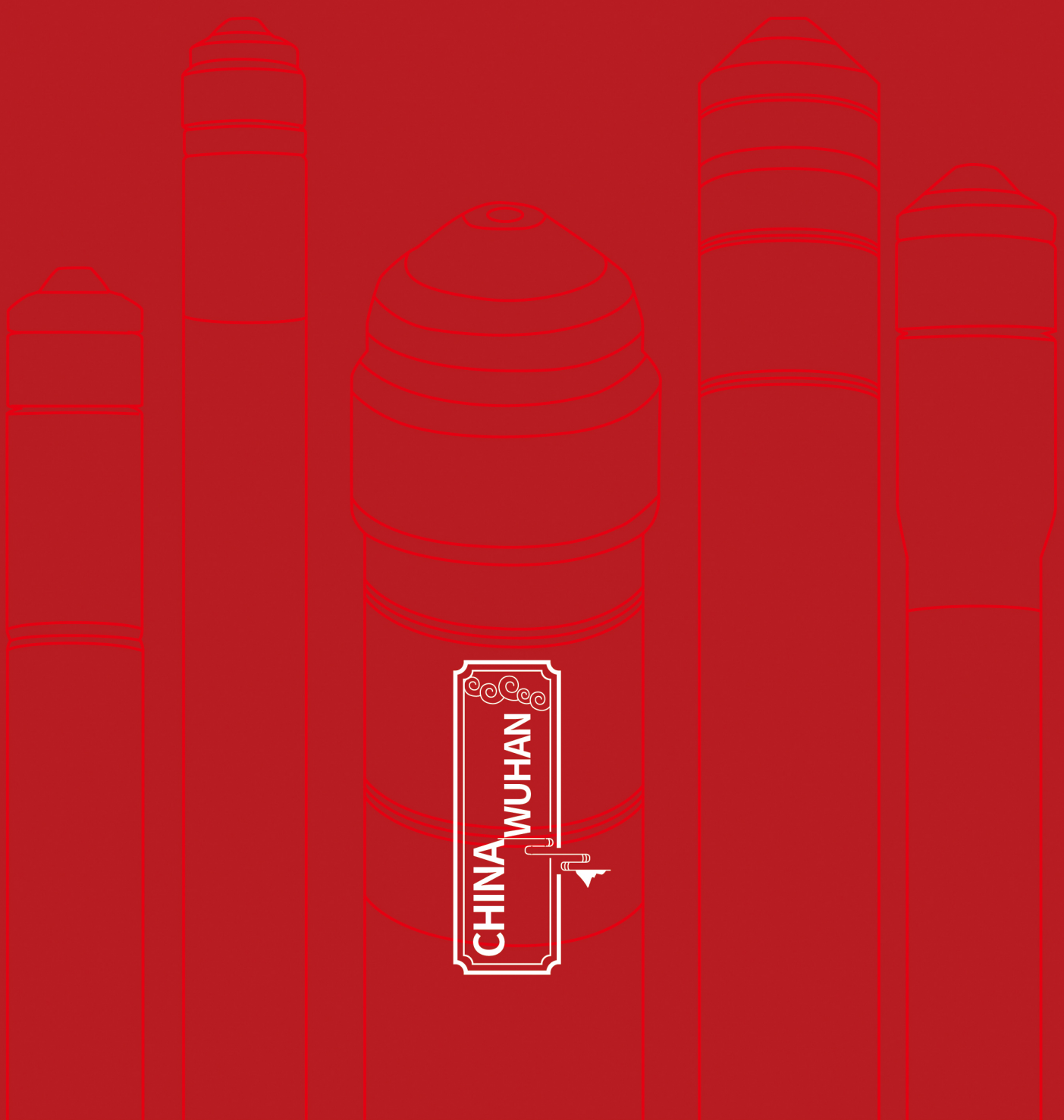
易快®
YIKUAI

A plasma cutting torch brand born with craftsman spirits



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YK-360

Air-Oxygen High Definition Plasma Torch

Features

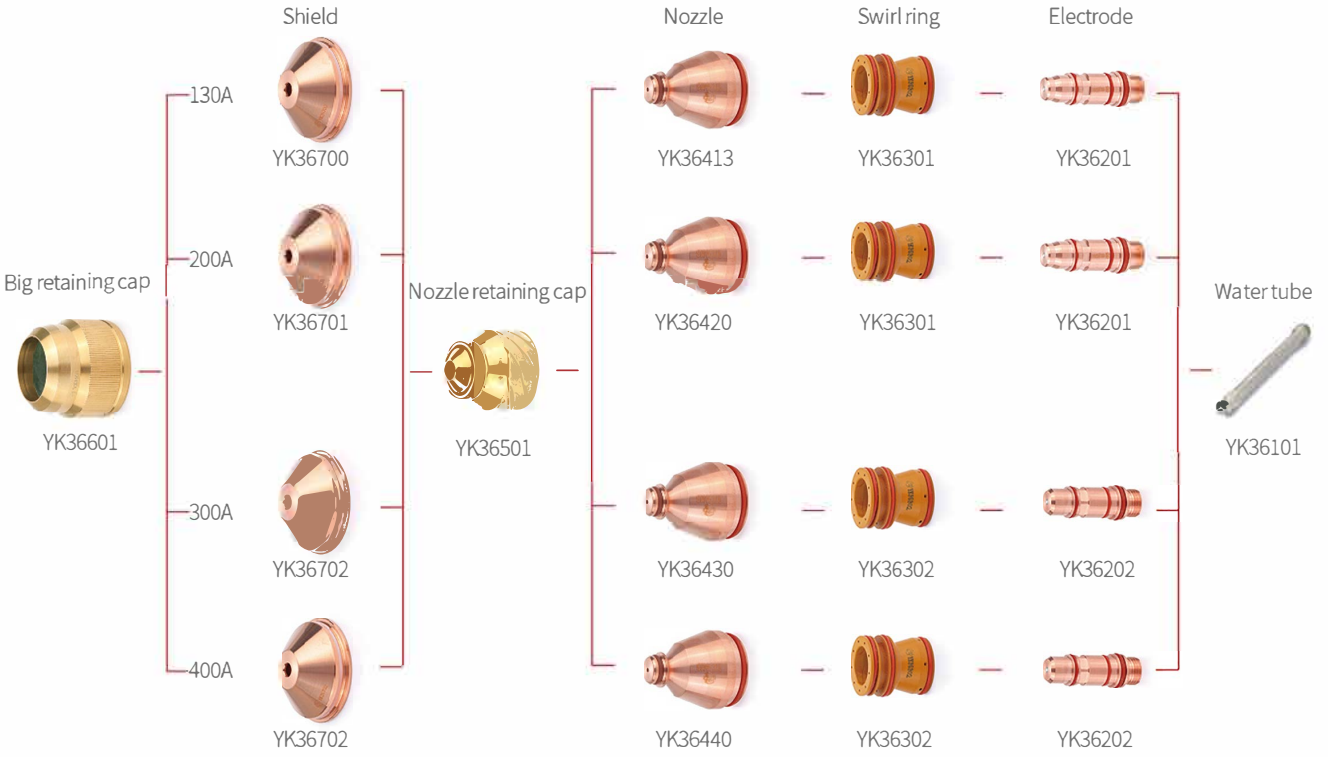
- The plasma torch design for high definition plasma cutting, by multigas mixing cutting technology
- The plasma torch body use latest upgrade materials, strong stability, suitable for multigas mixing cutting requirements (Such as air、oxygen、nitrogen and so on), continues the dual water cooling design, improve the torch body and consumables durability
- The multigas mixing cutting technology can suitable for international brand plasma power source, replace of the import expensive torch and full the high definition plasma cutting customers request, cost performance and high definition cutting effect won the user's approval



Diameter
Φ50mm

Torch assembly

The carbon steel's air-oxygen cutting standard spare parts model



YK-360 Recommend cutting parameters table for automated cutting

Current	Protection Gas	Plasma Gas Preflow	Plasma Gas cutting flow	Work-piece thickness	Cutting height	Reference arc voltage	Cutting speed	Positioning height	Piercing (dynamic)height	Piercing time
A	Air/Mpa	Air/Mpa	Oxygen/Mpa	mm	mm	V	mm/min	mm	mm	s
130A	0.5	0.5	0.8	8	4	140	3000	6	6	0.5
				10	4	142	2800	6	6	0.5
				12	4.5	145	2200	7	7	0.8
				14	4.5	146	1800	7	7	0.8
				16	4.5	148	1600	8	10 (Dynamic)	1.0
				20	4.5	150	1000	8	12 (Dynamic)	1.0
200A	0.5	0.5	0.8	10	4	135	3300	6	6	0.5
				12	4	137	2800	6	6	0.5
				16	4.5	140	2200	7	7	0.8
				20	4.5	144	1600	7	7	1.0
				25	5	152	1200	8	12 (Dynamic)	1.2
				30	5	155	900	8	20 (Dynamic)	2.0
300A	0.5	0.5	0.5	16	4	130	3000	6	6	0.5
				20	4.5	136	2000	7	7	0.5
				25	5	140	1500	8	8	0.8
				30	5	143	1300	8	12 (Dynamic)	1.0
				35	5	147	1000	8	16 (Dynamic)	1.0
				38	6	150	800	10	20 (Dynamic)	1.0
400A	0.5	0.5	0.5	25	5	140	2100	8	8	0.8
				30	5	143	1600	8	12 (Dynamic)	1.0
				35	5	147	1360	8	17 (Dynamic)	1.5
				40	6	150	1000	10	20 (Dynamic)	2.0
				50	7	160	700	Edge arcing	Edge arcing	2.5
				60	7.5	170	450	Edge arcing	Edge arcing	2.5
				70	8.5	180	200	Edge arcing	Edge arcing	3.0

Note: The above parameters are only for reference, please adjust it according to actual working conditions

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YK-330

High Definition Plasma Torch

Features

- New dual water cooling channel design(for both electrode and nozzle), highly increases the consumables working life
- Unique air channel design, gets more reliable cutting performance, more vertical cutting surface and more smoothly cut
- This torch with wide application to work with different plasma power source, especially suitable for finish machining cut

Diameter
Φ50mm





Torch assembly
YKC-300B2(7.1m)
YKC-300B3(7.1m)
YKC-300B4(7.1m)



Shield
YK02701
YK02702(Water spray)
YK02703(Thicken)



Small retaining cap
YK02711



Big retaining cap
YK02601

YK-330 Recommend cutting parameters table for automated cutting

work-piece thickness	Current	Nozzle hole diameter	Gas pressure	Piercing time	Positioning height	Cutting height	Cutting speed	Remarks
mm	A	mm	Mpa	S	mm	mm	mm/min	This data is based on carbon steel, if cut stainless steel, copper and aluminum, please reduce the cutting speed accordingly. If increase the cutting speed, current should be increased together, nozzle diameter should be changed accordingly
6	80-100	1.7	0.45	0.3	5-8	4-6	2500-3300	
8	80-120	1.7	0.45	0.3	5-8	4-6	2000-2500	
10	80-120	1.7	0.45	0.5	5-8	4-6	1600-1800	
12	100-120	1.7	0.45	0.5	5-8	4-6	1400-1600	
14	120-160	1.7	0.45	0.8	5-8	4-6	1200-1600	
16	130-160	1.9	0.5	0.8	5-8	5-8	1200-1600	
18	150-180	1.9	0.5	1.0	5-8	5-8	1200-1500	
20	200-220	1.9/2.1	0.5	1.0	8-10	5-8	1200-1500	
25	220-250	2.3/2.5	0.5	1.2	8-10	5-8	900-1300	
30	250-280	2.5/2.8	0.5	1.5	8-10	7-9	800-1100	
35	300-320	2.8/3.2	0.5	1.8	8-10	7-9	700-900	
40	320-350	2.8/3.2	0.5	2.3	8-10	8-10	600-900	

Note: The above parameters are only for reference, please adjust it according to actual working conditions

Please change the electrode and nozzle when following situation occurs

1. Cutting gap become larger
2. Can't pilot arc
3. Cutting area color getting much abnormal
4. Arc distinguish
5. Cutting speed suddenly decrease
6. Cutting nozzle getting seriously burned
7. Cutting nozzle melted on the work-piece
8. The electrode center sunken more than 2mm



Nozzle retaining cap
YK02501



Swirl ring
YK02301



Electrode
YK02201
YK02211



Nozzle
YK02413 YK02423
YK02415 YK02425
YK02417 YK02428
YK02419 YK02432
YK02421 YK02435



Water tube
YK02101

易快®
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YK-330

Groove High Definition Plasma Torch

Features

- The plasma torch special design for groove cutting, electrode and nozzle work life extremely long

Diameter
Φ50mm



Torch assembly



Retaining cap
YK02603P



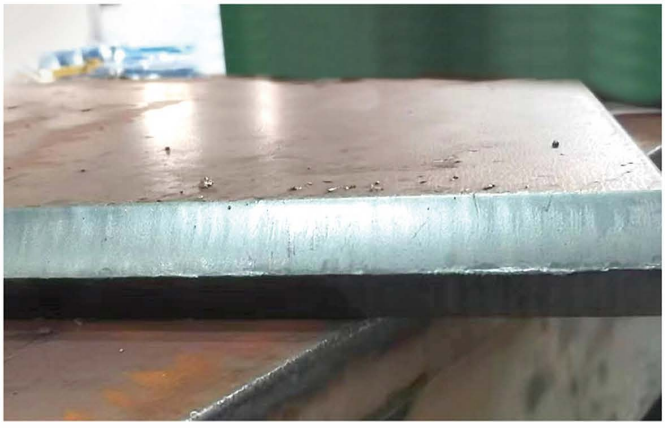
Retaining cap(water spray)
YK02604P



Nozzle retaining cap
YK02505

Application and cutting samples






Please change the electrode and nozzle when following situation occurs

1. Cutting gap become larger
2. Can't pilot arc
3. Cutting area color getting much abnormal
4. Arc distinguish
5. Cutting speed suddenly decrease
6. Cutting nozzle getting seriously burned
7. Cutting nozzle melted on the work-piece
8. The electrode center sunken more than 2mm



Swirl ring
YK02301



Electrode
YK02231



Nozzle
YK02419P
YK02423P
YK02425P
YK02428P
YK02432P



Water tube
YK02105

易快®
YIKUAI

YK100-H

Air Plasma Torch

Features

- It's a classical air cooling plasma torch with 6 year time-tested
- Better copper materials and HF wire inlay welding processing, confirms the reliability and much reduces cost
- Unique orifice throat ratio and optimized gas circuit confirms higher cut verticality and less dross

Diameter
Φ35mm



Torch assembly



Shield
YK100104



Small retaining cap
YK100105



Big retaining cap
YK100106H



Electrode
YK100102



Nozzle
YK100103(1.2)
YK100103(1.6)
YK100103(1.8)



Air core
YK100107

YK100-H Recommend cutting parameters table for automated cutting

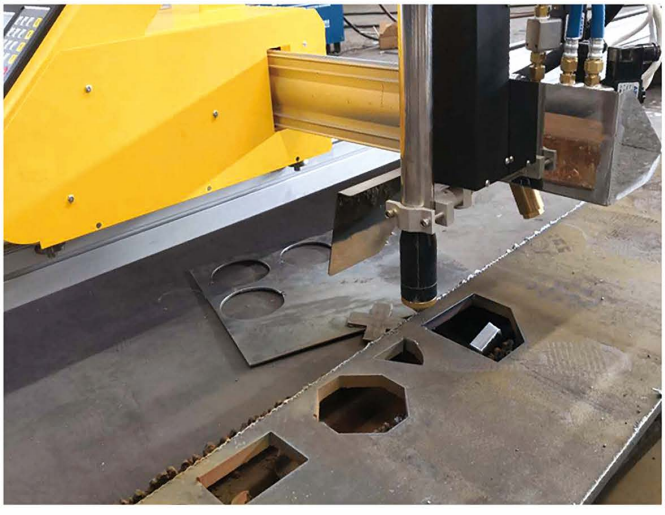
work-piece thickness	Current	Nozzle hole diameter	Gas pressure	Piercing time	Positioning height	Cutting height	Cutting speed	Remarks
mm	A	mm	Mpa	S	mm	mm	mm/min	This data is based on carbon steel, if cut stainless steel, copper and aluminum, please reduce the cutting speed accordingly. If increase the cutting speed, current should be increased together, nozzle diameter should be changed accordingly.
3	40-60	1.2	0.45-0.5	0.3	5-6	4-6	3500-4000	
5	50-70	1.6	0.45-0.5	0.3	6-8	5-8	1800-2100	
6	60-80	1.6	0.45-0.5	0.3	6-8	5-8	1400-1600	
8	80-110	1.6	0.45-0.5	0.5	6-8	5-8	1300-1500	
10	90-110	1.6	0.5-0.55	0.5	6-8	5-8	1000-1200	
12	100-120	1.6	0.5-0.55	0.8	8-10	5-8	950-1100	
14	100-120	1.6	0.5-0.55	0.8	8-10	5-8	800-1000	
16	100-120	1.8	0.55-0.6	1.0	8-10	5-8	600-700	

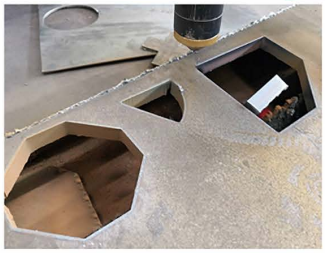
Note: The above parameters are only for reference, please adjust it according to actual working conditions

Please change the electrode and nozzle when following situation occurs

1. Cutting gap become larger
2. Can't pilot arc
3. Cutting area color getting much abnormal
4. Arc distinguish
5. Cutting speed suddenly decrease
6. Cutting nozzle getting seriously burned
7. Cutting nozzle melted on the work-piece
8. The electrode center sunken more than 2mm

Application and cutting samples







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YK200-H
Plasma Torch

Features

- It's a classical water cooling plasma torch with 6 year time-tested
- Unique water channel design confirms better cutting quality, faster cutting speed and longer consumable working life
- It's suitable for 160~200A current plasma cutting



Diameter
Φ40mm

Torch assembly



Shield
YK200104H



Small retaining cap
YK200105H



Big retaining cap
YK200106H



Electrode
YK200102H



Nozzle
YK200103H(1.3)
YK200103H(1.6)
YK200103H(1.8)
YK200103H(2.2)
YK200103H(2.5)
YK200103H(2.8)



Water tube
YK200107H

YK200-H Recommend cutting parameters table for automated cutting

work-piece thickness	Current	Nozzle hole diameter	Gas pressure	Piercing time	Positioning height	Cutting height	Cutting speed	Remarks
mm	A	mm	Mpa	S	mm	mm	mm/min	
3	50-80	1.3	0.45	0.3	5-8	4-6	3500-4000	This data is based on carbon steel, if cut stainless steel, copper and aluminum, please reduce the cutting speed accordingly. If increase the cutting speed, current should be increased together, nozzle diameter should be changed accordingly
6	80-100	1.6	0.45	0.3	5-8	4-6	2500-3500	
8	80-100	1.6	0.45	0.5	5-8	4-6	1600-1800	
10	100-120	1.6	0.45	0.5	5-8	4-6	1400-1600	
12	120-140	16	0.5	0.8	5-8	5-8	1400-1600	
14	130-160	1.6	0.5	0.8	5-8	5-8	1400-1600	
16	140-160	1.6/1.8	0.5	1.2	5-8	5-8	1200-1500	
18	180	1.8	0.5	1.2	8-10	5-8	1100-1300	
20	180-200	2.2	0.5	1.6	8-10	5-8	1000-1200	
22	200	2.2/2.5	0.55	1.8	8-10	5-8	1000-1100	
25	200	2.5	0.55	2.0	8-10	5-8	800-950	

Note: The above parameters are only for reference, please adjust it according to actual working conditions

Please change the electrode and nozzle when following situation occurs

1. Cutting gap become larger
2. Can't pilot arc
3. Cutting area color getting much abnormal
4. Arc distinguish
5. Cutting speed suddenly decrease
6. Cutting nozzle getting seriously burned
7. Cutting nozzle melted on the work-piece
8. The electrode center sunken more than 2mm

Application and cutting samples







易快®
YIKUAI

YK300-H
Plasma Torch

Features

- Unique water channel design confirms better cooling to reduce the heat effect
- Special air channel makes auger-type plasma gas, get good cutting quality and longer consumable working life
- It's suitable for 200~300A current plasma cutting

Diameter
Φ45mm



Torch assembly



Shield
YK300104H



Small retaining cap
YK300105H



Big retaining cap
YK300106H



Electrode
YK300102H
YK300102HX



Nozzle
YK300103H(1.6)
YK300103H(1.8)
YK300103H(2.2)
YK300103H(2.5)
YK300103H(2.8)



Water tube
YK300107H

YK300-H Recommend cutting parameters table for automated cutting

work-piece thickness	Current	Nozzle hole diameter	Gas pressure	Piercing time	Positioning height	Cutting height	Cutting speed	Remarks
mm	A	mm	Mpa	S	mm	mm	mm/min	This data is based on carbon steel, if cut stainless steel, copper and aluminum, please reduce the cutting speed accordingly. If increase the cutting speed, current should be increased together, nozzle diameter should be changed accordingly
6	60-100	1.6	0.5	0.3	5-8	4-6	2500-3500	
8	80-120	1.6	0.5	0.5	5-8	4-6	1500-1800	
10	80-120	1.6	0.5	0.5	5-8	4-6	1400-1600	
12	120-140	1.6	0.5	0.5	5-8	5-8	1400-1600	
14	130-160	1.6	0.55	0.5	5-8	5-8	1400-1600	
16	140-160	1.8	0.55	0.8	5-8	5-8	1200-1600	
18	160-180	1.8	0.55	1.0	5-8	5-8	1200-1400	
20	190-220	2.2	0.55	1.5	8-10	5-8	1200-1400	
25	220-250	2.5	0.55	1.5	8-10	5-8	1000-1300	
30	250-280	2.5/2.8	0.5	1.8	8-10	5-8	700-1000	
35	300	2.8	0.5	2.0	8-10	5-8	600-700	

Note: The above parameters are only for reference, please adjust it according to actual working conditions

Please change the electrode and nozzle when following situation occurs

1. Cutting gap become larger
2. Can't pilot arc
3. Cutting area color getting much abnormal
4. Arc distinguish
5. Cutting speed suddenly decrease
6. Cutting nozzle getting seriously burned
7. Cutting nozzle melted on the work-piece
8. The electrode center sunken more than 2mm

Application and cutting samples









易快®
YIKUAI

YK-130

High Definition Plasma Torch

Features

- It is a high definition air cooling plasma torch designed under 160A current
- Special designed multilayer compressed air channel with vortex ring, get reliable cutting performance, vertical cutting surface and smooth cut experience
- With fast cutting speed, high piercing height, well protected shield and long working life consumables

Diameter
Φ35mm



Torch assembly



Shield
YK03701



Big retaining cap
YK03601



Electrode
YK03201



Nozzle
YK03411
YK03414
YK03416
YK03418



Swirl ring
YK03301

YK-130 Recommend cutting parameters table for automated cutting

work-piece thickness	Current	Nozzle hole diameter	Gas pressure	Piercing time	Positioning height	Cutting height	Cutting speed	Remarks
mm	A	mm	Mpa	S	mm	mm	mm/min	
2-5	40-60	1.4	0.5	0.3	4-6	4-6	2500-3500	This data is based on carbon steel, if cut stainless steel, copper and aluminum, please reduce the cutting speed accordingly. If increase the cutting speed, current should be increased together, nozzle diameter should be changed accordingly
6	60-80	1.4	0.5	0.3	4-6	4-6	2500-2900	
8	80-120	1.6	0.5	0.3	4-6	4-6	1600-2000	
10	100-120	1.6	0.55	0.5	5-8	4-6	1500-1800	
12	100-120	1.6	0.55	0.8	5-8	5-8	1200-1600	
14	120	1.6	0.55	0.8	6-8	5-8	800-1000	
16	120	1.8	0.6	1.0	8-10	5-8	600-700	
18	120	1.8	0.6	1.2	8-10	5-8	550-650	

Note: The above parameters are only for reference, please adjust it according to actual working conditions

Please change the electrode and nozzle when following situation occurs

1. Cutting gap become larger
2. Can't pilot arc
3. Cutting area color getting much abnormal
4. Arc distinguish
5. Cutting speed suddenly decrease
6. Cutting nozzle getting seriously burned
7. Cutting nozzle melted on the work-piece
8. The electrode center sunken more than 2mm

Application and cutting samples







易快®
YIKUAI

YK-430

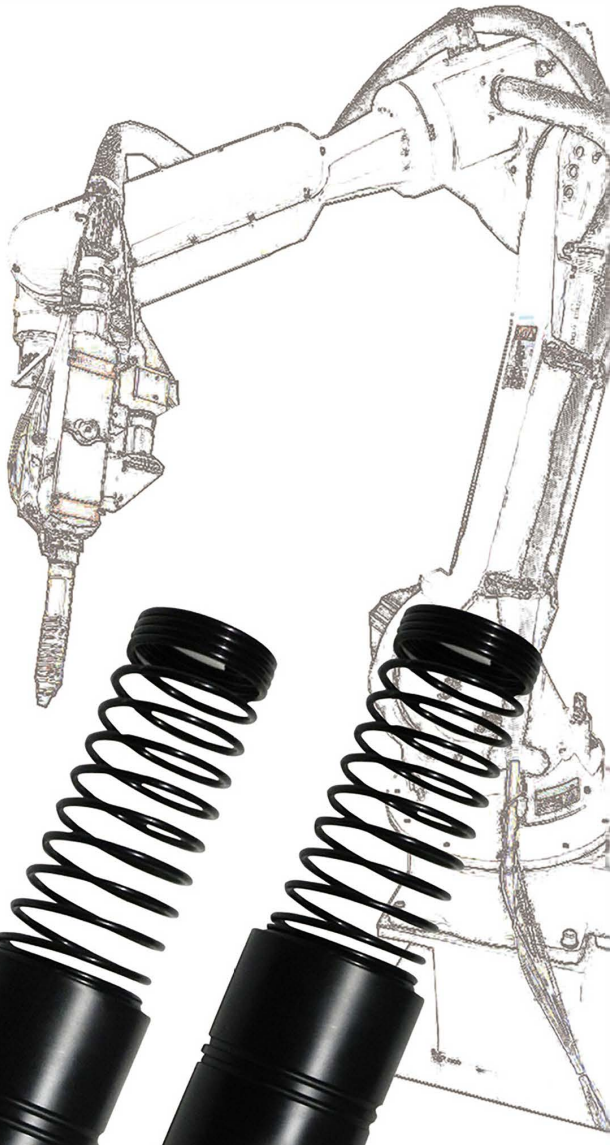
High Definition Plasma Torch

Features

- Dual water cooling、high water flow, better cooling effect, longer consumables work life
- Dry cutting/Water spray cutting/Oxygen cutting/ Gouging cutting change free, more convenient
- High efficiency, high quality cutting, the best optimal by robot plasma cutting

Diameter Φ50mm

Length 170mm





Air-air high definition cutting

Air-oxygen high definition cutting

Groove cutting

YK-430 High Definition Liquid Cooling Plasma Torch Parameter list

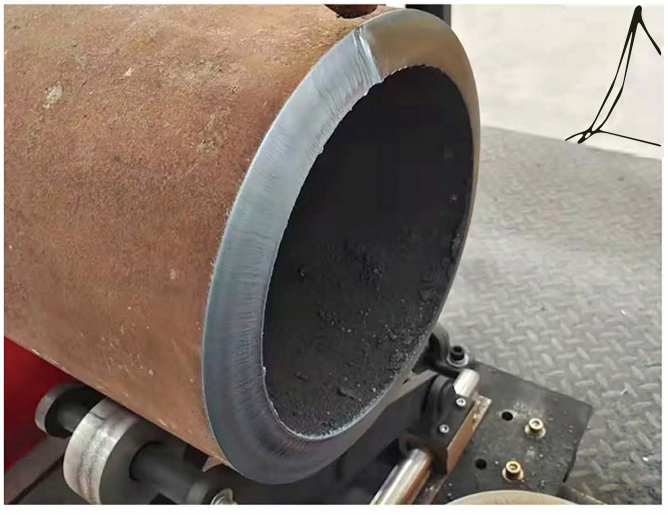
Cooling method	Liquid coolant(liquid cooling)	Cable length	1.8 / 8M
Plasma gas source	Compress air/oxygen/hydrogen/ nitrogen and so on	Working air supply pressure	0.4--0.6Mpa
Cutting current	40--400A	Torch body diameter	50mm
Arc pilot method	High Frequency	Rated duty cycle	100%

Note: The above parameters are only for reference, please adjust it according to actual working conditions

Please change the electrode and nozzle when following situation occurs

1. Cutting gap become larger
2. Can't pilot arc
3. Cutting area color getting much abnormal
4. Arc distinguish
5. Cutting speed suddenly decrease
6. Cutting nozzle getting seriously burned
7. Cutting nozzle melted on the work-piece
8. The electrode center sunken more than 2mm

Application and cutting samples






易快®
YIKUAI

YK-600
Plasma Torch

Features

- It's a high power plasma torch which works up to 600A current Unique water channel design confirms better cutting quality, faster cutting speed and longer consumable working life
- Strengthened torch body, makes more stable cutting performance under high power working

Diameter
Φ50mm





Shield
YK600104



Electrode
YK600102
YK600102X



Nozzle
YK600103(3.4)
YK600103(3.0)
YK600103(2.3)
YK600103(2.1)
YK600103(1.8)
YK600103(1.6)



Water tube
YK600105

YK-600 Recommend cutting parameters table for automated cutting

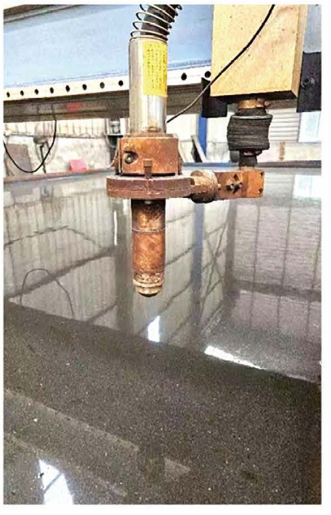
work-piece thickness	Current	Nozzle hole diameter	Gas pressure	Piercing time	Positioning height	Cutting height	Cutting speed	Remarks
mm	A	mm	Mpa	S	mm	mm	mm/min	This data is based on carbon steel, if cut stainless steel, copper and aluminum, please reduce the cutting speed accordingly.If increase the cutting speed, current should be increased together, electrode model should be differentiate by current small or big!
18	160-180	1.8	0.5	1.0	6	4-6	1300-1600	
20	200-220	2.1	0.5	1.2	6-8	6-8	1000-1400	
25	220-250	2.3	0.5	1.5	6-8	6-8	1000-1200	
30	240-260	3.0	0.5	1.8	8-10	6-8	700-1000	
35	280-300	3.0	0.5	2.0	8-10	6-8	600-900	
40	320-350	3.0/3.2	0.5	2.3	8-10	8-10	500-800	
45	>330	3.4	0.5	2.5	8	8	500-650	Edge arc pilot cutting

Note: The above parameters are only for reference, please adjust it according to actual working conditions

Please change the electrode and nozzle when following situation occurs

1. Cutting gap become larger
2. Can't pilot arc
3. Cutting area color getting much abnormal
4. Arc distinguish
5. Cutting speed suddenly decrease
6. Cutting nozzle getting seriously burned
7. Cutting nozzle melted on the work-piece
8. The electrode center sunken more than 2mm

Application and cutting samples



YK 160-MW

Handheld plasma torch



Features

- The special producing big power air cooling plasma torch, in the air cooling situation can keep 160A current cutting stably for a long time, the torch head use high air flow and cooling compress design, special small electrode and nozzle design will ensure the cutting effect, in the same time, the torch body and consumables can be quickly cooling, then the consumables work life improve and strong torch body's endurance. The general consumables same with mechanize model, reduce the stock kinds of consumables for user

Optional straight mechanize plasma torch



Electrode
YIKUAI 11



Nozzle
YIKUAI 12



Shield
YIKUAI 13



Air core
YIKUAI 14

YK 100-HW

Handheld plasma torch



Torch assembly

Features

- Basic on the YK100-H mechanize straight cutting torch's optimal design
- Continued the straight torch's advantage like fast cutting speed、long life of consumables、the cutting surface smooth and vertical
- It take the same consumables with mechanize torch, reduce the consumables stock models



Shield
YK100104W



Big retaining cap
YK100106W



Porcelain shield
100A



Nozzle
YK100103(1.2)
YK100103(1.6)
YK100103(1.8)



Electrode
YK100102



Air core
YK100107

YK 200-HW

Handheld plasma torch



Features

- The torch suitable for 200A and below current water cooling power source, torch body producing by thick material for long working life
- The cutting advantage continued YK200-H mechanize plasma torch, and general consumable is same and reduce consumables stock models
- And here design the touching copper shield, can be suitable for different work situation, more convenient and practical

Torch assembly



Porcelain shield
200A



Shield
YK200104W



Big retaining cap
YK200106W



Nozzle
YK200103H(1.3)
YK200103H(1.6)
YK200103H(1.8)
YK200103H(2.2)
YK200103H(2.5)
YK200103H(2.8)



Electrode
YK200102H



Water tube
YK200107H

YK 300-HW

Handheld plasma torch



Features

- The torch suitable for 300A current water cooling power source, producing by high quality material, take porcelain insulation technology, and torch body not easy to short-circuit burn
- The special air channel compress make the plasma arc more focus, more cutting capacity, more consumable working life
- The general consumable same with YK300-H mechanize torch, will reduce customer stock models

Torch assembly



Porcelain shield
300A



Shield
YK300104W



Big retaining cap
YK300106W



Nozzle
YK300103H(1.6)
YK300103H(1.8)
YK300103H(2.2)
YK300103H(2.5)
YK300103H(2.8)



Electrode
YK300102H
YK300102HX



Water tube
YK300107H

YK 600-HW

Handheld plasma torch



Torch assembly

Features

- The big power water cooling plasma torch suitable for 400A power source, high current tolerance, good heat resistance, suitable for middle and thick work-piece
- The torch head take screw type air channel, plasma arc stiffness is high, punching fast, strong cutting ability, specialized for middle and thick work-piece

Porcelain shield

YK-600HW



Nozzle

YK600103(1.6)
YK600103(1.8)
YK600103(2.1)
YK600103(2.3)
YK600103(3.0)
YK600103(3.4)



Electrode

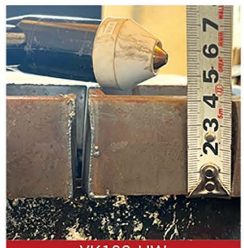
YK600102
YK600102X

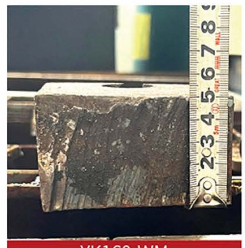


Water tube

YK600105

Handheld plasma torch cutting application


YK100-HW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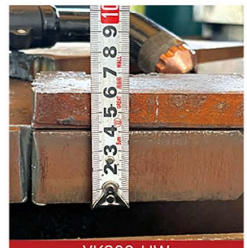
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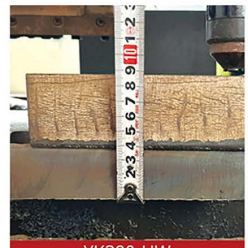
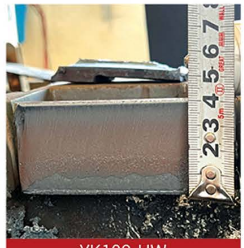

YK300-HW


YK600-HW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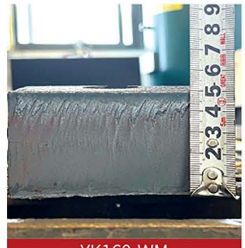
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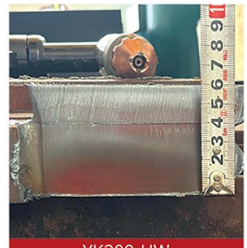
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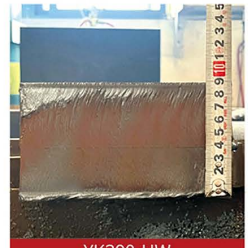
YK300-HW


YK600-HW

Widely adaptability

- Suitable for all the high frequency arc pilot power source;
- The plasma torch cable length and adaptor can be customized by different brand power source size request; (In working time can be finish and delivery within 8 hours)
- Full range, air cooling、water cooling、high current and low current can freely choose.

Low operation cost

- The plasma torch body use proven porcelain insulation, and air swirl compress structure, arc pilot stable, not easy to burn by wrong operation;
- Latest manufacturing process, high quality hafnium, long work life of E&N, the new touch copper shield strong and durable, cutting easy and save effort;
- The handheld plasma torch consumables is same with the mechanize model, save the stock cost and inventory pressure.

Handheld plasma torch cutting parameters table

Torch model	YK100-HW		YK160-MW		YK160-BS		YK200-HW		YK300-HW		YK600-HW	
Rated cutting current(A)	120		160		160		200		300		600	
Rated duty cycle	100%		60%		100%		100%		100%		60%	
Cutting	Thickness	Cutting speed	Thickness	Cutting speed	Thickness	Cutting speed	Thickness	Cutting speed	Thickness	Cutting speed	Thickness	Cutting speed
Quality cutting(mm)	25	280mm/min	35	280mm/min	35	280mm/min	45	250mm/min	50	270mm/min	60	250mm/min
Maximum cutting(mm)	40	125mm/min	50	125mm/min	50	125mm/min	65	125mm/min	80	125mm/min	90	125mm/min
Cutting capacity(mm)	45		60		60		80		95		110	

Note: The relevant data are all obtained using the "Huayuan" plasma power supply and tested in the laboratory of Wuhan "Yikuai" R&D Center. However, there may be slight differences in practical applications due to different cutting conditions



YIKUAI factory special in plasma torch and consumables manufacturing !





