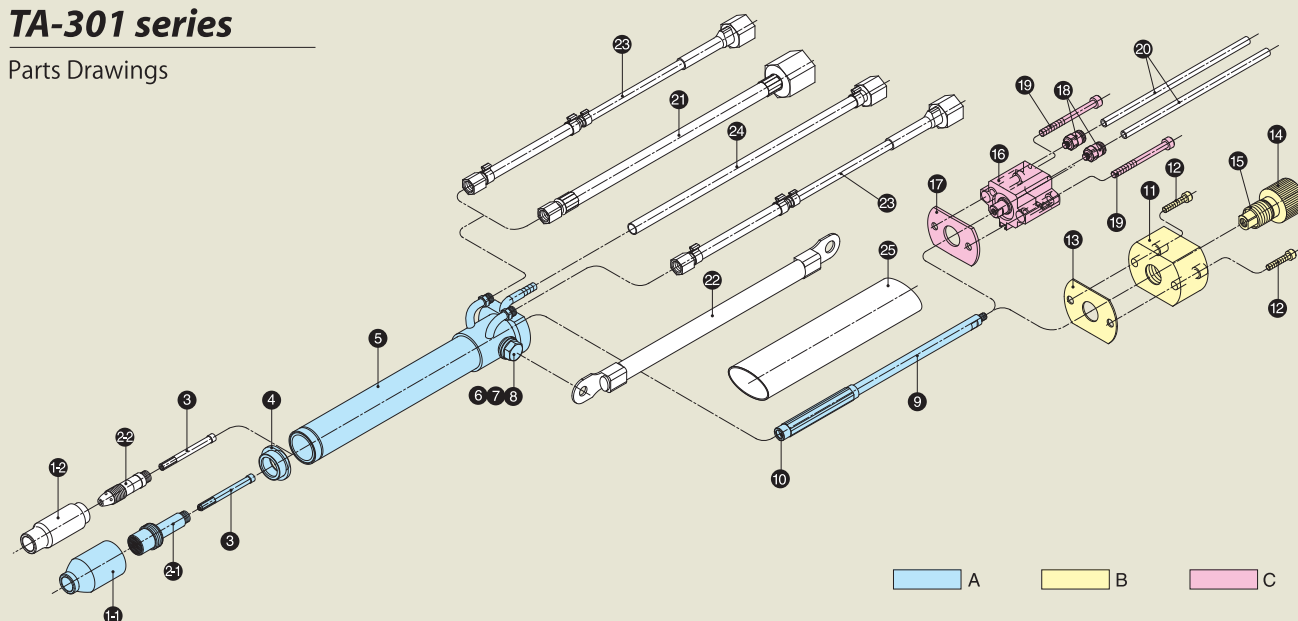


Insertion angle (30°/45°) selectable

- * The standard product has insertion angle of 45° and wire diameter of $\phi 1.2$. Standard Spec.: insertion Angle 45° and wire 1.2mm
- * Filler unit is available as an option.
- * The filler unit for TA-301 may also be used with the TA-200 series.
- * The filler unit does not include a flexible conduit.
- Please specify the length that you need when ordering.

TA-301 series

Parts Drawings



TA-301HW PARTS LIST

Code	Parts No.	Parts Name	Size	Qty
1-1	54N16	TA-17 GAS LENS NOZZLE	No.6	1
1-2	10N48	TA-17 CERAMIC NOZZLE	No.6	1
	018905	TA-200, 301 GAS LENS COLLET BODY	1.6mm	1
2-1	018906	"	2.4mm	1
	018907	"	3.2mm	1
	10N31	TA-17 COLLET BODY	1.6mm	1
2-2	10N32	"	2.4mm	1
	10N28	"	3.2mm	1
	018900	TA-200,301 COLLET	1.6mm	1
	018901	"	2.4mm	1
	018902	"	3.2mm	1
4	54N01	TA-17 GAS LENS INSULATOR		1
5	018912	TA-301 TORCH BODY		1
6		Hex bolt	M8*1.25-L16	1
7		Flat washer		1
8		Spring washer		1
9	018922	TA-301 GUIDE SHAFT	With O-ring	1
10	OS06-04D	TA-301 O-Ring	4D S-6	1
11	018931	TA-200, 301H ANCHORING BLOCK		1
12		HEX BOLT	M5*0.8-L25	2
13	018933	TA-200, 301H RUBBER SEAL		1
14	018932	TA-200,301H CAP	With O-ring	1
15	023505	O-ring for cap	P-12	1
A+B	018996	TA-301HW TORCH BODY ASSEMBLY		

TA-301CDW PARTS LIST

Code	Parts No.	Parts Name	Size	Qty
1-1	54N16	TA-17 GAS LENS NOZZLE	No.6	1
1-2	10N48	TA-17 CERAMIC NOZZLE	No.6	1
	018905	TA-200, 301 GAS LENS COLLET BODY	1.6mm	1
2-1	018906	"	2.4mm	1
	018907	"	3.2mm	1
	10N31	TA-17 COLLET BODY	1.6mm	1
2-2	10N32	"	2.4mm	1
	10N28	"	3.2mm	1
	018900	TA-200,301 COLLET	1.6mm	1
	018901	"	2.4mm	1
	018902	"	3.2mm	1
4	54N01	TA-17 GAS LENS INSULATOR		1
5	018912	TA-301 TORCH BODY		1
6		Hex bolt	M8*1.25-L16	1
7		Flat washer		1
8		Spring washer		1
9	018922	TA-301 GUIDE SHAFT	With O-ring	1
10	OS06-04D	TA-301 O-Ring	4D S-6	1
16	018960	AIR CYLINDER	CDOP2B20-W4978-S	1
17	018934	TA-200,301CD CYLINDER SEAL		1
18	M1GKQH06-M5	ONE-TOUCH PIPE JOINT	KQH06-M5 (S304)	2
19	018983	HEX BOLT	M5*0.8-L55	2
20	018935	TA-301CD AIR HOSE 6m	$\phi 6-\phi 4$ (6300L)	2
	018936	TA-301CD AIR HOSE 8m	$\phi 6-\phi 4$ (8100L)	2
A+C	018997	TA-301CDW TORCH BODY ASSEMBLY		

CABLE SPECIFICATIONS

A TYPE (water-cooled power cable type)

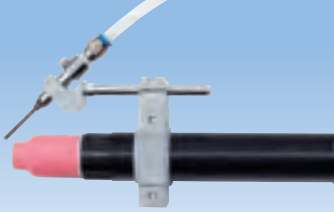
Code	Parts No.	Parts Name	Size	Qty
21	018052	TA-18 WATER-COOLED POWER CABLE	6m	1
	018024	"	8m	1
23	018941	TA-301, 500 COOLANT HOSE 6m	$\phi 45-\phi 65$ (6100L)	1
	018942	"	8m	1
	018946	TA-301 GAS HOSE 6m	$\phi 18(6100L)$	1
24	018947	"	8m	1
25	018053	TA-18 HOSE SHEATH	6m	1
	018036	"	8m	1

B TYPE (cabtyre type)

Code	Parts No.	Parts Name	Size	Qty
22	018051	TA-301 CABTYRE CABLE 6m	EWRCT38	1
	018952	"	8m	1
23	018941	TA-301, 500 COOLANT HOSE 6m	$\phi 45-\phi 65$ (6100L)	2
	018942	"	8m	2
24	018946	TA-301 GAS HOSE 6m	$\phi 18(6100L)$	1
	018947	"	8m	1
25	018053	TA-18 HOSE SHEATH	6m	1
	018036	"	8m	1

ROBOTIC TIG TORCH

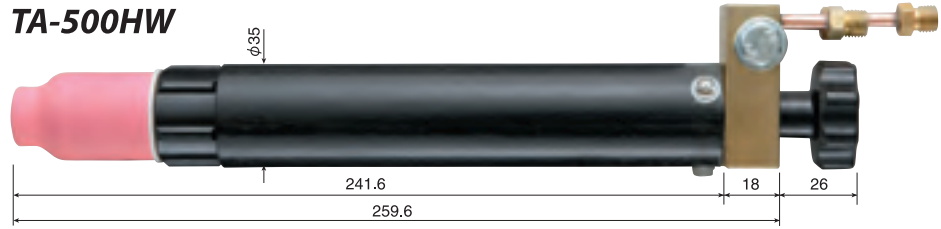
Filler unit for TA-500



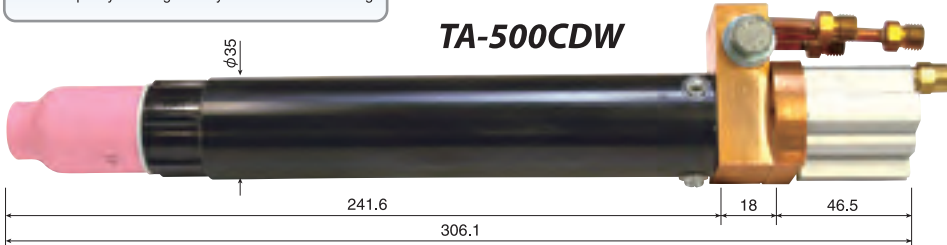
Insertion angle (30°/45°) selectable

- * 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.

TA-500HW



TA-500CDW



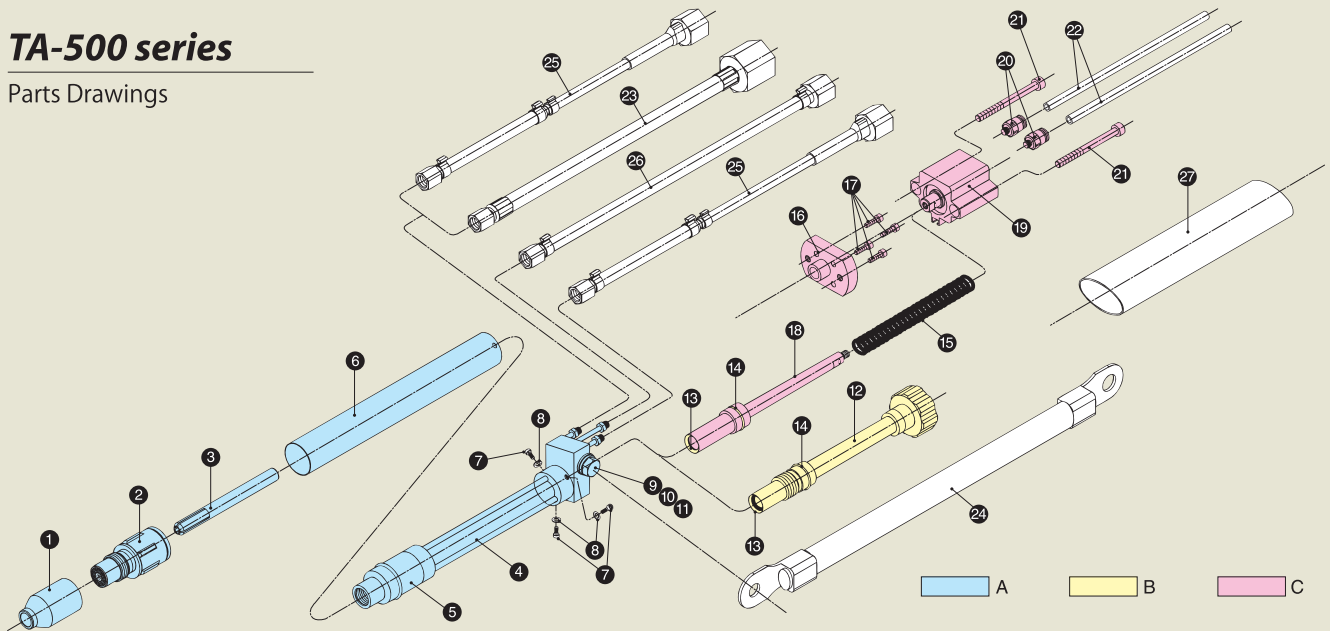
- Features**
- 500A, WATER-COOLED TYPE, OPERATION RATE 100%
 - Built-in pneumatic cylinder makes replacing the tungsten electrode easy.
 - Standard model is gas lens type, achieving a positive shielding effect.

Model type	500HW	500CDW
Rated current	A 500	500
Operation rate	% 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 Spec.: Gas Lens, Nozzle No. 10 and Electrode 4.0mm

TA-500 series

Parts Drawings



TA-500HW PARTS LIST

Code	Parts No.	Parts Name	Size	Qty
1	53N88	TA-17 LARGE-DIAMETER GAS LENS NOZZLE	No.10	1
2	018910	TA-500GL BODY	3.2mm	1
	018909	"	4.0mm	1
3	018904	TA-500 COLLET	3.2mm	1
	018903	"	4.0mm	1
4	018913	TA-500 TORCH BODY	With O-ring	1
5	OS25-01A	O-Ring	S-25	1
6	018914	TA-500 HOLDER		1
7	018918	Plastic screw	M4*0.7-L8	3
8	018919	Washer		3
9		Hex bolt	M8*1.25-L12	1
10		Flat washer		1
11		Spring washer		1
12	27-13A	TA-27A SHAFT	With O-ring	1
13	OP09-01A	O-Ring	P-9	1
14	OP11-01A	O-Ring	P-11	1
A+B	018998	TH-500HW TORCH BODY ASSEMBLY		

TA-500CDW PARTS LIST

Code	Parts No.	Parts Name	Size	Qty
1	53N88	TA-17 LARGE-DIAMETER GAS LENS NOZZLE	No.10	1
2	018910	TA-500GL BODY	3.2mm	1
	018909	"	4.0mm	1
3	018904	TA-500 COLLET	3.2mm	1
	018903	"	4.0mm	1
4	018913	TA-500 TORCH BODY	With O-ring	1
5	OS25-01A	O-Ring	S-25	1
6	018914	TA-500 HOLDER		1
7	018918	Plastic screw	M4*0.7-L8	3
8	018919	Washer		3
9		Hex bolt	M8*1.25-L12	1
10		Flat washer		1
11		Spring washer		1
15	018917	TA-500CDW SPRING	PWP-A 5380(SAMIN)	1
16	018915	TA-500CDW CYLINDER MOUNT		1
17		HEX BOLT	M4*0.7-L12	4
18	018923	TA-500CDW GUIDE SHAFT	With O-ring	1
13	OP09-01A	O-Ring	P-9	1
14	OP11-01A	O-Ring	P-11	1
19	018961	AIR CYLINDER	CDQP2B20-5D	1
20		ONE-TOUCH PIPE JOINT	KQH06-M5(SMC)	2
21		HEX BOLT	M5*0.8-L35	2
22	018935	TA-301CD AIR HOSE 6m	φ6-φ4(6300L)	2
	018936	"	8m	2
A+C	018999	TA-500CDW TORCH BODY ASSEMBLY		

CABLE SPECIFICATIONS

A TYPE (water-cooled power cable type)

Code	Parts No.	Parts Name	Size	Qty
23	018052	TA-18 WATER-COOLED POWER CABLE	6m	1
	018024	"	8m	1
25	018941	TA-301, 500 COOLANT HOSE 6m	φ45-φ65 (6100L)	1
	018942	"	8m	1
26	018946	TA-301, 500 COOLANT HOSE 6m	φ45-φ65 (8100L)	1
	018947	"	8m	1
27	018053	TA-18 HOSE SHEATH	6m	1
	018036	"	8m	1

B TYPE (cabtyre type)

Code	Parts No.	Parts Name	Size	Qty
24	018956	TA-500 CABTYRE CABLE 6m	EWRCT60	1
	018957	"	8m	1
25	018941	TA-301, 500 COOLANT HOSE 6m	φ45-φ65 (6100L)	2
	018942	"	8m	2
26	018948	TA-500 GAS HOSE 6m	47*1B(L+100)	1
	018949	"	8m	1
27	018053	TA-18 HOSE SHEATH	6m	1
	018036	"	8m	1

HIGH SPEED ROBOTIC TIG TORCH

TA-301FN



Features

- Water-cooled filler nozzle makes it possible to weld in High-speed.
- Filler wire is fed at an angle to the electrode that is optimal for high-speed welding.

Model type	TA-301FN	
Rated current (CO2)	A	300
Operation rate	%	100
Applicable tungsten size	mm	2.4, 3.2
Cooling method	Water-cooled	

TA-301FN FILLER NOZZLE UNIT ASSEMBLY

By attaching a filler nozzle unit assembly to the TA-301 series torch body that you currently use, you will be able to operate it in the same way as TK-301FN.

ROBOTIC TIG TORCH (WATER COOLED NOZZLE SPEC)

TA-500CDW WATER-COOLED NOZZLE SPEC.



Features

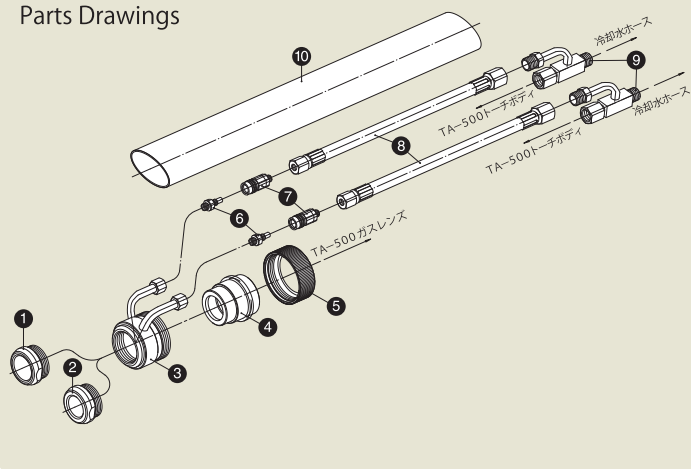
- Supports high current and high operation rate through the use of a water-cooled metallic nozzle.

APPLICABLE TORCH
(TA-500HW
TA-500CDW)

Code	Parts No.	Parts Name	Qty
1	DX-0211251	TA-500 NOZZLE HEAD ø19	1
2	DX-0211291	TA-500 NOZZLE HEAD ø16	1
3	DX-0211252	TA-500 WATER-COOLED NOZZLE BODY	1
4	018981	TA-500 INSULATION BUSHING	1
5	DX-0211258	TA-500 WATER-COOLED NOZZLE RETAINING NUT	1
6	MC-05SM	MICROCOUPLER (SOCKET)	2
7	MC-05PM	MICROCOUPLER (PLUG)	2
8	018916	TA-500 COOLANT HOSE FOR WATER-COOLED NOZZLE (COUPLER TYPE)	2
9	DX-0211260	COOLANT JOINT BLOCK	2
10	DX-0211251	HOSE SHEATH	1

TA-500 series WATER-COOLED NOZZLE SPEC

Parts Drawings



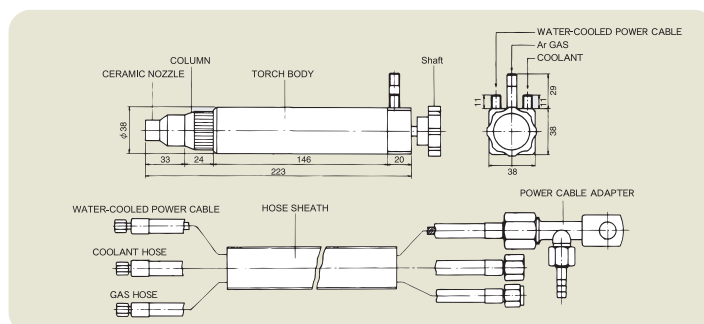
WATER COOLED TORCH FOR AUTOMATIC WELDING MACHINES



TA-350

TIG torch for automatic welding machines with superior serviceability.

Rated current	A	350
Operation rate	%	100
Operating electrode	mmφ	1.6, 2.4, 3.2, 4.0



TUNGSTEN GRINDER



PIRANHA II



PIRANHA III

- Just a single unit can grind and cut, and shape the tip face quickly and precisely.
- The precision function of grinding (surface roughness degree on vertical axis grinding) dramatically improves weld starting performance and stability, improving welding quality.

Parts Name	PIRANHA II	PIRANHA III
Parts No.	DGP-PG2	DGP-PG3
Grinding angle	10~60	15~60
Electrode diameter	1.0/1.6/2.4/3.2(mm)	1.0/1.6/2.4/3.2/4.0/4.8(mm)
Dimensions	W102 × L255 × H170(mm)	W180 × L380 × H260(mm)
Weight	5.5(kg)	21(kg)

ROBOTIC PERIPHERALS



* Legs are not included.

TUNGSTEN ELECTRODES CHANGER

By using together with TIG torch which includes built-in Tokin air cylinder, you can automate the replacement and setting of the tungsten electrodes.

Features

- A simple composition, consisting of a tungsten electrode stand, chuck, and sensor.
- Shortens the time for replacing the tungsten electrode, resulting in saving manpower.
- Maintains a constant protrusion length when replacing tungsten electrodes.
- Since it is Air-Driven, It is simple to attach and install.

Model of TIG torch which includes built-in air cylinder capable of replacing tungsten electrodes automatically.

TA-200CDA (AIR-COOLED TORCH 200A)
TA-301CDA (WATER-COOLED TORCH 300A)
TA-500CDW (WATER-COOLED TORCH 500A)

TUNGSTEN ELECTRODES

Tungsten with 1.5% lantana

For Iron and Non-ferrous metal except aluminum



- Contains no radioactive substances.
- Good arc starting.
- Maintains the preset current and voltage for a stable arc.
- Excellent durability and long service life.

Size $\varphi \times L$ (mm)	Parts No.
$\phi 1.0 \times 150$	018320
$\phi 1.6 \times 150$	018321
$\phi 2.0 \times 150$	018322
$\phi 2.4 \times 150$	018323
$\phi 3.2 \times 150$	018324
$\phi 4.0 \times 150$	018325

Tungsten with 2% cerium

For Non-ferrous metal and iron



- Contains no radioactive substances.
- Good arc starting at low current.
- AC aluminum welding ensures good durability and minimal electrode contamination.
- Optimal for welding copper or copper alloys.

Size $\varphi \times L$ (mm)	Parts No.
$\phi 1.0 \times 150$	018340
$\phi 1.6 \times 150$	018341
$\phi 2.0 \times 150$	018342
$\phi 2.4 \times 150$	018343
$\phi 3.2 \times 150$	018344
$\phi 4.0 \times 150$	018345

Pure Tungsten

For Aluminum



- For AC welding
- Uniform and high purity materials.

Size $\varphi \times L$ (mm)	Parts No.
$\phi 1.0 \times 150$	018336
$\phi 1.6 \times 150$	018330
$\phi 2.0 \times 150$	018331
$\phi 2.4 \times 150$	018333
$\phi 3.2 \times 150$	018334
$\phi 4.0 \times 150$	018335

For extension TIG TORCH SET

You can easily extend the cable length of TIG torch that you currently use to suit requirements from workplace. This product is well-suited to users experiencing difficulties in transporting or moving the welders, or those who frequently attach and detach the torches.

(For air-cooled torches from 50~300A, and water-cooled torches from 125~410A)



8 SWITCH CABLE	1 TORCH	① SPECIFY POWER CABLE 150A 200A * Select the rated current of your torches.	To extend cable length of water-cooled torches, please contact us.
9 EXTENSION SET	2 EXTENSION SET	② SPECIFY EXTENSION FITTINGS 150A (018721) 200A (018731) *Select the same rated current as the one selected in ①.	③ SPECIFY CABLE JOINT FOR CABTYRE K-19 JA-300 DINSE * Select the manufacturer of the cable joint for cabtyre. * Standard Spec.: Male Type
10 EXTENSION CABLE SET	5 EXTENSION CABLE SET	④ SPECIFY GAS HOSE FITTING. APOLLO COCK AP-1 type Nitto 22PH type * Select the manufacturer of the gas hose hardware. * Standard Spec.: Male Type	⑤ SPECIFY EXTENSION LENGTH * Specify the length that you wish to actually extend (length adjustments are performed here). * If you already have "an extension set" or "an adapter set on welder side", by replacing these parts, "extension cable set," you can extend its cable length.
11 ADAPTER SET ON WELDER SIDE	6 ADAPTER SET ON WELDER SIDE	⑥ SPECIFY CONNECTION FITTING Cabtyre K-19(female) JA-300(female) DINSE (female) GAS HOSE AS-1 22-SH * The connecting fitting is the same manufacturer as being selected in ③ and ④. * Standard Spec.: Female Type If you already own an adapter set on welder side, please specify manufacturer name and shape (male/female) of this connection fitting.	⑦ SPECIFY CONNECTION FITTING ON WELDER SIDE The connection type on welder side varies with the welder. Please specify the manufacturer and model of your welder.
⑧ SPECIFY SWITCH BUTTON TYPE Lever type Push-button type	⑨ SPECIFY SWITCH CABLE CONNECTIONS TYPE Water-proof plug type metal conduit type	⑩ SPECIFY EXTENSION LENGTH Specify the switch cable extension length * Standard spec: the length is same as being selected in ⑤	⑪ SPECIFY SHAPE OF METAL CONDUIT In order to connect welder correctly, please specify the manufacturer and model of your welder.

There are three specifications: extension set, extension cable set, and adapter set on welder side.

For actual extension, you need to specify the lengths of the following extension cables; gas hose, cabtyre, and switch cable.

The connection method varies, depending on the welder that you use. When ordering, please specify the model No. of your welder.

NOZZLE					
Material	Applicable torch	Appearance overall length x outer diameter (mm)	Parts No.	Size No.	Exit inner diameter (mm)
CERAMIC NOZZLE	TA-17,17P TA-18,18P TA-26 CS410 FX-17,26 FXS head 1726,1726P	 47 × 17.2 47 × 21 (No.10) 47 × 23.5 (No.12)	10N50 10N49 10N48 10N47 10N46 10N45 10N44	4 5 6 7 8 10 12	6 8 10 11 12.5 16 19
	TA-9,9P TA-20,20P TA-22A TA-23A CS310 FX-25,9 FXS head 9,9P,990 STUBBY	 29.5 × 14.3	13N08 13N09 13N10 13N11 13N12 13N13	4 5 6 7 8 10	6 8 10 11 12.5 16
	TA-12	 32 × 25.5	14N57 14N58 14N59 14N60 14N61 14N61-10 14N61-12	4 5 6 7 8 10 12	6 8 10 11 12.5 16 19
	TA-24, 24W FX-24 FXS head 24, 2490	 16 × 16	A53N24 A53N25 A53N27	4 5 6	6 8 10
LONG CERAMIC NOZZLE	TA-17,17P TA-18,18P TA-26 CS410 FX-17,26 FXS head 1726,1726P	 77.9 × 17.8	10N49L 10N48L 10N47L	5L 6L 7L	8 10 11
	TA-9,9P TA-20,20P, TA-22A TA-23A CS310 FX-25,9 FXS head 9,9P,990	 48.2 × 15.3	A796F72 A796F73	5L 6L	8 10
	TA-12	 66.7 × 25.4	14N69 14N70	5L 6L	8 10
	TA-17,17P TA-18,18P TA-18SC TA-26 CS410 FX-17,26 FXS head 1726,1726P	 42 × 24 28 × 23.3 (短)	54N18 54N17 54N16 54N15 54N14 54N19	4 5 6 7 8 短	6 8 10 11 12.5 17
GAS LENS CERAMIC NOZZLE	TA-17,17P TA-18,18P TA-18SC TA-26 CS410 FX-17,26 FXS head 1726,1726P	 76 × 24.6	54N17L 54N16L 54N15L	5L 6L 7L	8 10 11
	TA-9,9P TA-20,20P TA-22A TA-23A TA-24,24W CS310 FX-25, 9 FXS head 9, 9P, 990 FXS-24, 2490 STUBBY GAS LENS	 26.5 × 18.8	53N58 53N59 53N60 53N61 53N61S	4 5 6 7 8	6 8 10 11 13

NOZZLE					
Material	Applicable torch	Appearance overall length x outer diameter (mm)	Parts No.	Size No.	Exit inner diameter (mm)
CERAMIC NOZZLE FOR LARGE-DIAMETER GAS LENS	TA-17,17P TA-18,18P TA-26 TA-9,9P TA-20,20P TA-22A TA-23A CS310,CS410 FX-9,17,25,26 [FXS head 9,9P,990 1726,1726P]	 47.5 × 30.5 30.7 × 30.5 (Short)	57N75 57N74 53N88 53N87 53N89	6 8 10 12 Short	10 12.5 16 19 24
		 70 × 30 (L) 83 × 30 (XL) 120 × 30 (XXL)	57N75L 57N74L 53N88L 53N87L 57N75XL 57N74XL 53N88XL 53N87XL 57N75XXL 57N74XXL 53N88XXL 53N87XXL	6 8 10 12 6 8 10 12 6 8 10 12	10 12.5 16 19 10 12.5 16 19 10 12.5 16 19
LAVA NOZZLE	TA-17,17P TA-18,18P TA-26 CS410 FX-17,26 FXS head 1726,1726P	 47 × 19	105Z43 105Z42 105Z44 105Z45 08N78 08N79 08N80	4 5 6 7 8 10 12	6 8 10 11 12.5 16 19
	TA-9,9P TA-20,20P TA-22A TA-23A CS310 FX-9,25 FXS head 9,9P,990	 29.5 × 15	13N14 13N15 13N16 13N17 13N18 13N19	4 5 6 7 8 10	6 8 10 11 12.5 16
	TA-24, 24W FX-24 FXS head 24,2490	 16.4 × 16	53N23 53N24 53N25 53N27	3 4 5 6	4 6 8 10
LONG LAVA NOZZLE	TA-17,17P TA-18,18P TA-26 CS410 FX-17,26 FXS head 1726,1726P	 82 × 19	12N03 105Z60 12N02 105Z61	4L 5L 6L 7L	6 8 10 11
	TA-9,9P TA-20,20P TA-22A TA-23A CS310 FX-9,25 FXS head 9,9P,990	 48 × 15	796F70 796F71 796F72 796F73	3L 4L 5L 6L	4 6 8 10
		 68 × 15	796F74 796F75 796F76 796F77	3XL 4XL 5XL 6XL	4 6 8 10
	TA-24,24W FX-24, FXS head 24,2490	 27.7 × 16	53N28 53N26	4L 6L	6 10

COLLET			
Applicable torch	Appearance overall length x outer diameter (mm)	Parts No.	Size (mm)
TA-9, 9P TA-20, 20P CS310 FX-25, 9 FXS head 9, 9P, 990	 24.8 × 4.4	13N20	0.5
		13N21	1.0
		13N22	1.6
		13N23	2.4
		13N24	3.2
	 (For large-diameter gas lens) 40 × 5.3	13N20L	0.5
		13N21L	1.0
		13N22L	1.6
		13N23L	2.4
		13N24L	3.2
TA-17 TA-18,18P TA-26 CS410 FX-17, 26 FXS head 1726, 1726P * Four-way split AAA only	 50 × 6.3	10N21	0.5
		10N22	1.0
		10N23	1.6
		10N24	2.4
		10N24-AAA※	2.4
		10N25	3.2
		54N20	4.0
TA-18SC	 (For heavy-duty work) 49 × 6.3	10N25HD	3.2
		54N20HD	4.0
		18C36	4.8
TA-24, 24W FX-24 FXS head 24, 2490	 13.3 × 3.9	53N15	0.5
		53N16	1.0
		53N14	1.6
		24C332	2.4
	 (For gas lens) 22.2 × 4	53N62	0.5
		53N63	1.0
		53N64	1.6
		24GLC332	2.4
TA-22A TA-23A	 161 × 4.4 for A type torch	22N20A	0.5
		22N21A	1.0
		22N22A	1.6
		22N23A	2.4
		22N24A	3.2
TA-22A TA-23A (For large-diameter gas lens)	 171 × 4.4 for A type torch	22N20AL	0.5
		22N21AL	1.0
		22N22AL	1.6
		22N23AL	2.4
		22N24AL	3.2
TA-27, 27B	 67 × 9.6	57N45	1.0
		57N46	1.6
		57N47	2.4
		57N48	3.2
		57N49	4.0
		57N50	4.8
		57N51	6.4
TA-12	 (For heavy-duty work) 60 × 11.1	85Z16	3.2
		85Z17	4.0
		85Z18	4.8
		85Z19	6.4

See page 4 for the collet body for stubby.

COLLET BODY AND CHUCK			
Applicable torch	Appearance overall length x outer diameter (mm)	Parts No.	Size (mm)
TA-9,9P TA-20,20P TA-22A TA-23A CS310 FX-25, 9 FXS head 9, 9P, 990	 20.5 × 9.4	13N25 13N26 13N27 13N28 13N29	0.5 1.0 1.6 2.4 3.2
TA-17,17P TA-18,18P TA-26 CS410 FX-17, 26 FXS head 1726,1726P	 46.8 × 10.8	10N29 10N30 10N31 10N32 10N28 406488	0.5 1.0 1.6 2.4 3.2 4.0
TA-24, 24W FX-24 FXS head 24, 2490	 11.7 × 7.8	53N17 53N18 53N19 24CB332	0.5 1.0 1.6 2.4
TA-12	 7.3 × 18.9	11WP65	3.2-6.4
TA-18SC	 19.4 × 12.7	NCB-53 NCB-36	0.5~3.2 3.2~4.8
GAS LENS COLLET BODY (shortened to "GAS LENS")			
TA-9, 9P TA-20, 20P TA-24, 24W TA-22A TA-23A CS310 FX-24, 25, 9 FXS head 9, 9P, 990	 22.2 × 14.2	45V41 45V42 45V43 45V44 45V45	0.5 1.0 1.6 2.4 3.2
	 (For large-diameter gas lens) 41 × 25.1	45V0204S 45V116S 45V64S 995795S	0.5~1.0 1.6 2.4 3.2
TA-17,17P TA-18,18P TA-26 CS410 FX-17, 26 FXS head 1726,1726P	 50.2 × 18.9	45V29 45V24 45V25 45V26 45V27 45V28	0.5 1.0 1.6 2.4 3.2 4.0
	 (For large-diameter gas lens) 50.5 × 25.1	45V0204 45V116 45V64 995795 45V63	0.5~1.0 1.6 2.4 3.2 4.0
TA-18SC	 21.3 × 15.8	18GL32 18GL18 18GL53 18GL36	2.4 3.2 4.0 4.8
TA-27A, 27B	 64.2 × 34.7	49V22 49V23 49V24 49V25 49V26 49V27 49V28	1.0 1.6 2.4 3.2 4.0 4.8 6.4
TA-12	 39.2 × 25.3	11GL18 11GL53 11GL36	3.2 4.0 4.8

BACK CAP		
Applicable torch	Appearance overall length x outer diameter (mm)	Parts No.
TA-9 TA-20 FX-9 FXS head 9, 990 CS310	S  16 × 15.6	41V33
	M  47 × 14.6	41V35
	L  147 × 14.6	41V24
TA-17 TA-18, 18SC TA-26 FX-17, 26 FXS head 1726 CS410	S  25 × 19	57Y04
	M  70 × 18.2	57Y05
	L  116 × 18.2	57Y02
TA-12	S  28 × 19.2	56Y45
	L  116 × 19.2	56Y44

GASKET		
Applicable torch	Appearance overall length x outer diameter (mm)	Parts No.
TA-9, 9P TA-20, 20P CS310 FX-25, 9 FXS head 9, 9P, 990	Nozzle side 	598882
	Back cap side 	9-4 *Unavailable to use with pencil type (P) torch.
TA-22A TA-23A	Nozzle side 	22-10
TA-17 TA-18, 18P TA-26 CS410 FXS head 1726, FXS head 1726P	Nozzle side 	18CG
	Back cap side 	18-7 *Unavailable to use with pencil type (P) torch.
TA-24, 24W FX-24 FXS head 24, FXS head 2490	Nozzle side 	53N22
GAS LENS INSULATOR		
TA-17, TA-18, 18P TA-26 CS410 FX-17, 26 FXS head 1726, FXS head 1726P		54N01
		54N63 Large diameter (For gas lens)
		17GLG20 STUBBY (For gas lens)
TA-24, 24W FX-24 FXS head 24, FXS head 2490		53N66
TA-12		12GLG
TA-9, 9P TA-20, 20P TA-22A TA-23A CS310 FX-25, 9 FXS head 9, 9P, 990		54N63-20 Large diameter (For gas lens)

HANDLE		
Applicable torch	Appearance overall length x outer diameter (mm)	Parts No.
TA-9, 9P TA-20, 20P FX-25 FXSW-225	(Grain)  122 × 19	53N06 (Grain) 53N06R (Grooved)
	(Grooved)  122 × 25.5	105Z55 (Grain) 105Z55R (Grooved)
TA-17 FX-9, 24, 17 FXSA-150		
TA-24, 24W		H-100 (Grain) H-100R (Grooved)
TA-26 TA-18, 18SC FX-26	(Grain)  152.5 × 27.6	H-200 (Grain) H-200R (Grooved)
	(Grooved)  127 × 32	10N15 (Grain) 10N15R (Grooved)
FXSA-200 (200TB)		
CS310	 130 × 23.5	CS110H
CS410	 137.5 × 27	CS210H
TA-12	 179 × 35	85WP-13
TA-18P	 255 × 35	18PBWH
TA-22A	 132 × 19	22-8A
TA-27A	 122 × 35	27-10A
TA-27B	 395 × 35	27-10B

Switch		
Applicable torch	Appearance overall length x outer diameter (mm)	Parts No.
Lever type		018200
Button type		SW-B
N.D (Metal conduit)		018271
B (Metal conduit)		018272
H (Metal conduit)		018273
M (Metal conduit)		018274
T (Metal conduit)		018275
Switch CABLE (With Switch Without Metal conduit)		4m 018261 8m 018262 10m 018263 15m 018264
POWER CABLE ADAPTER / ADAPTER GAS HOSE		
TA-9, 9P TA-17, 17P TA-24 TA-23A FX-9, 24, 17 FXSA-150		018014 POWER CABLE ADAPTER
		018017 ADAPTER GAS HOSE
TA-26 FX-26 FXSA-200		018016 POWER CABLE ADAPTER
		018017 ADAPTER GAS HOSE
TA-18, 18P, 18SC TA-24W, 20, 20P CS310, 410 TA-22A FX-25 FXSW-225 TA-12, 27A, 27B, 350		018015 POWER CABLE ADAPTER
		018018 ADAPTER HOSE
		018809 Hitachi 150A AIR-COOLED ADAPTER SET
		018810 Hitachi 200A AIR-COOLED ADAPTER SET
		018811 Hitachi Water-cooled ADAPTER SET
H gas CONNECTION FITTINGS		018812
H water CONNECTION FITTINGS		018813

Extension kit			
Applicable torch	Appearance overall length x outer diameter (mm)	Parts No.	
150A For two-wire type		018721	
200A For two-wire type		018731	
POWER CABLES, HOSES			
Applicable torch	Parts No.	Type	Length (m)
TA-9,17,24,23A FX-24,9,17 FXSA-150 TA-125HA	018 601	POWER CABLE	4
	018 602	"	8
TA-26 FX-26 FXSA-200	018 611	POWER CABLE	4
	018 612	"	8
TA-18 TA-18SC	018 023	POWER CABLE	4
	018 024	"	8
	018 027	WATER HOSE	4
	018 028	"	8
	018 031	GAS HOSE	4
	018 032	"	8
	018 035	HOSE SHEATH	4
	018 036	"	8
TA-18P	40V64PR	POWER CABLE	3.8
	41V29PR	"	7.6
	40V74	WATER HOSE	3.8
	41V32	"	7.6
	40V75	GAS HOSE	3.8
	41V30	"	7.6
	CC-10-350	CABLE COVER	3.5
	CC-10-730	"	2.3

CABLE COVER		
Appearance	Parts No.	Overall length x width (diameter ø) (cm)
	ARC-8-380	360 × 8(2.7)
	ARC-8-720	720 × 8(2.7)
	ARC-10-360	360 × 10(3.2)
	ARC-10-720	720 × 10(3.2)
	CC-8-350	350 × 8(2.7)
	CC-8-730	730 × 8(2.7)
	CC-10-350	350 × 10(3.2)
	CC-10-730	730 × 10(3.2)

* We can also manufacture cable covers in non-standard lengths. Your inquiries are welcomed.

POWER CABLES, HOSES			
Applicable torch	Parts No.	Type	Length (m)
TA-20	45V03	POWER CABLE	3.8
TA-20P	45V04	"	7.6
TA-24W	45V07HD	WATER HOSE	3.8
FXSW-225	45V08HD	"	7.6
FX-25	45V09	GAS HOSE	3.8
	45V10	"	7.6
	CC-8-350	ケーブルカバー	3.5
	CC-8-730	"	7.3
TA-12 TA-27A TA-27B	40V84R 40V84RL 40V83R 40V83RL 40V82R 40V82RL CC-10-350 CC-10-730	POWER CABLE " WATER HOSE " GAS HOSE " " CABLE COVER "	3.8 7.6 3.8 7.6 3.8 7.6 3.5 7.3
TA-22A	45V03HD 45V04HD 45V07HD 45V08HD 45V09 45V10 CC-8-350 CC-8-730	POWER CABLE " WATER HOSE " GAS HOSE " " CABLE COVER "	3.8 7.6 3.8 7.6 3.8 7.6 3.5 7.3
CS310	CS310-12PC-J CS310-25PC-J CS310-12W CS310-25W CS310-12G CS310-25G CC-8-350 CC-8-730	POWER CABLE " WATER HOSE " GAS HOSE " " CABLE COVER "	3.8 7.6 3.8 7.6 3.8 7.6 3.5 7.3
CS410	CS410-12PC-J CS410-25PC-J CS310-12W CS310-25W CS410-12G CS410-25G CC-10-350 CC-10-730	POWER CABLE " WATER HOSE " GAS HOSE " " CABLE COVER "	3.8 7.6 3.8 7.6 3.8 7.6 3.5 7.3

Please feel free to inquire about TIG Torch of other manufacturers models, such as for digital type, portable type, and extension set.



Product Catalogue



Semi-Automatic Torches



Air-Cooled
Robotic Torches



Water-Cooled
Robotic Torches



Robotic Peripherals



Replacement Parts



Fume Extractors



Plasma Parts,
Laser Parts & Optics

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TOKIN CORPORATION

1509 Okubo-cho, Nishi-ku, Hamamatsu-shi, Shizuoka Japan 432-8006

TEL : +81-53-485-5252, FAX : +81-53-485-5680

E-mail trading@tokinarc.co.jp URL <http://www.tokinarc.co.jp>

North, Central, South Americas

TOKIN AMERICA CORPORATION

9844 Windisch Rd West Chester, OH 45069

TEL : +1-513-644-9743, FAX : +1-513-644-9749

E-mail info@tokinamerica.com URL <http://www.tokinamerica.com>

China

SUZHOU TOKIN MACHINE & METAL CORPORATION

No.107 Dong Cang North Road, Economic Development Zone, Tai cang city, Jiang su, China,

TEL : +86-512-53569095, FAX : +86-512-53577726

E-mail sales@tokinarc.com.cn URL <http://www.tokinarc.com>

For more information, contact us at

Part specifications, dimensions and design may be changed without prior notice for the purpose of part improvement. The product color shown here is a printed image and the actual color might vary somewhat.



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