

Catalogue 2005/2006



Finally, periphery that completes the efficiency of a robot work cell.

In the late seventies ABICOR BINZEL started with the development of systems for robotic welding parallel to the introduction of the first robots in the automotive industry.

Today ABICOR BINZEL provides an effective product range of robot torches and corresponding peripheral items which are in use around the world, 24 hours a day.

Accompanying the product, a team of experts, both in our headquarter and in our subsidiaries, is always ready to assist with standard and custom-specific solutions. Besides the installation, application and special training our aftersales service includes the support and optimization of the production process. Quick spare part supply and repairs are included.

To recognize and to co-create new innovative technological trends, is one of our strong points.

Automatic welding with ABICOR BINZEL

Founded in 1945 Alexander Binzel Schweisstechnik GmbH & Co. KG specialized themselves in the development and production of welding and cutting torches for the GMAW, TIG and Plasma processes.

Numerous patented developments help shape the world of welding and cutting and set international standards.

The ABICOR BINZEL group is represented in more than 50 countries with over 800 employees, 30 production and sales companies, as well as over 20 exclusive partners.

Main production is located in the parent company in Buseck near Giessen, in Dresden, as well as in the USA, Brazil, Switzerland, India and China.

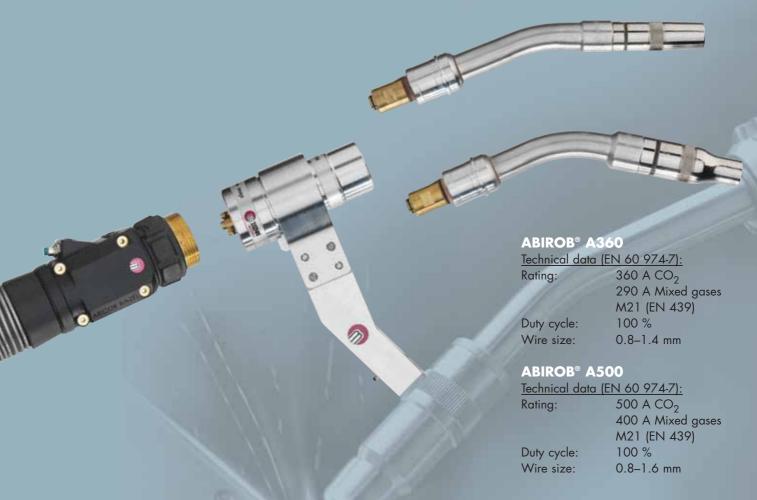
The brand name ABICOR had been etablished in 1997 as an impression of a company strategy that puts on innovation and globalization and that pursues a clear brand policy.

Content

A STATE OF THE PARTY OF THE PAR	MIG/MAG Welding Torches	
	■ MIG/MAG Welding Torch System "ABIROB®" air-cooled	Page 4-7
1 DE L	ABIROB® A360 / ABIROB® A500	
II CLE	MIG/MAG Welding Torch System "VTS-Interlock" liquid-cooled	Page 8-11
	ROBO VTS 290 / ROBO VTS 500TS	
	■ MIG/MAG Welding Torch System "WH and WH-PP" liquid-cooled	Page 12-15
	ROBO WH 242 D / ROBO WH 455 D / ROBO WH 652 D TS	
150	TIG Welding Torches	
THE RESERVE	■ TIG Welding Torch System "ABITIG® WH" liquid-cooled	Page 16-19
	ABITIG® WH 220 W / ABITIG® WH 400 W	
	Robot Periphery	
	Robot Mount "CAT2"	Page 20-21
The same of the sa	"To stop collisions quickly"	
	■ Torch Cleaning Station "BRS-CC"	Page 22-23
	"Plug and Play"	
	Front Injector "ABIROB® TMS-VI"	Page 24
11	"For the reduction of spatter adhesion"	
	■ Wire Cutting Station "DAV"	Page 25
	"The perfect cut "	
	■ Torch Neck Changing System "ATS-Rotor"	Page 26–27
	"Work around the clock "	
1 6	Welding Accessories	
	Anti Spatter Spray, Wire Cleaning Set, Special Coolant, etc.	Page 28
	Cooling Recirculators	
	■ WK 23 / WK 43	Page 29

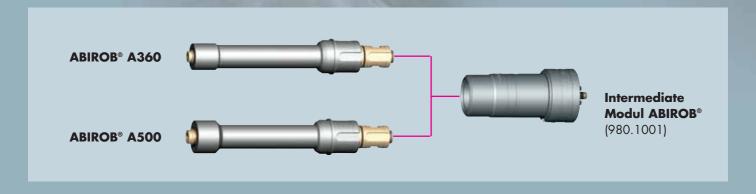
MIG/MAG Welding Torches "ABIROB®" air-cooled Rating 360 A and 500 A

- High welding capacity yet compact excellent accessibility and optimum performance.
- Double stability through "ALU-PROTECTION-SYSTEM" maximum protection and repeatable TCP even when a crash occurs.
- Short maintenance time the modular design of the system guarantees a smooth and quick exchange of the torch neck as well as the cable assembly components a constant TCP without additional programming.



Swanneck	- 11 10	Part	-No.	
Туре	straight	22° bend	35° bend	45° bend
ABIROB® A360	980.1023	980.1024	980.1025	980.1026
ABIROB® A500	980.1012	980.1013	980.1014	980.1015

Wear and spare parts are not included in the delivery! Please order separately and according to the application.



ABIROB® A360, ABIROB® A500

Wear parts ABIROB® A360 ABIROB® A500 Ø 28 Gas nozzle (5 pcs.) ØA X1 Ø B **X2** Bottle form "FLUSH" 68 mm Ø 12 145.0599 Ø 12 Bottle form "RECESS" (- 2 mm) Ø 12 70 mm 145.0600 Ø 12 Bottle form "STICK OUT" (+ 3 mm) Ø 12 65 mm 145.0601 Ø 12 Conical "FLUSH" Ø 13 Ø 13 75 mm 145.0589 Conical "RECESS" (- 2 mm) Ø 13 Ø 13 77 mm 145.0590 Conical "STICK OUT" (+ 3 mm) Ø 13 Ø 13 72 mm 145.0591 Conical "FLUSH" Ø 14 145.0595 Ø 14 68 mm Conical "RECESS" (- 2 mm) Ø 14 70 mm 145.0596 Ø 14 Conical "STICK OUT" (+ 3 mm) Ø 14 65 mm 145.0597 Ø 14 Bottle form "FLUSH" Ø 14 Ø 14 75 mm 145.0586 Bottle form "RECESS" (- 2 mm) Ø 14 Ø 14 77 mm 145.0587 Bottle form "STICK OUT" (+ 3 mm) Ø 14 145.0588 Ø 14 72 mm Conical "FLUSH" Ø 16 68 mm 145.0592 Ø 16 75 mm 145.0580 Conical "RECESS" (- 2 mm) Ø 16 70 mm 145.0593 Ø 16 77 mm 145.0581 Conical "STICK OUT" (+ 3 mm) Ø 16 72 mm 145.0582 Ø 16 65 mm 145.0594 Bottle form "FLUSH" Ø 16 Ø 16 75 mm 145.0583 Bottle form "RECESS" (- 2 mm) 145.0584 Ø 16 Ø 16 77 mm Bottle form "STICK OUT" (+ 3 mm) 145.0585 Ø 16 Ø 16 72 mm 28 mm 30 mm 30 mm 28 mm Ø8 Ø10 Ø10 Contact tip (10 pcs.) **M6 M8 M6 M8** CuCrZr Ø 0.8 147.0054 147.0117 147.0054 147.0117 Ø 0.9 147.0217 silver plated 147.0172 147.0217 147.0172 Ø 1.0 147.0245 147.0316 147.0245 147.0316 Ø 1.2 147.0382 147.0445 147.0382 147.0445 Ø 1.4 147.0519 147.0536 147.0519 147.0536 Ø 1.6 147.0590 147.0590 70.0 mm 63.4 mm M6 / M8 (M6 / M8 Contact tip holder (5 pcs. **M6** 142.0160 142.0159 **M8** 142.0163 142.0158 **Neck liner** for Steel Ø 0.8-1.2 149.0033 149.0033 Ø 1.4-1.6 149.0034 149.0034 for Al Ø 0.8-1.0 149.0035 149.0035

149.0036

Ø 1.2-1.6

149.0036

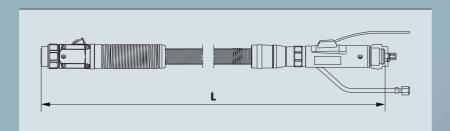
MIG/MAG Welding Torches "ABIROB®"

air-cooled

Cable assemblies and accessories

Cable assemblies cpl.							
Length	L=1.15 m	L=1.25 m	L=1.35 m	L=1.65 m	L=2.15 m	L=2.65 m	L=3.15 m
Part-No.	785.6002	785.6007	785.6003	785.6004	785.6005	785.6006	785.6001

^{*} The control cable is not pre-wired on the machine end. Implementing the function "wire inching" is made with a 10-pole control cable. Power source specific types of connections on request.



Example:

Overall length L=3.15 m, with 3.00 m ABIROB® cable assembly



Liner /	Spiral liner	up to L=2.15 m	up to L=3.15 m
Liner	Ø 0.8-1.2	124.0135	124.0105
BSLpink*			
Liner	Ø 1.4–1.6	124.0136	124.0108
BSLblue*			
PA-	Ø 0.8-1.2	128.0039	128.0012
liner**	Ø 1 4-1 6	128 0040	128 0020

- * Monocoil BSLpink and BSLblue (insulated) for the use of non-alloyed and low-alloyed steels as well as for stainless steels.

 A completely insulated wire feed prevents damage caused by "micro-arcing" on the wire. This allows optimal current transfer inside the contact tip improving the welding process. The insulated steel liner must be used for power sources with optional welding wire sensors.
- **PA-Liner for the use of aluminium and special wire types. Good feed ability properties and scratch resistance on the weld wire.

 Application temperature limit 150° C.

Mounting arm for robot mounting CAT2



Segment holder***



Pre-defined angle Fixed in 15°-steps



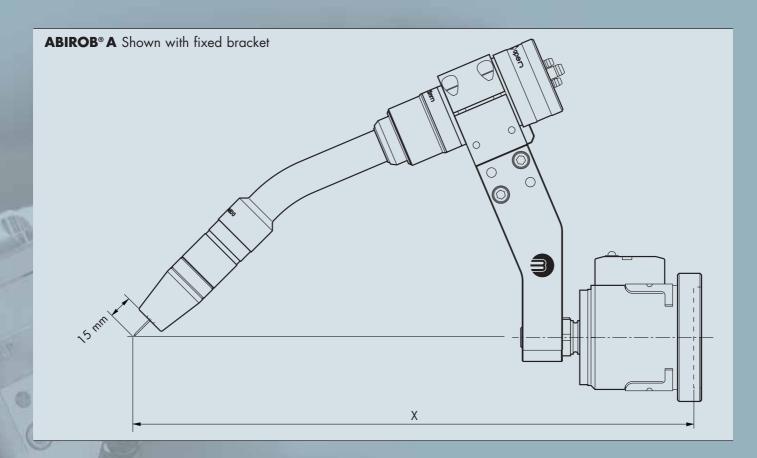
Fixed defined TCP

*** Order-No.: look on index / page 7

Adjustable TCP definition

ABIROB® A360, ABIROB® A500

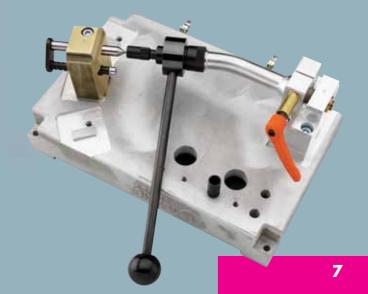
Dimension sketch and alignment jigs



Mounting					
type	Torch	Torch geometrie	X	Y	Part-No.
Clamp-holder	ABIROB® A360 / A500	22°	366	0	780.0259
	ABIROB® A360 / A500	35°	351	0	780.0259
	ABIROB® A360 / A500	45°	338	0	780.0259
Segment holder	ABIROB® A360 / A500	22°	variable in	15°-steps	780.0184
	ABIROB® A360 / A500	35°	variable in	15°-steps	780.0184
	ABIROB® A360 / A500	45°	variable in	15°-steps	780.0184
Fixed bracket	ABIROB® A360 / A500	22°	350	0	780.0268
	ABIROB® A360 / A500	35°	350	0	780.0272
	ABIROB® A360 / A500	45°	350	0	780.0270
OII 1:					

Other mountings on request.

Alignment jig for torch type	for torch geometrie	Part-No.
ABIROB® A360 / A500	0° / 22° / 45°	837.0500
ABIROB® A360 / A500	35°	837.0514



MIG/MAG Welding Torch System "VTS-Interlock"

liquid-cooled

"Ease of servicing, stable, flexible ..."

VTS-Interlock – the welding torch system from ABICOR BINZEL for universal, heavy-duty MIG/MAG-Welding – enables a simple and flexible welding torch with different overall sizes and geometries – for changing welding jobs. Standardized interfaces – identical on all VTS modules – guarantee an optimum interchange ability as well as a repeatable TCP installation at the robot or at another welding device.

Reproducible torch position thanks to the "tongue and groove" interlock connection, easy-change torch neck and long-life cable assemblies which are quick to exchange, gives ease of maintenance when servicing the system.

- Flexible adaptation on changing welding jobs
- Standardised interface interlock connection
- Reproducible torch position
- Liquid cooled up to 550 A
- Well proven and 100 % reliable



ROBO VTS 290

Technical data (EN 60 974-7):

Rating: 290 A Mixed gases

M21 (EN 439)

Duty cycle: 100 % Wire size: 0.8–1.2 mm



VTS cable assembly

ROBO VTS 500TS

Technical Data (EN 60 974-7):

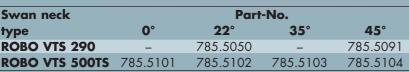
Rating: 500 A Mixed gases

M21 (EN 439)

Duty cycle: 100 %
Wire size: 0.8–1.6 mm



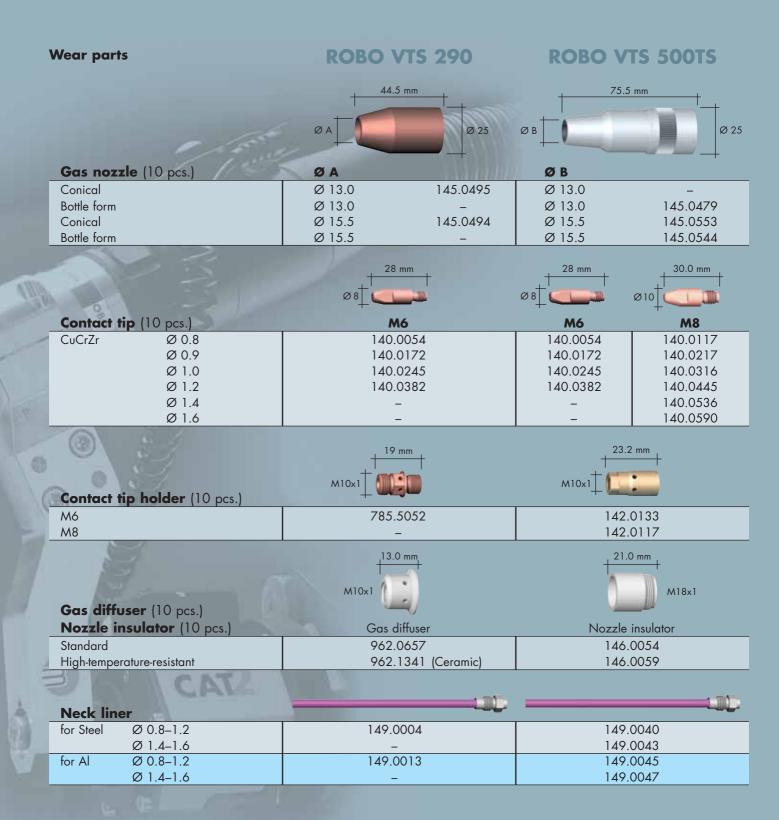
"Reproducible Interface" Interlock connection



Wear and spare parts are not included in the delivery! Please order separately and according to the application.



ROBO VTS 290, ROBO VTS 500TS



MIG/MAG Welding Torch System "VTS-Interlock"

liquid-cooled

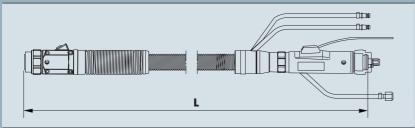
Cable assemblies and accessories

Cable assemblies cpl.				
The second secon	1 1 1 7	1 1 0 5	1 1 0 5	1

Length	L=1.15 m	L=1.25 m	L=1.35 m	L=1.65 m	L=2.15 m	L=2.65 m	L=3.15 m
Part-No.	785.6502	785.6507	785.6503	785.6504	785.6505	785.6506	<i>7</i> 85.6501

^{*} The control cable is not pre-wired on the machine end. Implementing the function "wire inching" is made with a 10-pole control cable. Power source specific types of connections on request.

Dimension "L"



Example:

Overall length L=3.15 m, with 3.00 m VTS cable assembly



Liner /	Spiral liner	up to L=2.15 m	up to L=3.15 m
Liner	Ø 0.8-1.2	124.0135	124.0105
BSLpink*			
Liner	Ø 1.4–1.6	124.0136	124.0108
BSLblue*			
PA-	Ø 0.8–1.2	128.0039	128.0012
liner**	Ø 1 4-1 6	128 0040	128 0020

- * Monocoil BSLpink and BSLblue (insulated) for the use of non-alloyed and low-alloyed steels as well as for stainless steels.

 A completely insulated wire feed prevents damage caused by "micro-arcing" on the wire. This allows optimal current transfer inside the contact tip improving the welding process. The insulated steel liner must be used for power sources with optional welding wire sensors.
- **PA-Liner for the use of aluminium and special wire types. Good feed ability properties and scratch resistance on the weld wire.

 Application temperature limit 150° C.

Connector for robot mounting CAT2



Clamp-holder**

Segment holder**



Pre-defined angle Fixed in 15°-steps



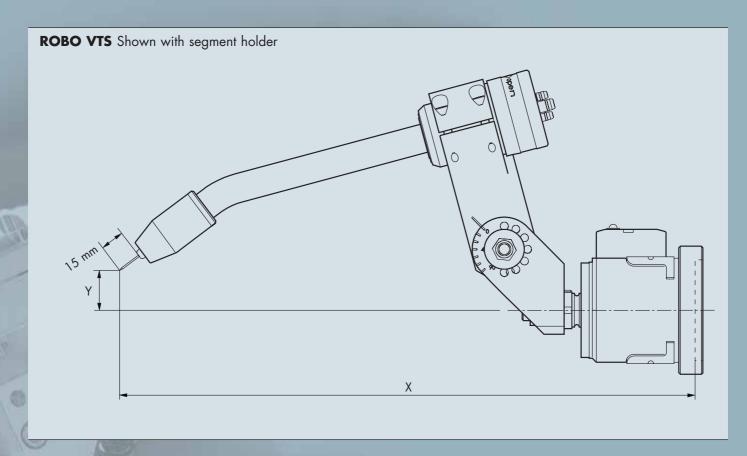
Fixed defined TCP

*** Order-No.: look on index / page 11

Adjustable TCP definition

ROBO VTS 290, ROBO VTS 500TS

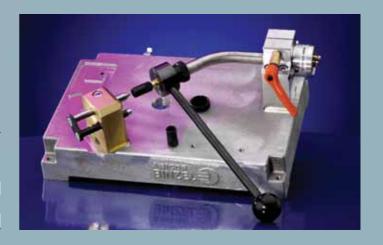
Dimension sketch and alignment jigs



Mounting					
type	Torch	Torch geometrie	X	Y	Part-No.
Clamp-holder	VTS 290	22°	354	0	780.0259
	VTS 290	45°	332	0	780.0259
	VTS 500TS	22°	354	0	780.0259
100	VTS 500TS	45°	326	0	780.0259
Segment holder	VTS 290	22°	variable in	15°-steps	780.0184
	VTS 290	45°	variable in	15°-steps	780.0184
	VTS 500TS	22°	variable in	15°-steps	780.0184
	VTS 500TS	45°	variable in	15°-steps	780.0184
Fixed bracket	VTS 500TS	22°	350	0	780.0278
400	VTS 500TS	45°	350	0	780.0282

Other mountings on request.

Alingment jig for torch type	for torch geometrie	Part-No.
ROBO VTS 290	0° / 45°	837.0452
ROBO VTS 500TS	0° / 22° /45°	837.0464
ROBO VTS 500TS	35°	837.0466



MIG/MAG Welding Torch System "WH and WH-PP" liquid-cooled

"Quick adaptation to changing welding tasks ..."

The ABICOR BINZEL neck change torch system makes it possible to replace the complete torch neck by an identical type as well by special geometries for different welding positions in next to no time.

The replacement of contact tip and gas nozzle as well as the monitoring of the TCP also take place outside the welding cell, thus increasing the availability of the system and reducing downtimes.

- Flexible and mobile adaption on changing welding jobs
- Also available as a Push Pull System
- Liquid cooled up to 550 A
- Well proven and 100 % reliable



Quick change body WH









Quick change body WH-PP

... fully automatic toch neck change see page 26

Swan neck		Part-No.	
Туре	0 °	22 °	45°
ROBO WH 242 D	962.1314	962.1315	962.1316
ROBO WH 455 D	962.0767	962.0768	962.0769
ROBO WH 652 D TS	962.1353	962.1365	962.1366

Wear and spare parts are not included in the delivery! Please order separately according to the application.

ROBO WH 242 D

Technical data (EN 60 974-7):

Rating: 320 A CO₂

280 A Mixed gases

M21 (EN 439)

Duty cycle: 100 % Wire size: 0.8–1.2 mm

ROBO WH 455 D

Technical data (EN 60 974-7):

Rating: 450 A CO₂

400 A Mixed gases

M21 (EN 439)

Duty cycle: 100 % Wire size: 0.8–1.6 mm

ROBO WH 652 D TS

Technical data (EN 60 974-7):

Rating: 550 A CO₂

500 A Mixed gases

M21 (EN 439)

Duty cycle: 100 % Wire size: 1.0–1.6 mm

ROBO WH 242 D, ROBO WH 455 D, ROBO WH 652 D TS

Wear parts ROBO WH 242 D ROBO WH 455 D ROBO WH 652 D TS 62.0 mm Ø21 ØB Ø 25 Ø C Ø30 Gas nozzle (10 pcs.) ØC Conical Ø 15.5 145.0090 Ø 15.5 145.0089 Ø 18.0 145.0574 Conical Ø 13.0 145.0135 Ø 13.0 145.0134 Ø 21.5 145.0575 28.0 mm 28.0 mm 30.0 mm 35.0 mm Ø8 Ø 12 Contact tip (10 pcs.) **M6 M6 M8** M10 CuCrZr 140.0054 140.0054 140.0117 Ø 0.8 Ø 0.9 140.0172 140.0172 140.0217 Ø 1.0 140.0245 140.0245 140.0316 140.0348 Ø 1.2 140.0382 140.0382 140.0445 140.0481 Ø 1.4 140.0536 140.0547 Ø 1.6 140.0590 140.0616 14.5 mm 23.5 mm $28.0 \ \text{mm}$ M12x1 Bi 8/24 Contact tip holder (10 pcs.) 142.0149 142.0123 M8 142.0122 M10 142.0145 27.0 mm 21.0 mm 16.0 mm M16x1 M18x1 M22x1 Nozzle insulator (10 pcs.) 146.0066 146.0054 146.0056 146.0059 High-temperature-resistant 146.0069 (Ceramic) **Neck liner** for Steel 149.0073 149.0072 Ø 0.8-0.9 0° / 22° Ø 1.0-1.2 149.0077 149.0076 149.0080 Ø 1.4-1.6 149.0081 149.0083 for Steel Ø 0.8-0.9 149.0075 149.0074 45° Ø 1.0-1.2 149.0079 149.0078 149.0080 149.0083 Ø 1.4-1.6 149.0082 for Al 149.0085 Ø 0.8-1.0 149.0084 149.0088 0° / 22° 149.0090 Ø 1.2-1.6 149.0089 149.0093 149.0086 Ø 0.8-1.0 149.0087 149.0088 for Al 45° Ø 1.2-1.6 149.0092 149.0091 149.0093

MIG/MAG Welding Torch System "WH and WH-PP" liquid-cooled

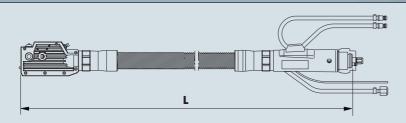
Cable assembly

Cable assembly "WH" cpl.								
Length	L=1.05 m	L=1.15 m	L=1.25 m	L=1.45 m	L=1.65 m	L=2.15 m	L=2.65 m	L=3.15 m
Part-no.	965.2001	965.2002	965.2003	965.2004	965.2005	965.2006	965.2007	965.2008

Cable assembly "WH-PP" cpl. (gear ratio i=17,1:1 / Motor 42 V DC*)							
Length	L=1.10 m	L=1.50 m	L=1.70 m	L=2.20 m	L=2.70 m	L=3.20 m	
Part-no.	965.4014	965.4015	965.4016	965.4001	965.4002	965.4003	

^{*} The control cable is not pre-wired on the machine end. Implementing the function "wire inching" is made with a 10-pole control cable. Power source specific types of connections and lengths of more than 3,20 m on request.

Dimension "L"



Example:

- Overall length L=3.15 m, with 3.00 m ROBO WH cable assembly
- Overall length L=3.20 m, with 3.00 m ROBO WHPP cable assembly



Liner /	Spiral Liner	up to L=2.15 m	up to L=3.20 m
Liner	Ø 0.8-1.2	124.0135	124.0105
BSLpink*			
Liner	Ø 1.4–1.6	124.0136	124.0108
BSLblue*	•		
PA-	Ø 0.8–1.2	128.0039	128.0012
Liner**	Ø 1.4–1.6	128.0040	128.0020

- * Monocoil BSLpink and BSLblue (insulated) for the use of non-alloyed and low-alloyed steels as well as for stainless steels.

 A completely insulated wire feed prevents damage caused by "micro-arcing" on the wire. This allows optimal current transfer inside the contact tip improving the welding process. The insulated steel liner must be used for power sources with optional welding wire sensors.
- **PA-Liner for the use of aluminium and special wire types. Good feed ability properties and scratch resistance on the weld wire.

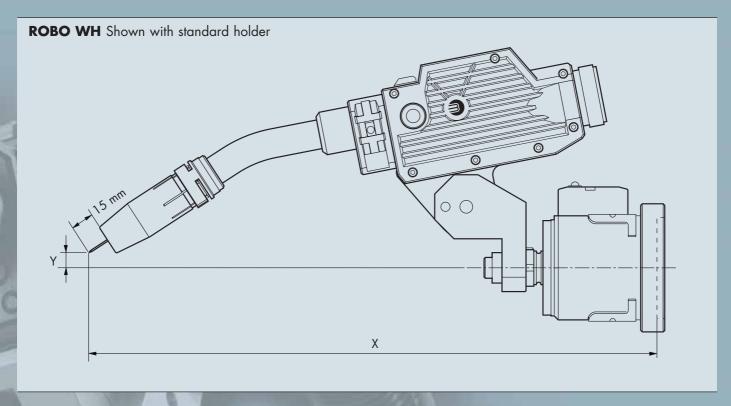
 Application temperature limit 150° C.

Drive Roll

for WH-PP	Al (U-Nut)	Universal (V-Nut)
Ø 0.8	961.001 <i>7</i>	961.0269
Ø 0.9	961.0056	961.0270
Ø 1.0	961.0018	961.0227
Ø 1.2	961.0019	961.0228
Ø 1.4	-	961.0279
Ø 1.6	961.0020	961.0267

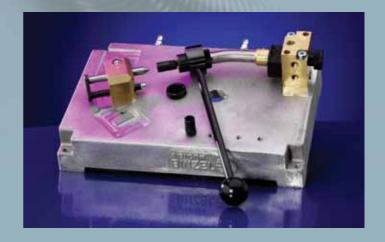
ROBO WH 242 D, ROBO WH 455 D, ROBO WH 652 D

Dimension Sketch and alignment jigs



Mounting		19/9	\		
type	Torch	Torch geometrie	X	Y	Part-No.
WH standard	WH 242 D	22°	354	0	960.0026
adjustable	WH 242 D	45°	349	0	960.0026
	WH 455 D	22°	354	0	960.0026
	WH 455 D	45°	349	0	960.0026
	WH 652 D TS	22°	410	0	960.0026
	WH 652 D TS	45°	382	0	960.0026
Segment holder	WH 242 D	22°	variable in	15°-steps	780.0146
WH	WH 242 D	45°	variable in	15°-steps	780.0146
	WH 455 D	22°	variable in	15°-steps	780.0146
	WH 455 D	45°	variable in	15°-steps	780.0146
	WH 652 D TS	22°	variable in		780.0146
- 0	WH 652 D TS	45°	variable in	15°-steps	780.0146

Alignment jig for torch type	for torch geometrie	Part-No.
ROBO WH 242 D	0°/22°/45°	837.0020
ROBO WH 455 D	0°/22°/45°	837.0020
ROBO WH 652 D	0°/22°/45°	837.0099



TIG Welding Torch System "ABITIG® WH"

liquid-cooled

"Quick, safe and failure-free ..."

The ABITIG® WH-Welding-Torch-System from ABICOR BINZEL for TIG soldering and TIG welding offers a high process stability for joining various materials.

Preset tungsten electrodes, reproducible torch changes and maintenance service outside the robot cell guarantees constant high quality and continuous operation of the system.

With two sizes and different geometries, the TIG welding torch system ABITIG WH covers nearly all applications in the field of automated TIG welding and is suitable for welding even the most complicated parts. Also available as Push- or Push-Pull-Option with cold wire feeding.

- Flexible adaption on changing welding jobs
- Adjustable tungsten electrodes
- Reproducible torch position
- Cold wire feeding optional
- Liquid cooled up to 550 A
- Well proven and 100 % reliable





... fully automatic toch neck change see page 26



ABITIG® WH 400 W

Technical data (EN 60 974-7):

Rating: 220 A DC

160 A AC

Duty cycle:

100 %

Wire size: 1.0–3.2 mm

ABITIG® WH 400 W

Technical data (EN 60 974-7):

Rating:

400 A DC 280 A AC

y cycle: 100 %

Duty cycle: Wire size:

1.6-4.8 mm

 Swan neck
 Part-No.

 Type
 0°
 45°
 70°
 90°

 ABITIG® WH 220 W
 −
 −
 781.1001
 −

 ABITIG® WH 400 W
 781.0504
 781.0507
 781.0501
 781.0510

Wear and spare parts are not included in the delivery! Please order separately according to the application.

ABITIG® WH 220 W, ABITIG® WH 400 W



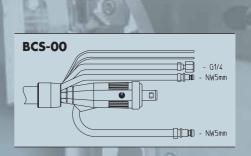
TIG Welding Torch System "ABITIG® WH"

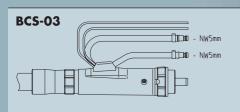
liquid-cooled

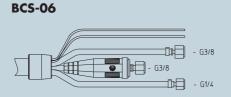
Cable assemblies and options

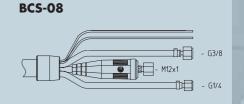
Cable assemblies c	pl.	Part-No.	
version	L=4.00 m*	L=6.00 m*	L=8.00 m*
BCS-00 Standard	781.0526	781.0527	<i>7</i> 81.0528
BCS-03	781.0517	781.0518	<i>7</i> 81.0519
BCS-06	781.0523	781.0524	<i>7</i> 81.0525
BCS-08	781.0520	781.0521	781.0522

^{*}Other versions on request.









Options



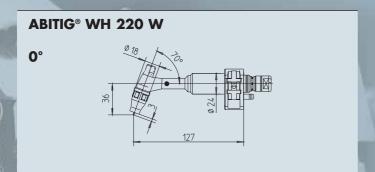
Cold wire feeding		
Description	Version / Specification	Part-No.
Cold wire feeding cpl.	incl. guide tube and -nozzle	967.0320
Guide tube	ABITIG® WH 220 W 70	967.0327
Guide tube	ABITIG® WH 400 W 0	967.0326
Guide tube	ABITIG® WH 400 W 45	967.0328
Guide tube	ABITIG® WH 400 W 70	967.0325
Guide tube	ABITIG® WH 400 W 90	967.0325
Guide nozzle	for wire size 0.6	967.0335
Guide nozzle	for wire size 0.8	967.0329
Guide nozzle	for wire size 1.0	967.0330
Guide nozzle	for wire size 1.2	967.0331
Guide nozzle	for wire size 1.6	967.0332
Wire conduit cpl.	4.00 m length	781.0514
Wire conduit cpl.	6.00 m length	781.0515
Wire conduit cpl.	8.00 m length	781.0516

wire condon cpi.	0.00 iii leligiii	701.0313
Wire conduit cpl.	8.00 m length	781.0516
Push-Pull Option		10.0
Description	Version / Specification	Part-No.
Push-Pull Option	$i=34.3:1$ for $\Delta V = 0.2-5.0$ m/min	963.0253
cpl. with ENCODER-Motor	incl. Drive rolls	
Drive roll	for wire size 0.6	961.0268
Drive roll	for wire size 0.8	961.0269
Drive roll	for wire size 1.0	961.0227
Drive roll	for wire size 1.2	961.0228
Drive roll	for wire size 1.6	961.0267
Ignition aid		
Description	Version / Specification	Part-No.
Ignition aid cpl.	ABITIG® WH 220 W	967.0102
lanition aid cpl.	ABITIG® WH 400 W	967.0101

igillion did cpi.	Abilio VVII 400 VV	707.0101
Bracket		
Description	Version / Specification	Part-No.
Bracket	Connector for CAT2	963.0007

ABITIG® WH 220 W, ABITIG® WH 400 W

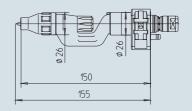
Dimension sketches and alignment jigs



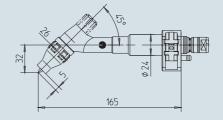


ABITIG® WH 400 W

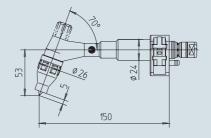
0°



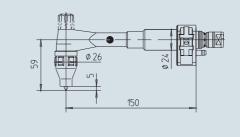
45°



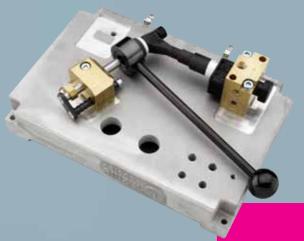
70°



90°



Alignment jig for torch type	for torch geometrie	Part-No.
ABITIG® WH 220 W	70°	837.0442
ABITIG® WH 400 W	0° / 70°	837.0440
ABITIG® WH 400 W	45° / 90°	837.0441



Robot mount "CAT2" - for safer welding

"To stop collisions quickly ..."

Faster robots, increasing dynamics, and thinner metals with complex outlines can lead to a collision of the torch to the workpiece. The **CAT2** robot mount protects against collisions with optimized resetting accuracy. Safety switch sensitivity can be user adjusted.

The wide range of accessories gives the **CAT2** a multitude of mounts and extensions for realising the desired TCP.

- Variable deflection in every position.
- Instantaneous stop in case of collision.
- Precise repeatability minimizes downtime.
- Precise switch points by innovative switching-time response.
- Perfect for ultrahigh accuracy, light gauge sheet metal operations.
- Easy to service by visual multi-functional display for a quick error analysis.
 - Covered screws for quick service.
- Adaptable to all robot types and handling systems by adapter flange (plastic or aluminium).



Technical data:

Robot mount "CAT2"

Dimensions: Corner width 75 mm; Across flats 65 mm;

height 87 mm (robot flange > release flange)

Weight: approx. 630 g

approx. 850 g (incl. tool holder and flange)

Release force: please look at the chart

Max. excursion: in X- and Y-plane against each spring

10 - 14°; in Z-plane against each spring

4 - 8 mm

Instantaneous Through Z-axis 0.5° - 1°; Deviation through stop release: X- and Y-direction approx. 1.5°; Deviation

through Z-direction approx. 0.5 - 1 mm

Reapeatibility: < +/- 0.04 mm (at 300 mm stand-off from

robot flange)

Safety switch: 24 V DC, max. 100 mA

Robot mount "CAT2"

Deflection of the CAT2:

- Collision in direction of the X- or Y-axis.
- Rotation around the Z-axis.
- Collision in direction of the Z-axis.

The release torque is defined by the spring types, depending on application and weight of the torch. There are five spring types available - see table.

			/ B = 1
Re	PUCE	force	

Spring- type	Release force X-, Y-axis (N)	Release force Z-axis (N)
S	46	475
M	80	535
L	85	925
II.	130	1325
XL	150	1540





Description	Part-No.
Robot mount CAT2 (S) cpl.	780.2131
Robot mount CAT2 (M) cpl. standard	780.2100
Robot mount CAT2 (L) cpl.	780.2121
Robot mount CAT2 (LL) cpl.	780.2118
Robot mount CAT2 (XL) cpl.	780.2132
Alignment jig cpl.	780.2019



Adapter flange

Description	Plastic type	Aluminium type	
	Part-No.	Part-No.	
ISO 9409-1-A31.5	780.0632	780.0532	
ISO 9409-1-A40	780.0604	780.0504	
ISO 9409-1-A50	780.0603	780.0503	
ISO 9409-1-A63	780.0614	780.0514	
ISO 9409-1-A80	780.0607	780.0507	
ISO 9409-1-A100	780.0649	780.0549	
ISO 9409-1-A125	780.0630	780.0530	

Adapter flanges can be delivered for all common welding robots. Please indicate the type of robot and model of robot.

Attention! Due to insulation reasons always apply plastic adapter flange when using MIG/MAG welding torches of the ABIROB® A product series.

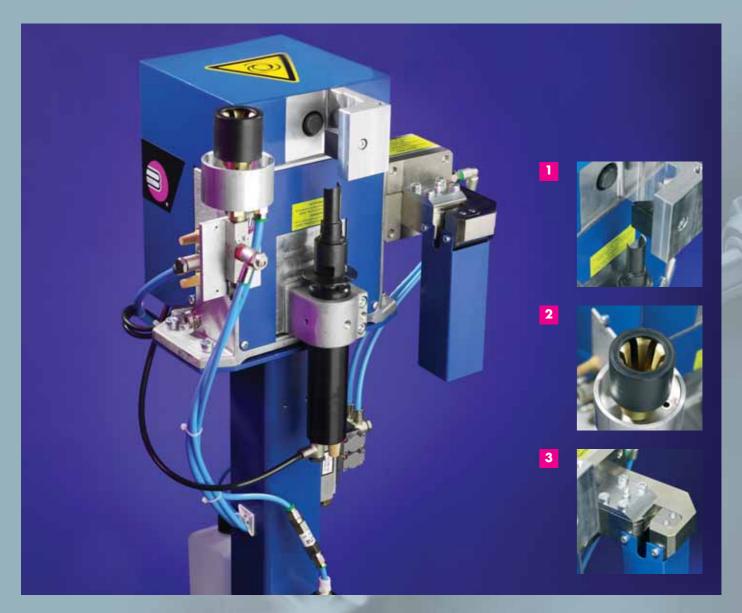


ABIROB® A 360 with Robot mount CAT2

Torch cleaning station "BRS-CC"

"Plug and Play ..."

... the complete solution for reliable automatic servicing of the torch neck. Installed quickly and easily, or "Plug and Play ...", the compact torch cleaning station BRS-CC means top reliability. Combined in a single station, the 3 systems guarantee optimally timed processes and an increase in available plant floor space. A number of other features such as mounting stand and drip pan reduce installation costs.



1. Torch cleaning station

- Precise and effective cleaning for almost all robot welding torches.
- Proven and trusted cutter principle, suitable even for heavy spatter adhesion.
- 3-point clamping of the gas nozzle fixes the torch in place during the cleaning process.

2. Spraying unit "TMS-VI"

- Direct, economical spraying of anti-spatter fluid reduces welding spatter adhesion and extends the servicing intervals.
- Clean environment thanks to encapsulated spraying nozzle and collecting pan for dirty residual oil.

Simple disposal of residual oil and replenishment of the anti-spatter agent by simply exchanging the bottles.

3. Wire cutting fixture "DAV"

- The combined clamping and shearing action guarantees precise cutting quality and ensures optimum arc-start properties as well as exact TCP measurement.
- Long service life thanks to sturdy design.

Torch cleaning station "BRS-CC"

(incl. stand, drip pan and spraying unit)

Description	Part-No.
Torch cleaning station "BRS-CC" with "DAV"	831.0490
Torch cleaning station "BRS-CC" without "DAV"	831.0550

Torch cleaning station "BRS-CC"

Clamping block and reamer

For torch type	with	Outer-Ø /	Length	with	Clamping block	Reamer
7,00	gas nozzle		(mm)	contact tip	Part-No.	Part-No.
ABIROB® A 360	145.0599	22.0 / 12.0	68.0	M6/Ø8	831.0371	831.0604
ABIROB® A 360	145.0600	22.0 / 12.0	70.0	M6/Ø8	831.0371	831.0604
ABIROB® A 360	145.0601	22.0 / 12.0	65.0	M6/Ø8	831.0371	831.0604
ABIROB® A 360	145.0595	22.0 / 14.0	68.0	M6/Ø8	831.0371	831.0575
ABIROB® A 360	145.0596	22.0 / 14.0	70.0	M6/Ø8	831.0371	831.0575
ABIROB® A 360	145.0597	22.0 / 14.0	65.0	M6/Ø8	831.0371	831.0588
ABIROB® A 360	145.0592	22.0 / 16.0	68.0	M6/Ø8	831.0371	831.0487
ABIROB® A 360	145.0593	22.0 / 16.0	70.0	M6/Ø8	831.0371	831.0487
ABIROB® A 360	145.0594	22.0 / 16.0	65.0	M6/Ø8	831.0371	831.0589
ABIROB® A 500	145.0589	28.0 / 13.0	75.0	M6/Ø8	831.0318	831.0180
ABIROB® A 500	145.0590	28.0 / 13.0	77.0	M6 / Ø 8	831.0318	831.0180
ABIROB® A 500	145.0591	28.0 / 13.0	72.0	M6 / Ø 8	831.0318	831.0169
ABIROB® A 500	145.0586	28.0 / 14.0	75.0	M6 / Ø 8	831.0318	831.0592
ABIROB® A 500	145.0587	28.0 / 14.0	77.0	M6 / Ø 8	831.0318	831.0592
ABIROB® A 500	145.0588	28.0 / 14.0	72.0	M6 / Ø 8	831.0318	831.0593
ABIROB® A 500	145.0580	28.0 / 16.0	75.0	M8 / Ø 10	831.0318	831.0488
ABIROB® A 500	145.0581	28.0 / 16.0	77.0	M8 / Ø 10	831.0318	831.0488
ABIROB® A 500	145.0582	28.0 / 16.0	72.0	M8 / Ø 10	831.0318	831.0591
ABIROB® A 500	145.0583	28.0 / 16.0	75.0	M8 / Ø 10	831.0318	831.0488
ABIROB® A 500	145.0584	28.0 / 16.0	77.0	M8 / Ø 10	831.0318	831.0488
ABIROB® A 500	145.0585	28.0 / 16.0	72.0	M6/Ø8	831.0318	831.0591
VTS 290	145.0495	25.0 / 13.0	44.5	M6/Ø8	831.0316	831.0169
VTS 290	145.0494	25.0 / 15.5	44.5	M6/Ø8	831.0316	831.0576
VTS 500TS	145.0553	25.0 / 15.5	75.5	M8 / Ø 10	831.0316	831.0485
VTS 500TS	145.0479	25.0 / 13.0	75.5	M8 / Ø 10	831.0316	831.0368
VTS 500TS	145.0544	25.0 / 15.5	75.5	M8 / Ø 10	831.0316	831.0023
WH 242 D	145.0135	21.0 / 13.0	62.0	M6/Ø8	831.0314	831.0564
WH 242 D	145.0090	21.0 / 15.5	62.0	M6/Ø8	831.0314	831.0563
WH 455 D	145.0134	25.0 / 13.0	67.5	M8 / Ø 10	831.0316	831.0413
WH 455 D	145.0089	25.0 / 15.5	67.5	M8 / Ø 10	831.0316	831.0023
WH 652 D TS	145.0574	30.0 / 18.0	77.0	M10 / Ø 12	831.0319	831.0162
WH 652 D TS	145.0575	30.0 / 21.5	77.0	M10 / Ø 12	831.0319	831.0547

Technical data:

General data

Weight: approx. 16 kg
Ambient temperature + 5°C up to + 50°C

Pneumatic connection - manifold block

Compressed air supply outlet: G 1/4
Inside width: min. Ø 6 mm
Nominal pressure: 6 bar
Operating pressure: 6-8 bar

Electrics - terminal block

4 inlets for triggering the 5/2-control valves

Control voltage: 24 V DC Power demand: 4.5 W

1 inductive proximity switch a-contact (pnp)
Operating voltage: 10-30 V DC
Tolerated residual ripple: Vss < 10%
Continuous current: 200 mA max.

Current consumption: approx. 4 mA (24 V)
Voltage drop: approx. 1.2 V (200 mA)

Cleaning station

Pneumatic motor (nominal speed)

with lubricated air: approx. 650 rpm
 with non-lubricated air: approx. 550 rpm
 Air consumption: approx. 380 L/Min.

Injection unit

Capacity of the bottle: 1 litre

Wire cutting station

Cutting rate at 6 bar

- Solid wire: up to 1.6 mm
- Flux-cored wire: up to 3.2 mm
Cutting time: 0.5 sec.

Front injector "ABIROB® TMS-VI"

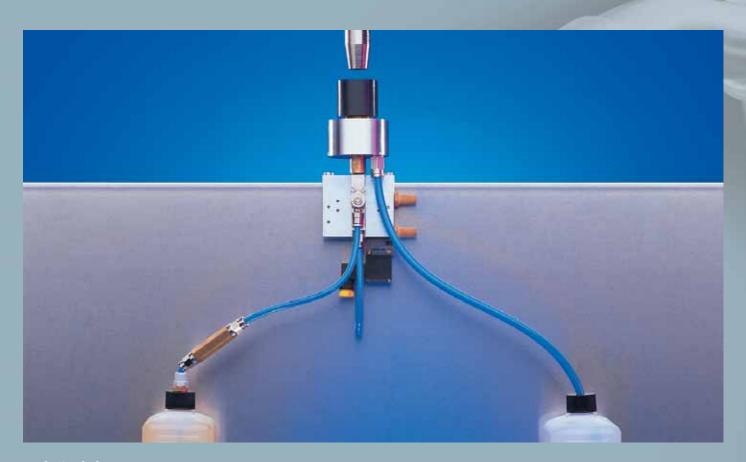
"For the reduction of spatter adhesion ..."

With the **front injector ABIROB® TMS-VI** the cleaned torch is sprayed with anti spatter fluid which minimizes built-up of welding spatter. The specially developed spray nozzle enables a highly efficient application of the anti spatter fluid.

Front injector ABIROB® TMS-VI – this new concept enables a smooth and economical spraying of the anti spatter fluid to the front of the welding torch.

The advantages at a glance:

- Effective and economical anti spatter spray supply to nozzle interior and nozzle edge.
- Covered injector nozzle and extra bottle for used oil improves working safety and ensures environmental friendly use.
- Trouble-free refilling of the anti spatter fluid, simply by swapping the bottle.
- Trouble-free dispose of used oil by swapping the bottle.
- Installation set for a user-friendly installation of the unit.



Technical data:

Pneumatics

Working pressure: 5 – 10 bar Internal dia.: ø 4 mm

5/2 solenoid valve

Air connection: G 1/8"

Nonimal flow: approx. 650 l/min.

Input signal: 24 V DC

I max. ≤ 1.1 A I nom. = 220 mA Front injector TMS-VI

Description	Part-No.
Front injector TMS-VI cpl.	830.1110
Solenoid valve pilot-controlled (NW 10) 24 V DC / 42 V AC	832.0005
Anti-spatter-fluid 1 Litre	192.0056
Anti-spatter-fluid 5 Litre	192.0052
Anti-spatter-fluid 20 Litre	192.0048
Anti-spatter-fluid 200 Litre	192.0046

Wire cutting station "DAV"

"The perfect cut ... "

The wire cutting station DAV in MIG/MAG robotic welding is an essential requirement to guarantee a consistent wire stick-out, and clean end of the wire as well as better capacity of arc-start due to the cutting of the welding ball and oxides formed at the end of the wire.

The ABICOR BINZEL wire cutting station DAV stands for:

- Defined wire length as requirement for the automatic TCP measurement.
- Precise and reliable cutting quality even with hard or thick wires.
- High durability and longevity of the blades.
- Wire clamping function for the wire removal in connection with the ATS-Rotor.



Technical data:

Wire cutting station "DAV"

Working pressure: 6 – 8 bar Air connection: ID 4.0 mm

Cutting range at

6 bar: Solid wire 1.6 mm

Cored wire 3.2 mm

Weight: 2700 g

Extension set

Working pressure: 6 – 8 bar Air connection: G 1/8" Control requirements: 24 V DC

I max. = 1.1 A peak

I ave. = 220 mA cont.

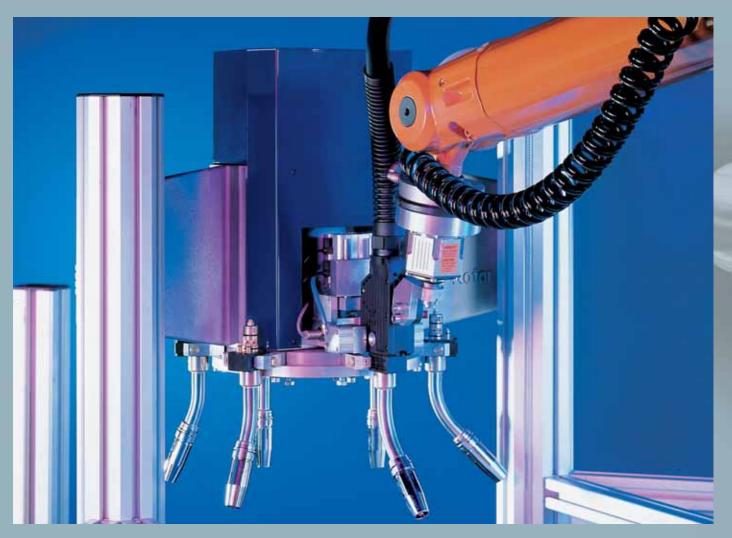
Weight: 265 g

Wire cutting station "DAV"

3	
Description	Part-No.
Wire cutting station "DAV" cpl.	839.0020
Replacement knife	839.0024
Replacement static blade	839.0026
Extension set consisting of: 5/2-way-valve, plug, connectors, pneumatic hose (1 m), silencer	839.0035

"ATS-Rotor" – the intelligent system for the automatic exchange of the WH torch necks (MIG and TIG)

"Work around the clock ..."



Integrated into the robot cell the ATS rotor can be equipped with up to five replacement torch necks. The factory standardized interface enables the application of MIG/MAG- and TIG-neck changes. Depending on the welding application the robot accesses the neck change system cyclically and event-oriented (for example a stuck torch) to exchange a torch neck with a new torch neck.

Only after exchanging all five change necks (in a cyclical exchange) a manual action needs to be done by equipping the ATS rotor with newly serviced necks. Exchanging of the spare and wear parts on the torch necks is performed outside the robot cell, while the production process continues.

This means to the user an enormous potential (up to the fivefold) of the availability of the unit (referring to the maintenance service at the torch neck).

- System for an automatic torch neck changing, unique world wide
- Simple aluminium cast frame with low-maintenance pneumatic cylinder
- Integrated SPS (industry standard) for the connection at the robot control system
- Easy to install and use

Technical data:

Dimensions: 660 mm width,

416 mm height (plus 100 mm lift)
– for more detailed information
please refer to separate data-

sheet

Weight: App. 31 kg
Ambient temp.: 5°- 50°C
Protection class: I (DIN 57 106)

Pneumatic data

Connection: G1/4"
Internal dia: min. Ø 6 mm
Rated pressure: 6 bar
Consumption per 1,5 |

change: **Electrical data**

Operating voltage: 24 V DC Power consumption: 50 W W Max. ripple: Vss<10%

Functioning

The robot controls the ATS-Rotor through the use of 24V digital inputs and outputs.

Each individual change cycle is performed automatically under the control of an integrated PLC.



1 Robot docks WH neck into ATS-Rotor change station.



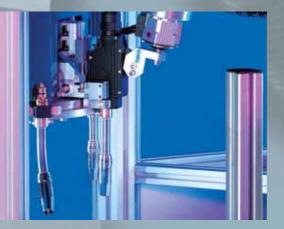
2 Neck release mechanism is engaged and wire is cut inside the torch body.



3 The change neck is taken off by the downward movement of the rotor plate. Quick release valves in the water channels avoid leaking of the coolant.



4 Rotor carousel rotates a replacement neck into position.



5 Replacement neck is locked into position. All supply connectors are automatically made, robot moves out of change station and continues.

AIS-KOTOR	
Description	Part-No.
ATS-Rotor with SPS	840.3300
ATS-Rotor without SPS	840.3400

Welding accessories

To achieve the best results ...

... one of the things which will help you to achieve the best results in the welding process is to use professional accessories. When ideally tailored to the task, they provide the basis for operational safety and long service life. High-quality welding accessories increase the output and reliability of your torch. To achieve optimum results, don't leave anything to chance. Rely on original welding accessories from ABICOR BINZEL.





2 Gas flow meter Part-No.: 191.0003

3 Wire cleaning set red for steel Part-No.: 193.0001 white for Al Part-No.: 193.0002

Wire cleaning felt red for steel (25 pcs.) Part-No.: 193.0003 white for Al (25 pcs.) Part-No.: 193.0004

Clamp

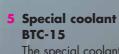
Part-No.: 193.0007



1 Anti spatter

fluid, silicon free,

protect for spatter



from BINZEL protect down to minus 10°C for all liquid welding and cutting facilities. Part-No.:

5 litre 192.0110 20 litre 192.0111 200 litre 192.0112



Spigot

Part-No.: 192.0109 for 200 litre barrel



Part-No.: 191.0001 10 Multiple spanner

11 Universal spanner Part-No.: 750.0125

12 Electrode spanner Part-No.: 743.0064





collet core liner Part-No.: 191.0064

Sharpener for

Part-No.: 191.0062



9 Spanner w./o. fig.

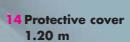
Part-No.: 191.0015





13 Cable assembly support

Part-No.: 191.0039



 $\emptyset = 40.0 \text{ mm with}$ Velcro fastening Part-No.: 191.0040



 $\emptyset = 45.0 \text{ mm with}$ Velcro fastening and leather strap)

Part-No.: 191.0079



Coolant recirculator WK 23 / WK 43



Technical data:

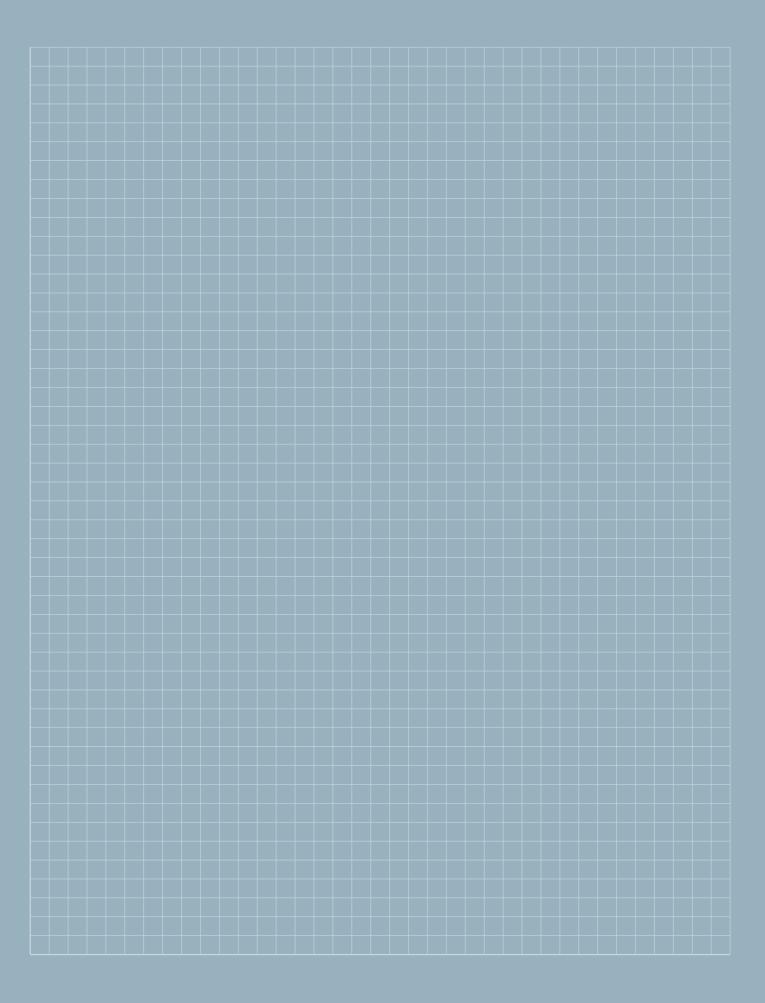
Туре	WK 23	WK 43
Heat exchanger:	2 lines	4 lines
Immersion pump 50 Hz	Delivery height: Hmax. 32 m	Delivery height: Hmax. 32 m
(protection class IP 54)	Delivery height at G3/8" connector:	Delivery height at G3/8" connector:
	Qmax. 13.5 litres per min.	Qmax. 13.5 litres per min.
Immersion pump 60 Hz	Delivery height: Hmax. 32 m	Delivery height: Hmax. 32 m
(protection class IP 54)	Delivery height at G3/8" connector:	Delivery height at G3/8" connector:
	Qmax. 16.0 litres per min.	Qmax. 16.0 litres per min.
Cooling capacity (RT = 22° C)	ca.1000 W at 1 litre per min.	ca.1300 W at 1 litre per min.
Dimensions (LxBxH)	253x270x460 mm	253x270x516 mm
Weight:	1 <i>7</i> kg	18 kg
Tank capacity:	7 litres	7 litres

Туре	Line Voltage	Frequency	Power rating	Current consumption	Part-No.
WK 23	115 V	50 Hz	0.35 kW	6.5 A	850.0214
WK 23	115 V	60 Hz	0.35 kW	6.5 A	850.0135
WK 23	230 V	50 Hz	0.35 kW	3.1 A	850.0137
WK 23	230 V	60 Hz	0.35 kW	3.1 A	850.0210
WK 23	240/415 V	50 Hz	0.50 kW	2.6/1.6 A	850.0144
WK 43	115 V	50 Hz	0.35 kW	6.5 A	850.0215
WK 43	115 V	60 Hz	0.35 kW	6.5 A	850.0156
WK 43	230 V	50 Hz	0.35 kW	3.1 A	850.0159
WK 43	230 V	60 Hz	0.35 kW	3.1 A	850.0211
WK 43	240/415 V	50 Hz	0.50 kW	2.6 A/1.6 A	850.0165

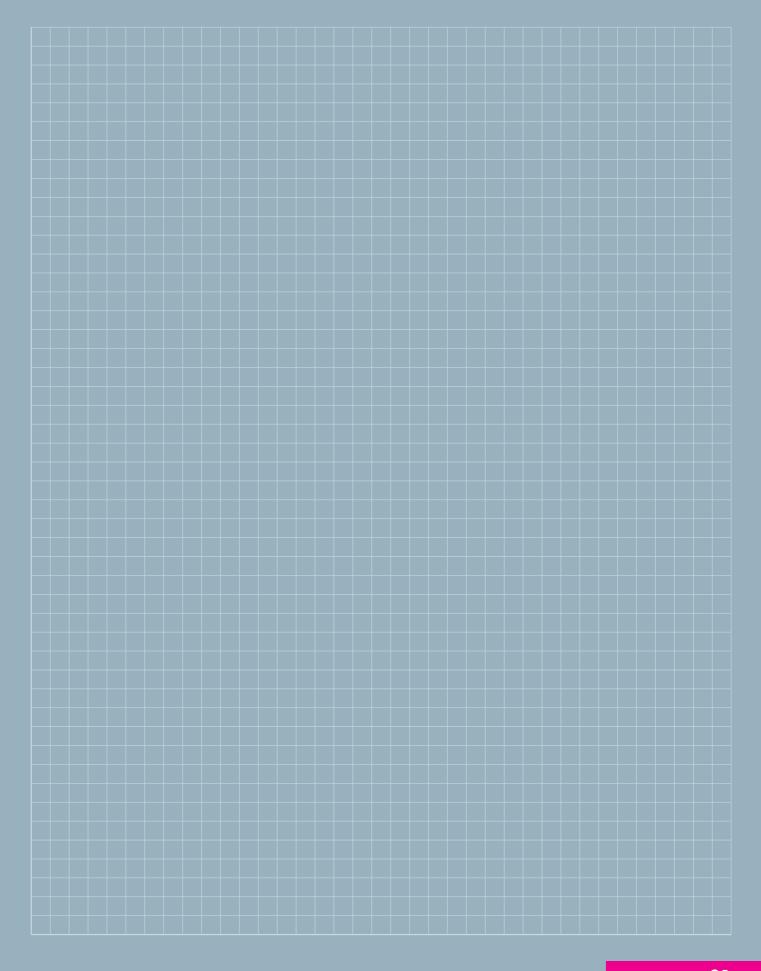
Operating instructions

As coolant for all liquid-cooled torch systems, we recommend the special BINZEL coolant BTC-15, which remains liquid down to -10°C. Must be used in conjunction with an adequate motor protection device. A water flow cut-off switch (850.0033) is recommended.

Notes



Notes





Our product range:

■ MIG/MAG

- Welding Torches
- Automatic and Special Torches
- Push-Pull Welding Torches
- Fume Extraction Torches
- Central Adaptor System

TIG

- Welding Torches
- Automatic and Special Torches

PLASMA

- Cutting Torches
- Welding Torches
- Automatic and Special Torches

■ Robotic Peripheral Equipment

- Robot Torches
 MIG/TIG/Plasma
- Robot Mount CAT2
- Torch Change System ATS-Rotor
- Tool Change System WWS
- Wire Cutting Station DAV
- Torch Cleaning Station BRS-LC and BRS-FP
- Wire Feeding Station APD-MF

■ Welding Accessories

- Cooling Device
- Welding Cable Plug and Socket
- Anti Spatter Spray and Paste and so on ...

Welding & cutting brought to the point.



Alexander Binzel Schweisstechnik GmbH & Co. KG P.O. Box 10 01 53 \cdot D-35331 Gießen Phone:++49 (0) 64 08 / 59-0

Fax: ++49 (0) 64 08 / 59-191 Internet: www.binzel-abicor.com

