

# Aristo<sup>®</sup> RT Robotic Torches

Standard, Helix and Infinity robot arms for single arc and tandem applications



The Aristo<sup>®</sup> RT robotic torches offers world class performance in single arc and tandem applications. **Standard arm torches are also very suitable for mechanized solutions.**

There are three different product set ups:

- Robotic standard arm (external cable)
- Robotic hollow wrist arm Helix (+/- 220°)
- Robotic hollow wrist arm Infiniturn (endless rotation)

With multiple gas cooled models and multiple water cooled models available in different swan neck angles. Packages available for ABB, Fanuc, Kuka and Motorman/Yaskawa.

## Practical advantages

- Collision resistant design meaning no readjustment of the torch neck. Giving TCP (Tool Centre Point) stability and reducing downtime, increasing productivity
- Integrated blow out capability can be used for cooling and cleaning of the robotic neck
- Long life of consumables, torch body and spares

## Special features

- All torches support ESAB TrueArcVoltage™ systems and TouchSense\* function from ESAB power sources
- Quick change system for torch neck
- Simple exchange of the cable assembly
- Constant TCP when changing the torch neck or cable assembly
- Extremely strong brass outer tubes provide highest TCP stability
- Large selection of torch necks to suit every weld application
- Customized torch necks can be ordered on request

All benefits mentioned above reduce the downtime of the robot and mechanized solutions and therefore bring more efficiency to our equipment compared with any other torch system available in the market.

\* TouchSense function can be used via gas cup or wire. For TouchSense functionality standard robot arm torch is preferred. If using Helix and Infiniturn weld wire can be used as a touch sensor instead of gas cup.

Standard robot arm  
(external cable assembly)



Tandem for  
Standard  
robot arm



Helix / infiniturn  
for hollow wrist arm



## Torch design

- Large and strong brass outer tube that assures TCP stability due to its high wall thickness
- Low spatter adhesion to brass due to its physical character
- Brass torch flange
- Highest precision guarantees stability

Air and water cooled torches of the same torch model use the same spare parts giving a reduction of inventory.

Smallest gas nozzles and torch heads available in order to perform excellent in all kinds of different welding jobs. Threaded gas nozzles with additional clamping lead to a much better heat transfer and therefore long life consumables which again reduce the downtime of the robot for a constant change of consumables.

Optimized gas flow which brings us an extremely stable and reliable welding arc.

## Ordering Information Standard robotic arm / mechanized solution (External Cable)

Torch model	Gas cooled				Water cooled			
	RT 42G	RT 52G	RT 62G	RT 72G	RT 42W	RT 52W	RT 62W	RT 82W
Technical Data mix gas, A / DC	350 / 60%	350 / 60%	420 / 60%	400 / 60%	350 / 100%	400 / 100%	450 / 100%	550 / 100%
Technical Data CO <sub>2</sub> gas, A / DC	420 / 60%	420 / 60%	500 / 60%	480 / 60%	420 / 100%	470 / 100%	530 / 100%	600 / 100%
Neck 0°	0700300441	0700300447	0700300452	0700300849	0700300474	0700300480	0700300485	0700300673
Neck 22°	0700300442	-	0700300453	0700300850	0700300475	-	0700300486	0700300674
Neck 36°	0700300443	0700300448	0700300454	0700300851	0700300476	0700300481	0700300487	0700300675
Neck 45°	0700300444	0700300449	0700300455	0700300852	0700300477	0700300482	0700300488	0700300676
Neck 45°, Long version	0700300445	0700300450	0700300456	-	0700300478	0700300483	0700300489	-
Cable, Euro connector, 1.0m	0700300458	0700300458	0700300458	0700300458	0700300491	0700300491	0700300491	0700300491
Cable, Euro connector, 1.2m	0700300459	0700300459	0700300459	0700300459	0700300492	0700300492	0700300492	0700300492
Cable, Euro connector, 1.3m	-	-	-	-	0700300493	0700300493	0700300493	0700300493
Cable, Euro connector, 1.4m	0700300460	0700300460	0700300460	0700300460	-	-	-	-
Cable, Euro connector, 1.5m	0700300461	0700300461	0700300461	0700300461	0700300494	0700300494	0700300494	0700300494
Cable, Euro connector, 1.8m	0700300462	0700300462	0700300462	0700300462	-	-	-	-
Cable, Euro connector, 3m	-	-	-	-	0700300495	0700300495	0700300495	0700300495
Torch neck mount 23° *	0700300422	-	0700300422	0700300422	0700300422	-	0700300422	0700300422
Torch neck mount 9° *	0700300424	0700300425	0700300424	0700300424	0700300424	0700300425	0700300424	0700300424
Torch neck mount 0° *	0700300423	0700300423	0700300423	0700300423	0700300423	0700300423	0700300423	0700300423
Adapter flange for robot **	Depends on robot							
KS-2 MIG safety off mechanism	0700300790	0700300790	0700300790	0700300790	0700300790	0700300790	0700300790	0700300790

### Options

FL-1 (rigid mount for collision detection performed by robot controller)

0700300435 0700300435 0700300435 0700300435 0700300435 0700300435 0700300435 0700300435

\* Standard  
\*\* If required

For heavy duty applications ESAB recommends RT72G (gas cooled) and RT82W (water cooled).

## Ordering Information Helix / Infiniturn robotic hollow wrist arm

Robot model	ABB IRB 1520ID/1600ID	ABB IRB 2600ID	Fanuc ArcMate 100iC	Fanuc ArcMate 120iC	Motoman MA 1400	Motoman MA 1900
Torch neck	Same as for standard cables					
RT KSC-2W water cooled	0700300431	0700300431	0700300431	0700300431	0700300431	0700300431
Torch mount, rigid version						
RT FLC-2W water cooled	0700300433	0700300433	0700300433	0700300433	0700300433	0700300433
Adapter flange for robot	0700300509	0700300521	0700300497	0700300497	0700300429	0700300429
Infiniturn cable, air cooled	0700300437	0700300511	0700300436	0700300437	0700300510	0700300512
Infiniturn cable, water cooled	0700300465	0700300514	0700300464	0700300465	0700300513	0700300515
Helix cable, air/water cooled	0700300467	0700300517	0700300466	0700300467	0700300516	0700300518

For further information please contact your ESAB robotic specialist.

## Ordering Information Tandem

Torch model	RT 20F8	RT 22F8	RT 20F10	RT 22F10	RT 22F15
Technical Data 2x 550A 100% DC mixed gas, water cooled	Straight neck Wire distance at TCP 8 mm (Standard)	Neck 22° bent Wire distance at TCP 8mm (Standard)	Straight neck Wire distance at TCP 10mm	Neck 22° bent Wire distance at TCP 10mm	Neck 22° bent Wire distance at TCP 15mm
Complete torch, Euro connector, 1.0m	-	-	0700300312	-	-
Complete torch, Euro connector, 1.2m	0700300317	-	0700300313	-	-
Complete torch, Euro connector, 1.5m	-	0700300318	-	0700300314	-
Complete torch, Euro connector, 2.5m	-	-	-	0700300315	0700300692
Complete torch, Euro connector, 3.0m	-	-	0700300312	0700300316	-
Complete torch, Euro connector, 3.5m	0700300426	0700300426	0700300426	0700300426	-
Torch mount 22° for RT 20F/22F	depends on robot				
Adapter flange for robot (if required)	0700300434	0700300434	0700300434	0700300434	
KS-2 TDM safety off mechanism	0700300791	0700300791	0700300791	0700300791	0700300791
<b>Options</b>					
FL-1 (rigid mount for collision detection performed by robot controller)	0700300435	0700300435	0700300435	0700300435	0700300435
For further information please contact your ESAB robotic specialist.					

# Torch cleaning stations

## JetStream Advantages / Properties

- For prismatic, round and elliptical gas nozzles
- Inside cleaning of conical nozzles
- Cleaning of contact tips, tip holders, insulators
- Cleaning of the gas nozzle front and outside
- Leaves a clean and smooth surface, enhances laminar gas flow in the torch
- Longer life of all consumables
- Enhances cleanliness of the welding area
- No mechanical damage to the torch
- Innovative cleaning principle
- The torch head is blasted with a particle jet
- Limitations of the Reamer cleaning are overcome



JetStream



RT2000



Before

After

## Ordering Information JetStream

JetStream RT cleaning station	0700300405
FineSpray Spraying unit	0700300406
Granulate for JetStream	0700300399
RT Anti spatter liquid 5L	0700300400

## Ordering Information Reamer RT2000

Cleaning station RT 2000	0700300401
Cleaning strn RT 2000 w/ cutter	0700300402
Base for RT 2000	0700300403

## Options & Accessories JetStream

		For Nozzle OD	Suitable for torch model
Rubber seal ID 25mm JetStream	0700300416	26 mm	RT 52
Rubber seal ID 23mm JetStream	0700300412	24 mm	RT 62
Rubber seal ID 19mm JetStream	0700300418	20 mm	RT 42
Rubber seal elliptical JetStream	0700300413	24x40 mm	RT 20F/22F
Rubber seal ID 29mm FineSpray	0700300419	27 mm	RT 62
Rubber seal ID 26mm FineSpray	0700300414	24 mm	RT 52
Rubber seal ID 22mm FineSpray	0700300420	20 mm	RT 42
Rubber seal elliptical FineSpray	0700300415	24x40 mm	RT 20F/22F

For further information please contact your ESAB robotic specialist.

## Options & Accessories Reamer RT2000

Reamer OD/ID 13/9 RT 2000	0700300407
Reamer OD/ID 15/11 RT2000	0700300408
Reamer OD/ID 18/11 RT2000	0700300409
Reamer OD/ID 15/9 RT2000	0700300410
Reamer OD/ID 15/11 RT2000	0700300411

For further information please contact your ESAB robotic specialist.



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COMPANY WITH  
MANAGEMENT SYSTEM  
CERTIFIED BY DNV  
= ISO 9001 =  
= ISO 14001 =  
= OHSAS 18001 =