





# SET-UP AND MAINTENANCE GUIDE

## ARCT SERIES

**INTELLIGENT**  
TORCH SOLUTIONS

 EN English	Quick Guide	 RU Russia	Краткое руководство
 ES Spanish	Guía Consulta Rápida	 SV Swedish	Snabbguide
 PL Polish	Szybki przewodnik	 CH Chinese	快速指南
 PT Portuguese	Guia de consulta rápida		

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View Auto Tig Product Catalogue

# RATINGS AT A GLANCE

IEC/EN 60974-7



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## Air-Cooled

Technical Data:		T1A/CWT1A Auto	T3A/CWT3A Auto
Cooling Method		Air-Cooled	
Rating:	DC	140A	240A
	AC	100A	170A
Duty Cycle		60%	60%
Electrode Size		1.0-3.2mm / 0.04"-1/8"	1.0-4.8mm / 0.04"-3/16"
Operating Temperature		-20°C ...+40°C	

## Liquid-Cooled

Technical Data:		T1WA/CWT1WA Auto		T3WA/CWT3WA Auto		T5WA/CWT5WA Auto		
Cooling Method		Liquid-Cooled						
		12.5ft	25ft	12.5ft	25ft	12.5ft	25ft	
Rating:	1200W	DC	330A	330A	400A	400A	550A	450A
		AC	230A	230A	280A	280A	385A	315A
	1600W	DC	-	-	-	-	550A	450A
		AC	-	-	-	-	385A	315A
Duty Cycle		100%	100%	100%	100%	100%	100%	
Electrode Size		1.0-4.0mm / 0.04"-5/32"		1.0-4.0mm / 0.04"-5/32"		1.6-6.4mm / 1/16"-1/4"		
Minimum Water Flow		1.5 l/min		1.5 l/min		1.5 l/min		
Minimum Water Inlet Pressure		2.5 Bar						
Maximum Water Inlet Pressure		5.0 Bar						
Maximum Water Inlet Temperature		50°C						
Operating Temperature		-20°C ...+40°C						

### Technical Data

ES Datos Técnicos PL Dane techniczne PT Dados Técnicos  
RU Краткое руководство SV Snabbguide CH 技术参数

### Rating

ES Rango PL Obciążalność PT Capacidade  
RU Параметры SV Strömstyrka CH 电流

### Duty Cycle

ES Ciclo de Trabajo PL Cykl pracy PT Ciclo de Trabalho  
RU ПБ SV Intermittens CH 暂载率

### Electrode Size

ES Diametro Electrodo PL Średnica elektrody  
PT Diâmetro Eletrodo RU Диаметр электрода  
SV Elektroddiameter CH 电极尺寸

### Air-Cooled

ES Refrigerado Aire PL Chłodzenie gazowe  
PT Refrigerado Gás RU Воздушное охлаждение  
SV Gaskylid CH 空冷

### Liquid-Cooled

ES Refrigerado Agua PL Chłodzenie cieczą  
PT Refrigerado Água RU Жидкостное охлаждение  
SV Vattenkyld CH 水冷

### Minimum Water Flow

ES Mínimo Flujo Agua PL Minimalny przepływ cieczy PT Fluxo Água Mínimo  
RU Минимальная скорость подачи охлаждающей жидкости  
SV Vattenflöde minimum CH 最低水流

### Minimum Water Inlet Pressure

ES Presión Mínima Entrada Agua PL Minimalne ciśnienie wejściowe  
PT Pressão Mínima Entrada Água RU Минимальное давление на входе  
SV Vattentryck minimum CH 最低进水口压力

### Maximum Water Inlet Pressure

ES Presión Máxima Entrada Agua PL Maksymalne ciśnienie wejściowe  
PT Pressão Maxima Entrada Água RU Максимальное давление на входе  
SV Vattentryck maximum CH 最高进水口压力

### Maximum Water Inlet Temperature

ES Máxima Temperatura Entrada Agua PL Maksymalna temperatura cieczy  
PT Máxima Temperatura Entrada Água RU Максимальная температура охлаждающей жидкости на входе  
SV Maxtemperatur vatten CH 进水口最高温度

- ✓ IEC/EN 60974-7
- ✓ ISO9001:2015
- ✓ LVD 2014/35/EU
- ✓ REACH 1907/2006/EC
- ✓ RoHS2 2011/65/EU, amend 2015/863/EU

# GETTING STARTED







## Auto Standard Set-Up



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**1** Ensure you have all the parts



-  Asegúrese que tienes todas las piezas
-  Upewnij się, że masz wszystkie części w zestawie
-  Certifique-se de ter todas as peças
-  Убедитесь, что у Вас есть все части горелки.
-  Kontrollera att alla delar finns
-  准备好需要安装的备件







**2** Push the gasket onto the head  
Twist and push the gasket until in place



-  Coloque el sello de goma en la cabeza de la antorcha.  
Nota: Hay una pequeña ranura en la parte superior de la cabeza de la antorcha.  
Es necesario girar e insertar la pieza hasta el tope.
-  Załóż silikonową uszczelkę na główkę palnika
-  Coloque a vedação de borracha na cabeça do queimador.  
Nota: Há uma pequena saliência na parte superior da cabeça da tocha.  
É necessário girar e inserir a peça até o seu travamento.
-  Наденьте резиновый уплотнитель на голову горелки.  
Внимание: на голове горелки есть небольшой выступ.  
Необходимо повернуть и вставить уплотнитель до упора.
-  Montera packningen på huvudet. Observera räfflan på huvudet. Vrid och tryck på packningen tills den är i rätt läge
-  按照图示方法，将橡胶绝缘套装到枪头上







**3** Assemble the heat isolator.  
Tighten with the enclosed spanner



-  Armar el aislador de calor. Apretar con llave de boca.
-  Złożyć izolator ze stali nierdzewnej
-  Montar o isolador de calor.  
Apretar com chave de boca.
-  Наденьте теплоизолятор. Закрепите с помощью прилагающегося ключа.
-  Montera värmeisolatorn och spänn fast med det medföljande verktyget
-  按照图示方法，将不锈钢隔热套旋到枪头螺纹上，并使用专用扳手拧紧。

**4** Insert the collet and locate the collet slot on the pin at the back of the head



-  Inserte la pinza y localice la ranura de la pinza en el pasador en la parte posterior del cabezal.
-  Umieść tuleję zaciskową na
-  Insira a pinça e localize a ranhura da pinça no pino na parte posterior da cabeça.
-  Вставьте цангу с задней стороны головы горелки.
-  Rikta in spännhylsan på huvudets baksida
-  按照图示方法，将钨极夹装到枪头内孔，装配时注意钨极夹上的轴向定位导槽对准枪头孔内的定位销。

# GETTING STARTED



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## 5 Assemble the back cap to pinch the collet



- Gire el capuchón para apretar la pinza
- Przykręć korek w celu zaciśnięcia oprawy elektrody
- Gire a capa para apertar a pinça
- Закрепите колпачок, чтобы зажать цангу.
- Montera spännhuven för att spänna fast spännhylsan
- 按照图示方法，将后帽与钨极夹通过螺纹连接到一起

## 6 Insert the tungsten



- Insertar el tungsteno
- Włóż elektrodę wolframową od przodu palnika
- Inserir o Tungsténio
- Вставьте вольфрамовый электрод.
- Montera elektroden
- 按照图示方法，将钨极装到钨极夹的内孔中，顺时针旋转后帽夹紧钨极。

## 7 Assemble the ceramic - push on



- Ubicar la cerámica - encajar
- Zamocuj dyszę ceramiczną
- Posicionar o bocal de cerâmica - encaixar
- Закрепите керамическое сопло.
- Tryck på gashylsan
- 按照图示方法，将陶瓷喷嘴装到不锈钢隔热套上，并推紧。

## 8 Tighten the back cap. You're ready to go!



- Armar el capuchón. Usted está listo!
- Dokręć korek w celu zaciśnięcia elektrody wolframowej w palniku
- Apertar a capa do tungsténio. Você esta pronto!
- Затяните колпачок. Горелка готова к работе!
- Dra åt spännhuven. Nu är det klart att svetsa!
- 按照图示方法，逆时针旋转后帽松开钨极位置，调整钨极位置，顺时针旋转后帽夹紧并固定钨极位置。

# GETTING STARTED

## Auto Cold-Wire Set-Up



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### 1 Ensure you have all the parts



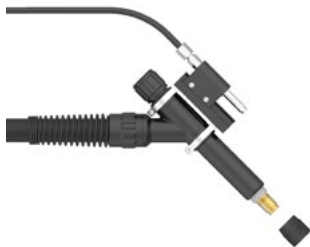
- Asegúrese que tienes todas las piezas
- Upewnij się, że masz wszystkie części w zestawie
- Certifique-se de ter todas as peças
- Убедитесь, что у Вас есть все части горелки.
- Kontrollera att alla delar finns
- 准备好需要安装的备件

### 2 Remove the cold-wire neck assembly



- Retire el conjunto cold-wire del cuello
- Zdemontuj rurkę prowadzącą
- Remova o conjunto cold-wire do pescoço
- Снимите узел холодного провода
- Ta bort den kalla trådens halsanslutning
- 取下冷丝弯管

### 3 Push the gasket onto the head Twist and push the gasket until in place



- Coloque el sello de goma en la cabeza de la antorcha.  
Nota: Hay una pequeña ranura en la parte superior de la cabeza de la antorcha.  
Es necesario girar e insertar la pieza hasta el tope.  
 Załóż silikonową uszczelkę na główkę palnika
- Coloque a vedação de borracha na cabeça do queimador.  
Nota: Há uma pequena saliência na parte superior da cabeça da tocha.  
É necessário girar e inserir a peça até o seu travamento.
- Наденьте резиновый уплотнитель на голову горелки.  
Внимание: на голове горелки есть небольшой выступ.  
Необходимо повернуть и вставить уплотнитель до упора.
- Montera packningen på huvudet. Observera räfflan på huvudet. Vrid och tryck på packningen tills den är i rätt läge
- 按照图示方法, 将橡胶绝缘套装到枪头上。

### 4 Assemble the heat isolator. Tighten with the enclosed spanner



- Armar el aislador de calor. Apretar con llave de boca.
- Złóż izolator ze stali nierdzewnej
- Montar o isolador de calor.  
Apertar com chave de boca.
- Наденьте теплоизолятор. Закрепите с помощью прилагающегося ключа.
- Montera värmeisolatorn och spänn fast med det medföljande verktyget
- 按照图示方法, 将不锈钢隔热套旋到枪头螺纹上, 并使用专用扳手拧紧。

# GETTING STARTED



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## 5 Insert the collet and locate the collet slot on the pin at the back of the head



- Ubique la pinza en el pasador en la parte posterior del cabezal
- Umieść tuleję zaciskową na
- Localizar a pinça no pino atrás da cabeça da tocha.
- Вставьте цангу с задней стороны головы горелки.
- Rikta in spännhylsan på huvudets baksida
- 按照图示方法，将钨极夹装到枪头内孔，装配时注意钨极夹上的轴向定位导槽对准枪头孔内的定位销。

## 6 Assemble the back cap to pinch the collet



- Montar el capuchón largo para apretar la pinza
- Przykręć korek w celu zaciśnięcia oprawy elektrody
- Montar a capa do eletrodo para apertar a pinça
- Закрепите колпачок, чтобы зажать цангу.
- Montera spännhuvuven för att späna fast spännhylsan
- 按照图示方法，将后帽与钨极夹通过螺纹连接到一起。

## 7 Insert the tungsten



- Insertar el tungsteno
- Włóż elektrodę wolframową od przodu palnika
- Inserir o Tungstênio
- Вставьте вольфрамовый электрод.
- Montera elektroden
- 按照图示方法，将钨极装到钨极夹的内孔中，顺时针旋转后帽夹紧钨极。

## 8 Assemble the ceramic - push on



- Ubicar la cerámica - encajar
- Zamocuj dyszę ceramiczną
- Posicionar o bocal de cerâmica - encaixar
- Закрепите керамическое сопло.
- Tryck på gashylsan
- 按照图示方法，将陶瓷喷嘴装到不锈钢隔热套上，并推紧。

# GETTING STARTED

## Auto Cold-Wire Set-Up



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### 9 Tighten the back cap



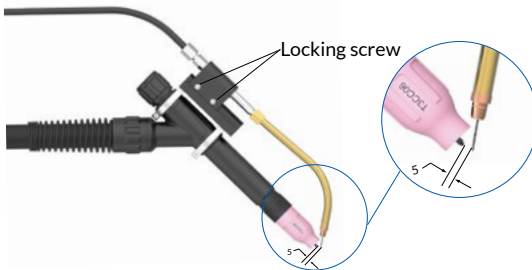
- Armar el capuchón.
- Dokręć korek w celu zaciśnięcia elektrody wolframowej w palniku
- Apertar a capa do tungsténio.
- Затяните колпачок.
- Dra åt spännhuv.
- 按照图示方法，逆时针旋转后帽松开钨极，调整钨极位置，顺时针旋转后帽夹紧并固定钨极位置。

### 10 Install the cold-wire neck assembly



- Instale el conjunto cold-wire en el cuello
- Zamontuj rurkę prowadzącą
- Instale o conjunto cold-wire no pescoço
- Установите холоднотермопроводную шейную сборку
- Montera cold-wire-halsassemblagen
- 装上冷丝弯管

### 11 Feeding welding wire, adjust the distance and tighten the locking screw



- Alimentar el hilo de soldadura, ajustar la distancia y apretar el tornillo de bloqueo
- wyreguluj odległość drutu spawalniczego od elektrody.
- Alimentar o arame de solda, ajustar a distância e apertar o parafuso de fixação.
- Подавать сварочную проволоку, отрегулировать расстояние и затянуть фиксирующий винт
- Mata in svetsstråden, justera avståndet och dra åt låsskruven.
- 送入焊丝，调整距离并拧紧锁定螺丝。



# ARC TIG WEAR PARTS SET-UP OVERVIEW



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## T1A/T1WA CWT1A/CWT1WA Series



### Standard Nozzle Collet Body Set-Up

Recommended Set-up Parameters for Steel and Aluminium

Nozzle Size	Bore Size	Suggested Gas Flow Rate	Maximum Tungsten Stick-out	Ceramic Nozzle	Tungsten Size						
					1.0	1.6	2.4	3.2	4.0	4.8	6.4
4	6mm 1/4"	6 l/min	8mm	●	●	●	●	●	●	●	●
5	8mm 5/16"	6 l/min	8mm	●	●	●	●	●	●	●	●
6	10mm 3/8"	7 l/min	10mm	●	●	●	●	●	●	●	●
7	11mm 7/16"	8 l/min	10mm	●	●	●	●	●	●	●	●
8	12mm 1/2"	8 l/min	10mm	●	●	●	●	●	●	●	●
10	15mm 5/8"	10 l/min	13mm	●	●	●	●	●	●	●	●

Note: Maximum recommended tungsten for Quartz option is 3.2mm.  
Quartz cups can be used for Aluminium welding but only in short runs

### Standard Nozzle Gas Lens Collet Body Set-Up

Recommended Set-up Parameters for Steel and Aluminium

Nozzle Size	Bore Size	Suggested Gas Flow Rate	Maximum Tungsten Stick-out	Ceramic Nozzle	Tungsten Size						
					1.0	1.6	2.4	3.2	4.0	4.8	6.4
4	6mm 1/4"	5 l/min	10mm	●	●	●	●	●	●	●	●
5	8mm 5/16"	6 l/min	10mm	●	●	●	●	●	●	●	●
6	10mm 3/8"	7 l/min	13mm	●	●	●	●	●	●	●	●
7	11mm 7/16"	8 l/min	14mm	●	●	●	●	●	●	●	●
8	12mm 1/2"	8 l/min	15mm	●	●	●	●	●	●	●	●
10	15mm 5/8"	10 l/min	15mm	●	●	●	●	●	●	●	●

Note: Maximum recommended tungsten for Quartz option is 3.2mm.  
Quartz cups can be used for Aluminium welding but only in short runs



### Short Nozzle Collet Body Set-Up

Recommended Set-up Parameters for Steel and Aluminium

Nozzle Size	Bore Size	Suggested Gas Flow Rate	Maximum Tungsten Stick-out	Ceramic Nozzle	Tungsten Size						
					1.0	1.6	2.4	3.2	4.0	4.8	6.4
5	8mm 5/16"	6 l/min	8mm	●	●	●	●	●	●	●	●
7	11mm 7/16"	8 l/min	8mm	●	●	●	●	●	●	●	●
10	15mm 5/8"	10 l/min	10mm	●	●	●	●	●	●	●	●



### Short Nozzle Gas Lens Collet Body Set-Up

Recommended Set-up Parameters for Steel, Aluminium and Stainless Steel

Nozzle Size	Bore Size	Suggested Gas Flow Rate	Maximum Tungsten Stick-out	Ceramic Nozzle	Tungsten Size						
					1.0	1.6	2.4	3.2	4.0	4.8	6.4
5	8mm 5/16"	6 l/min	8mm	●	●	●	●	●	●	●	●
7	11mm 7/16"	8 l/min	8mm	●	●	●	●	●	●	●	●
10	15mm 5/8"	10 l/min	10mm	●	●	●	●	●	●	●	●



# ARC TIG WEAR PARTS SET-UP OVERVIEW



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## T3WA/CWT3WA



### Standard Nozzle Collet Body Set-Up

Recommended Set-up Parameters for Steel and Aluminium

Nozzle Size	Bore Size	Suggested Gas Flow Rate	Maximum Tungsten Stick-out	Ceramic Nozzle	Tungsten Size							
					1.0	1.6	2.4	3.2	4.0	4.8	6.4	
4	6mm 1/4"	6 l/min	10mm	●	●	●	●	●	●	●	●	●
5	8mm 5/16"	6 l/min	10mm	●	●	●	●	●	●	●	●	●
6	10mm 3/8"	7 l/min	11mm	●	●	●	●	●	●	●	●	●
7	11mm 7/16"	7 l/min	12mm	●	●	●	●	●	●	●	●	●
8	12mm 1/2"	10 l/min	13mm	●	●	●	●	●	●	●	●	●
10	15mm 5/8"	12 l/min	15mm	●	●	●	●	●	●	●	●	●

Note: Maximum recommended tungsten for Quartz option is 3.2mm.

Quartz cups can be used for Aluminium welding but only in short runs

### Standard Nozzle Gas Lens Collet Body Set-Up

Recommended Set-up Parameters for Stainless Steel, Steel and Aluminium

Nozzle Size	Bore Size	Suggested Gas Flow Rate	Maximum Tungsten Stick-out	Ceramic Nozzle	Tungsten Size							
					1.0	1.6	2.4	3.2	4.0	4.8	6.4	
4	6mm 1/4"	5 l/min	10mm	●	●	●	●	●	●	●	●	●
5	8mm 5/16"	6 l/min	10mm	●	●	●	●	●	●	●	●	●
6	10mm 3/8"	7 l/min	13mm	●	●	●	●	●	●	●	●	●
7	11mm 7/16"	7 l/min	14mm	●	●	●	●	●	●	●	●	●
8	12mm 1/2"	8 l/min	15mm	●	●	●	●	●	●	●	●	●
10	15mm 5/8"	10 l/min	20mm	●	●	●	●	●	●	●	●	●

Note: Maximum recommended tungsten for Quartz option is 3.2mm.

Quartz cups can be used for Aluminium welding but only in short runs

## T3A /T5WA CWT3A /CWT5WA



### Standard Nozzle Collet Body Set-Up

Recommended Set-up Parameters for Steel and Aluminium

Nozzle Size	Bore Size	Suggested Gas Flow Rate	Maximum Tungsten Stick-out	Ceramic Nozzle	Tungsten Size							
					1.0	1.6	2.4	3.2	4.0	4.8	6.4	
4	6mm 1/4"	6 l/min	10mm	●	●	●	●	●	●	●	●	●
5	8mm 5/16"	6 l/min	10mm	●	●	●	●	●	●	●	●	●
6	10mm 3/8"	7 l/min	11mm	●	●	●	●	●	●	●	●	●
7	11mm 7/16"	7 l/min	12mm	●	●	●	●	●	●	●	●	●
8	12mm 1/2"	10 l/min	13mm	●	●	●	●	●	●	●	●	●
10	15mm 5/8"	12 l/min	15mm	●	●	●	●	●	●	●	●	●
12	19mm 3/4"	15 l/min	18mm	●	●	●	●	●	●	●	●	●

Note: Maximum recommended tungsten for Quartz option is 3.2mm.

Quartz cups can be used for Aluminium welding but only in short runs

# ARC TIG WEAR PARTS SET-UP OVERVIEW



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## T3A /T5WA CWT3A /CWT5WA



### Standard Nozzle Gas Lens Collet Body Set-Up

Recommended Set-up Parameters for Stainless Steel, Steel and Aluminium

Nozzle Size	Bore Size	Suggested Gas Flow Rate	Maximum Tungsten Stick-out	Ceramic Nozzle	Tungsten Size							
					1.0	1.6	2.4	3.2	4.0	4.8	6.4	
4	6mm 1/4"	5 l/min	10mm	●	●	●	●	●	●	●	●	●
5	8mm 5/16"	6 l/min	10mm	●	●	●	●	●	●	●	●	●
6	10mm 3/8"	7 l/min	13mm	●	●	●	●	●	●	●	●	●
7	11mm 7/16"	7 l/min	14mm	●	●	●	●	●	●	●	●	●
8	12mm 1/2"	8 l/min	15mm	●	●	●	●	●	●	●	●	●
10	15mm 5/8"	10 l/min	20mm	●	●	●	●	●	●	●	●	●
12	19mm 3/4"	13 l/min	20mm	●	●	●	●	●	●	●	●	●

Note: Maximum recommended tungsten for Quartz option is 3.2mm.  
Quartz cups can be used for Aluminium welding but only in short runs

## T3A /T5WA CWT3A /CWT5WA



### Large Gas Lens Nozzle With Large Gas Lens Collet Body Set-Up

Recommended Set-up Parameters for Stainless Steel, Steel and Aluminium

Nozzle Size	Bore Size	Suggested Gas Flow Rate	Maximum Tungsten Stick-out	Ceramic Nozzle	Tungsten Size							
					1.0	1.6	2.4	3.2	4.0	4.8	6.4	
8	12mm 1/2"	8 l/min	15mm	●	●	●	●	●	●	●	●	●
10	15mm 5/8"	10 l/min	20mm	●	●	●	●	●	●	●	●	●
12	19mm 3/4"	13 l/min	20mm	●	●	●	●	●	●	●	●	●
14	24mm 15/16"	15 l/min	25mm	●	●	●	●	●	●	●	●	●

Note: The Tungsten stick out should be minimum 10mm for Aluminium welding

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