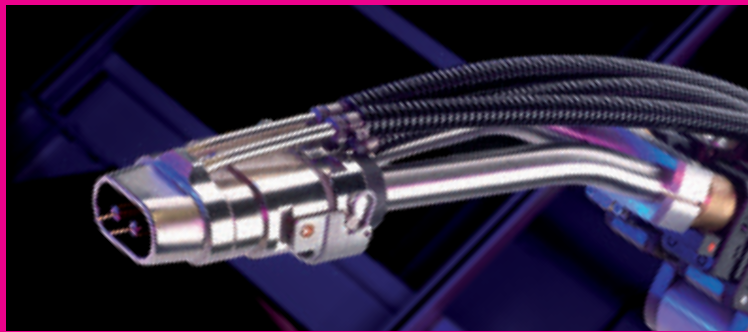


## Welding torch system: WH Tandem W800



### WH Tandem W800 liquid cooled

High performance tandem welding by ABICOR BINZEL with two separate potentials. Harmonized with the technology of well known power source manufacturers the new WH Tandem W800 offers highest reliability in many welding applications. A compact design and a high wire melting rate increases the welding speed and hence productivity.

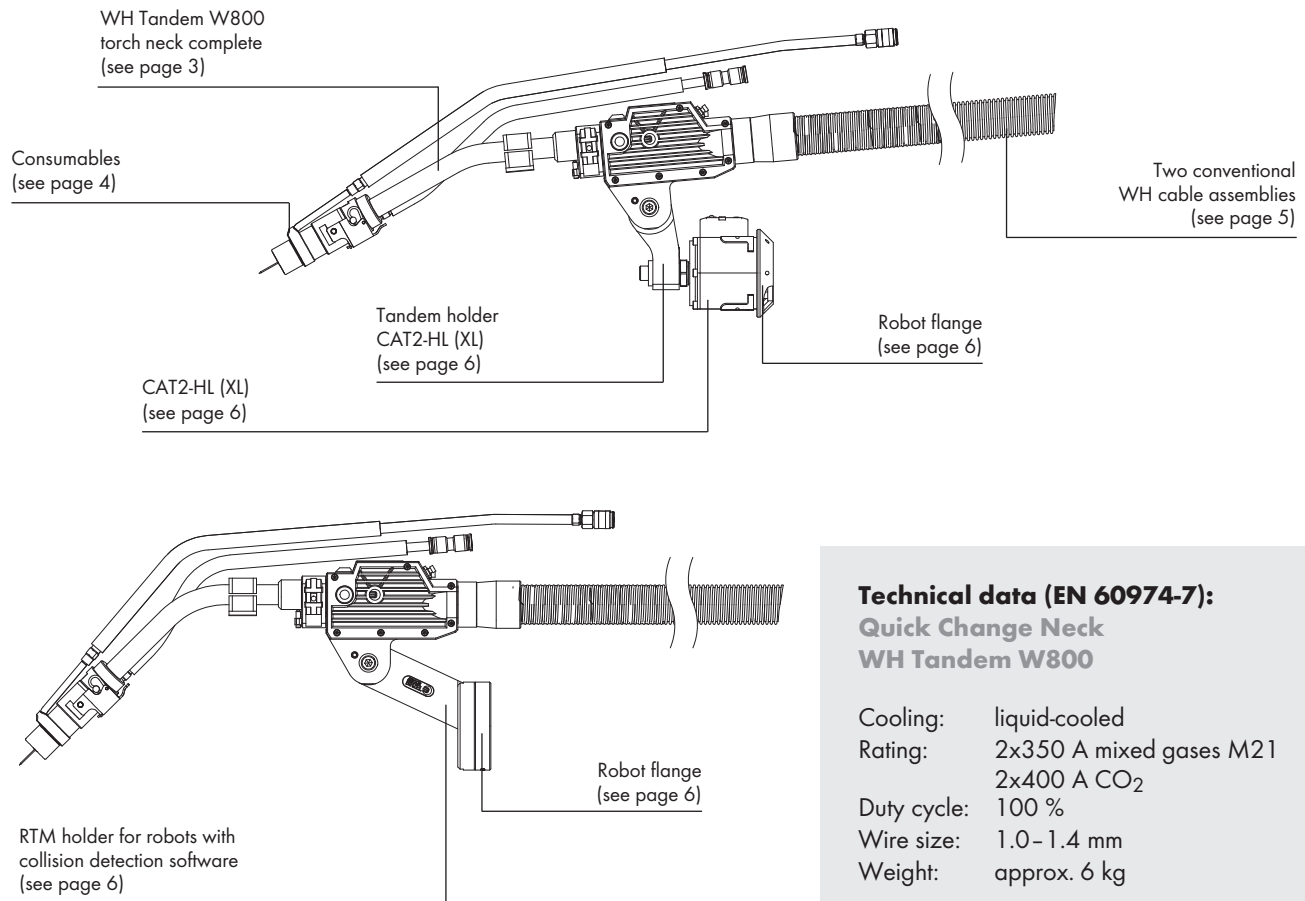
Due to the high demands on the tandem application we recommend a detailed consultation with the respective system partner.

### The Features:

- Fast maintenance due to quick neck-change function of BINZEL WH-System.
- Standard WH cable assemblies are used.
- Wide range of torch geometries and wire spacing related to power-source technology and application.
- Three individual cooling circuits for best cooling performance.



## System overview WH Tandem W800



### Technical data (EN 60974-7): Quick Change Neck WH Tandem W800

Cooling:	liquid-cooled
Rating:	2x350 A mixed gases M21 2x400 A CO <sub>2</sub>
Duty cycle:	100 %
Wire size:	1.0–1.4 mm
Weight:	approx. 6 kg

### Order configuration:

For one complete set "ready-for-welding" please order the following components:

#### 1. WH Tandem W800 torch neck complete – page 3

Related to the application and power source brand the right torch neck needs to be specified. Important is the space between the wires and the stick-out and the total dimension (see page 7). Please get in touch with your BINZEL contact for the latest list of approved Tandem power sources.

**Note:** The torch necks listed on page 3 are fully equipped with spare parts and consumables for 1,2mm wire. Additionally we recommend ordering one complete tandem torch as spare for the first order. With a spare neck system downtime due to the servicing of the neck can be reduced to a minimum. Before using the torch neck it is advisable to check it with an alignment jig.

#### 2. Consumables – page 4

Make sure to order enough consumables for the first arc-starts and welding trials.

#### 3. Cable assembly – page 5

Choose the right cable assembly considering length and power connector. Two cable assemblies are required plus one "hose set" each for gas nozzle cooling (pos. 6) and air blast (pos. 7). The cable assemblies are equipped with liner for 1,2 mm steel wire.

For best welding performance three separate cooling circuits are recommended, one for each cable assembly and one for the gas nozzle. The use of an active water cooler is recommended too.

#### 4. Torch mount & holders – page 6

The WH Tandem W800 is mounted to the robot arm with flange, robot mount CAT2-HL (XL) and Tandem holder or RTM holder (used on robots with collision detection software).

Robot mount CAT2-HL (XL) is spring loaded and contains a switch. In case of a collision the switch is activated and stops the robot movement. The spring-loaded robot mount allows some deflection of the torch.

There are multiple flanges available: Please refer to the latest Robo catalogue.

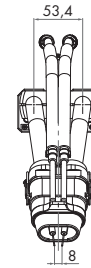
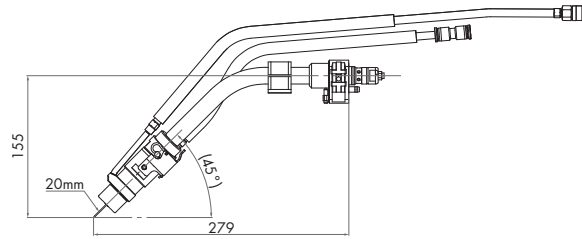
#### 5. Alignment jig – page 6

The use of an alignment jig is strongly recommended due to the required accuracy of the two individual torch necks for each other and the total torch geometry (TCP).

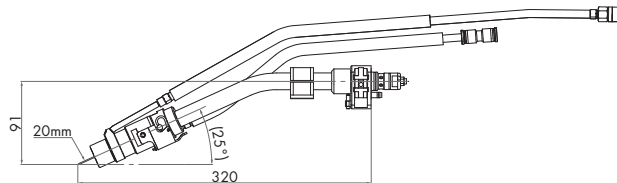
Neck alignment and tip space has a strong influence on welding performance and joint quality. The service friendly torch neck allows repair and replacement of both individual necks. In this case the accurate adjustment is essential by using an alignment jig.

## Dimensional sketch torch necks WH Tandem W800

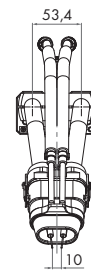
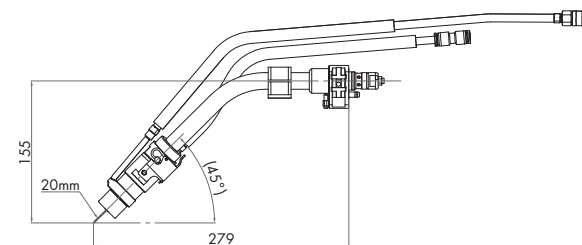
- 1.1 Torch neck 45°  
962.1483.1



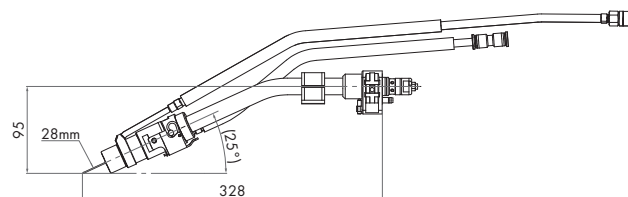
- 1.2 Torch neck 25°  
962.1431.1



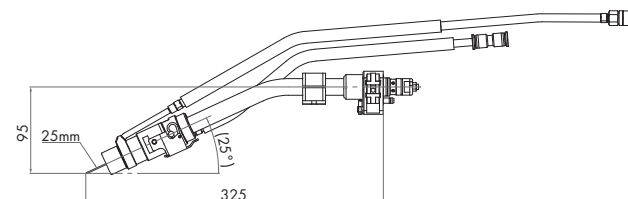
- 1.3 Torch neck 45°  
962.1443.1



- 1.4 Torch neck 25°  
962.1437.1



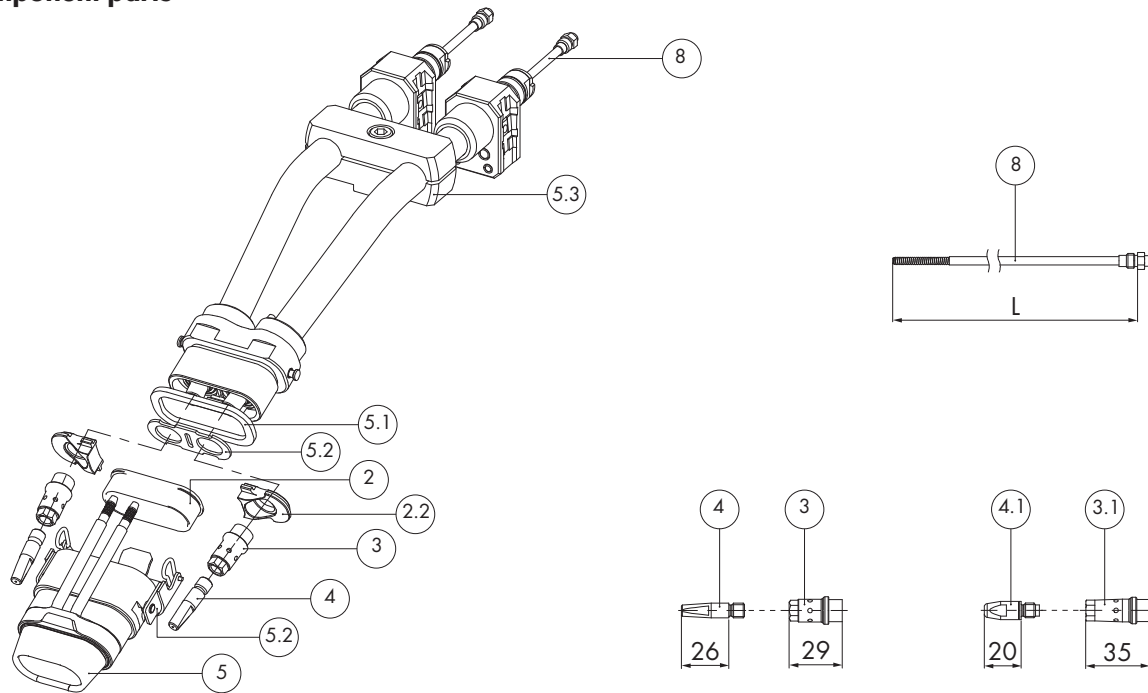
- 1.5 Torch neck 25°  
962.1511.1



Component	Pos.	Description	Spec.	Part-no.
<b>Quick change neck*</b>	1.1	Torch neck WH Tandem W800 45; D8/SO20		962.1483.1
	1.2	Torch neck WH Tandem W800 25; D10/SO20		962.1431.1
	1.3	Torch neck WH Tandem W800 45; D10/SO20		962.1443.1
	1.4	Torch neck WH Tandem W800 25; D15/SO28		962.1437.1
	1.5	Torch neck WH Tandem W800 25; D20/SO25		962.1511.1

\*Single necks (left/right) are available on request. One set of spare parts in pos. 1.1 - 1.5 included.

## Wear & component parts

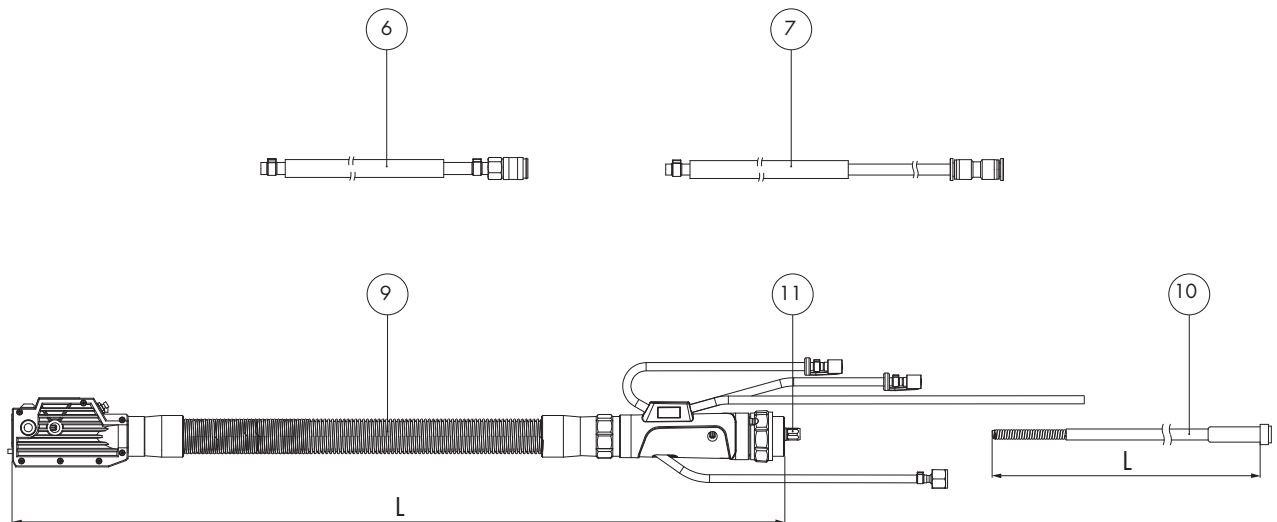


Component	Pos.	Description	Spec.	Part-no.
<b>Nozzle insulator and accessories</b>	2	Nozzle insulator (Type W800)*	3 pcs.	146.0072.3
	2.1	Insulation disc (Type W800)*	5 pcs.	962.1464.5
	2.2	Protection ceramics D8/10 (Type W800) <sup>1</sup>	10 pcs.	146.0073.10
		Protection ceramics D15 (Type W800) <sup>2</sup>	10 pcs.	146.0074.10
		Protection ceramics D20 (Type W800) <sup>3</sup>	10 pcs.	146.0075.10
<b>Tip adaptor</b> Type W800	3	Tip adaptor Cu M8/M10x1 29mm*	10 pcs.	142.0172.10
		Tip adaptor ceramic M8/M10x1 29mm	10 pcs.	142.0174.10
	3.1	Tip adaptor Cu M8/M10x1 35mm	10 pcs.	142.0175.10
<b>Contact tip</b> (Pos. 4 only with pos. 3 and pos. 4.1 only with pos. 3.1)	4	Contact tip M8 CuCrZr; Ø 1.0; 34.5 mm	10 pcs.	140.0939
		Contact tip M8 CuCrZr; Ø 1.2; 34.5 mm*	10 pcs.	140.0453
		Contact tip M8 CuCrZr; Ø 1.4; 34.5 mm	10 pcs.	140.0958
	4.1	Contact tip M8 CuCrZr; Ø 1.0; 30 mm	10 pcs.	140.0316
		Contact tip M8 CuCrZr; Ø 1.2; 30 mm	10 pcs.	140.0445
		Contact tip M8 CuCrZr; Ø 1.4; 30 mm	10 pcs.	140.0536
<b>Gas nozzle and accessories</b>	5	Gas nozzle D8/D10/D15/D20; Type W800*	1 pc.	145.0628.1
	5.1	Gas nozzle sealing; Type W800*	5 pcs.	962.1463.5
	5.2	Clamping part cpl.; for gas nozzle Type W800*	1 pc.	962.1469.1
	5.3	Locking clamp*	1 pc.	962.1475.1
<b>Hose sets</b>	6	Hose set gas nozzle; Type W800 with clutch NW5, L=2 m	1 pc.	962.1480.1
	7	Hose set air blast; Type W800 NW8, L=1 m	1 pc.	962.1481.1
<b>O-Rings</b> (for torch necks)	w/o. fig.	O-ring 3.5 x 1.2 mm	20 pcs.	165.0062
	w/o. fig.	O-ring 15.0 x 1.5 mm	20 pcs.	165.0015
<b>Neck liner</b> (for pos. 3 used with pos. 4)	8	Neck liner for steel, BSLred L=320mm; Ø 1.0-1.2*		149.0151
		Neck liner for steel, BSLblue L=320mm; Ø 1.4 - 1.6		149.0155
		Neck liner for aluminium, Brass L=320mm; Ø 0.8 - 1.0		149.0202
		Neck liner for aluminium, Brass L=320mm; Ø 1.2 - 1.6		149.0203
<b>Neck liner</b> (for pos. 3.1 used with pos. 4.1)		Neck liner for steel, BSLred L=325 mm; Ø 1.0-1.2		149.0204
		Neck liner for steel, BSLblue L=325 mm; Ø 1.4-1.6		149.0205
		Neck liner for aluminium, Brass L=325mm; Ø 0.8 - 1.0		149.0206
		Neck liner for aluminium, Brass L=325mm; Ø 1.2 - 1.6		149.0207

\* Included in all listed torch necks WH Tandem, pos. 1.1 - 1.5 • 1 Included in torch necks WH Tandem, pos. 1.1 - 1.3

<sup>2</sup> Included in torch neck WH Tandem, pos. 1.4 • <sup>3</sup> Included in torch neck WH Tandem, pos. 1.5

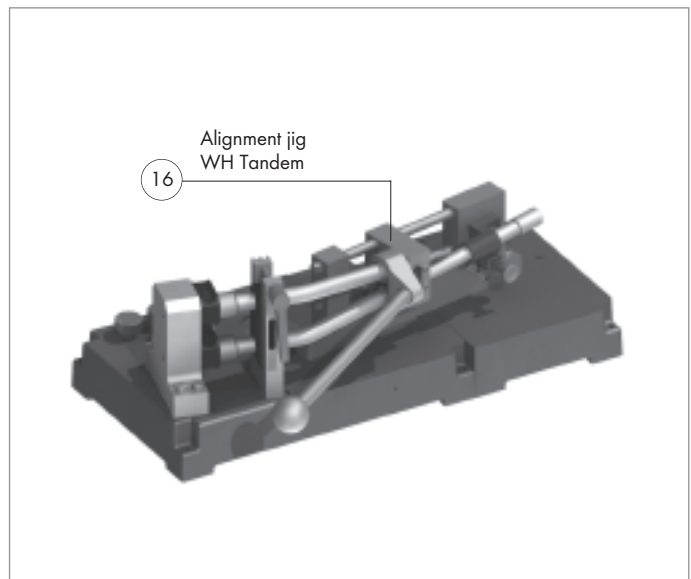
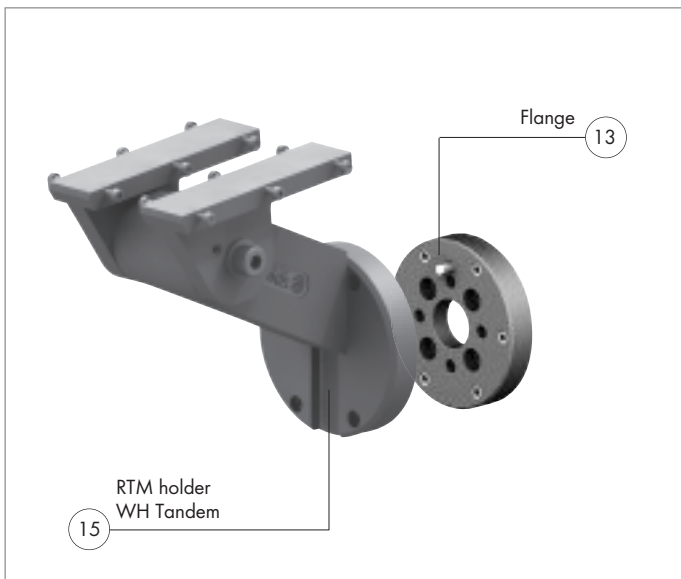
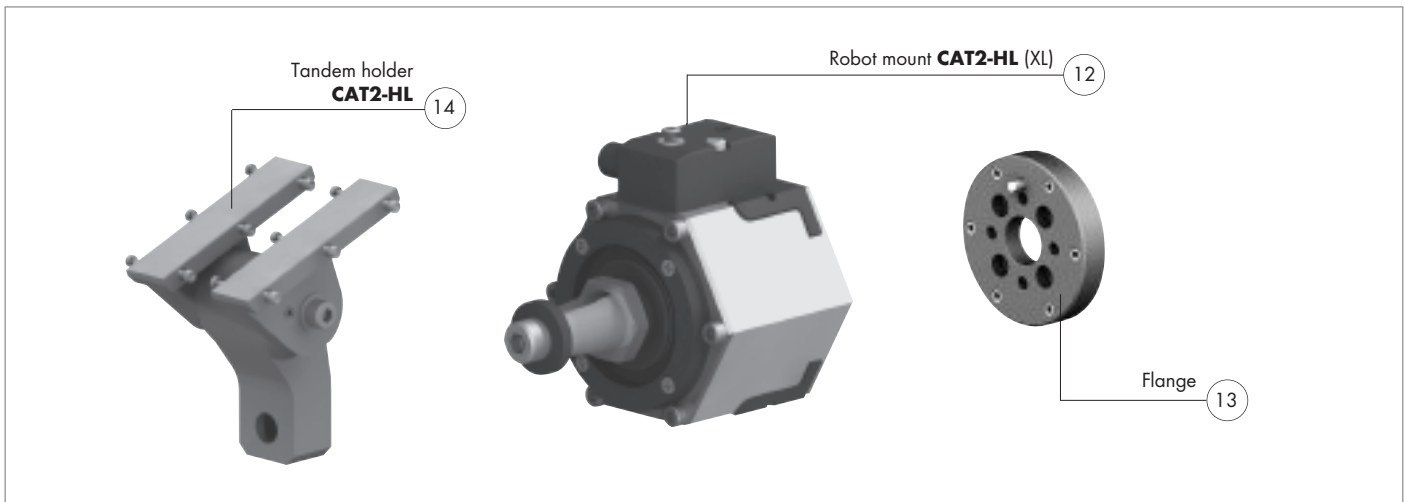
## Wear & component parts



Component	Pos.	Description	Spec.	Part-no.
<b>Cable assembly WH</b>	9	Cable assembly cpl. WH; L=1.05 m*	liquid cooled	965.2001
		Cable assembly cpl. WH; L=1.15 m*	liquid cooled	965.2002
		Cable assembly cpl. WH; L=1.25 m*	liquid cooled	965.2003
		Cable assembly cpl. WH; L=1.45 m*	liquid cooled	965.2004
		Cable assembly cpl. WH; L=1.65 m*	liquid cooled	965.2005
		Cable assembly cpl. WH; L=2.15 m*	liquid cooled	965.2006
		Cable assembly cpl. WH; L=2.65 m*	liquid cooled	965.2007
		Cable assembly cpl. WH; L=3.15 m*	liquid cooled	965.2008
		Cable assembly cpl. WH with Wire-Brake; L=2.50**	liquid cooled	965.2045
<b>Liner</b>	10	Liner red isolated with nipple 2.0/4.5mm/2.0m; Ø 0.8-1.2		124.0176
		Liner red isolated with nipple 2.0/4.5 mm/3.5 m; Ø 0.8-1.2		124.0111
		Liner yellow isolated with nipple 2.5/4.5 mm/3.5 m; Ø 1.4		124.0114
		Carbon teflon liner with nipple and O-ring 2.0/4.0mm/3.5m; Ø 0.8-1.2		127.0005
		PA-liner grey with nipple and O-ring 2.0/4.0mm/3.5m; Ø 0.8-1.2		128.0012
		PA-liner grey with nipple and O-ring 2.3/4.7mm/3.5m; Ø 1.0-1.6		128.0020
		w/o. fig. Nipple with thread, 4.0mm		131.0001
		w/o. fig. Nipple with thread, 4.5/4.7mm		131.0002
	<b>Accessories</b>	11	Nut M10x1	
		w/o. fig. O-ring Ø 3.5 x 1.5 mm		165.0008
		w/o. fig. Guide tube for liner ≤ 4.0 mm		129.0461
		w/o. fig. Outlet guide insulated		960.0151
		w/o. fig. Component-WH, consisting of: manual neck change tool, screw M3x10 (6pcs.), grease, silicon free (10g)		960.0150

\*Equipped with std. liner 124.0176 • \*\*Equipped with std. liner 124.0111

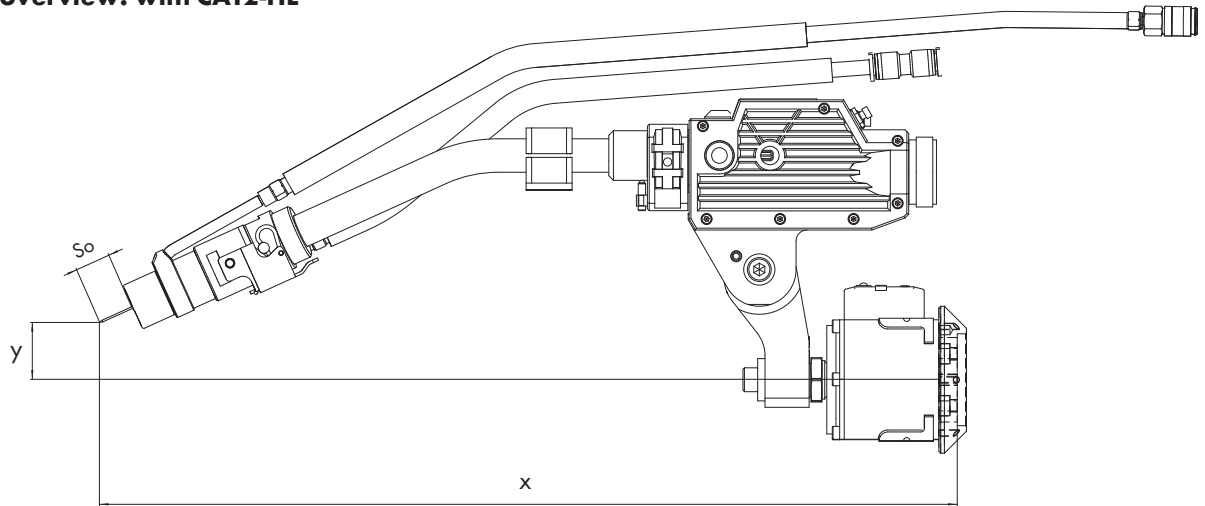
**Robot mount, alignment jig & accessories**  
for WH Tandem W800 — liquid cooled



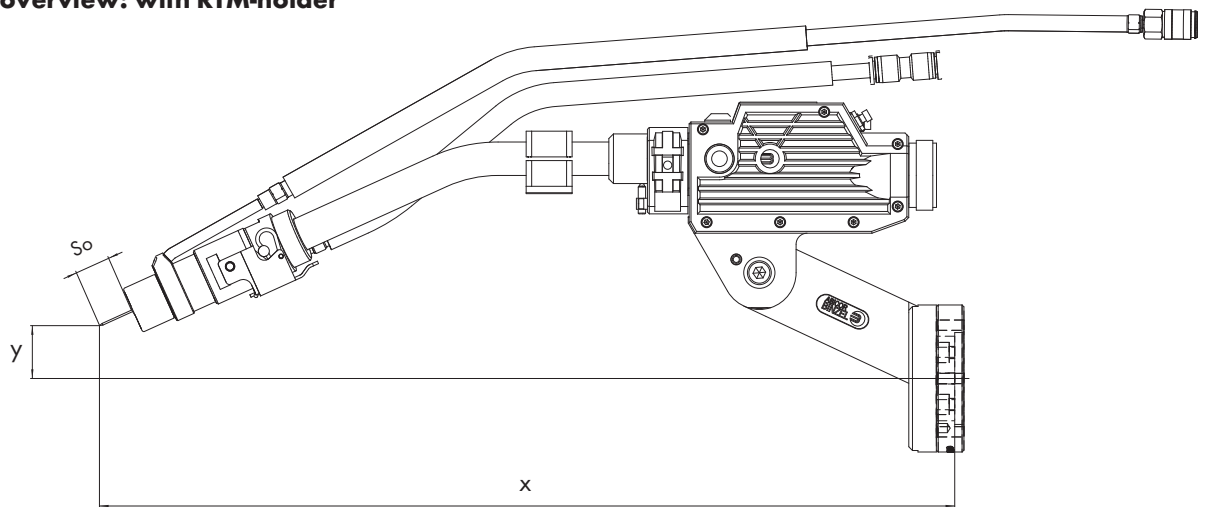
Component	Pos.	Description	Part-no.
<b>Robot mount</b>	12	Robot mount CAT2-HL (XL)	780.2040
	13	Flange for CAT2-HL or RTM holder	see Robo-Catalogue
	14	Tandem holder CAT2-HL*	780.0364
<b>Mounting arm</b> (for robots with collision detection software)	15	RTM holder WH Tandem TCP B/B	780.0365
		w/o fig. RTM holder WH Tandem TCP B/T	780.0367
<b>Accessories</b>		w/o fig. Cable assembly support	191.0039
		w/o fig. Wrench for tip holder	743.0064
		w/o fig. Wrench for contact tip SW6 M6	191.0103
		w/o fig. Wrench for contact tip SW8 M8	191.0102
		w/o fig. Sharpener for plastic liner	191.0064
		w/o fig. Hose cutter	191.0062
		w/o fig. Blades for hose cutter (VE 10 Pcs.)	191.0063
		w/o fig. Protection cover for WH housing	191.0105
		w/o fig. Protection cover for cable assembly, L=2m; Ø 45mm	191.0079
<b>Alignment jig for torch type</b>	16	WH Tandem D8/D10/D15	837.0670
		w/o fig. WH Tandem D20	On request
		w/o fig. WH Tandem W800 for single necks	On request

\*Mounting arm for connection to the Robot Mount CAT 2-HL

### Holder overview: with CAT2-HL



### Holder overview: with RTM-holder



Mounting type	Torch	Torch geometry	x	y	Part-no.
<b>Tandem holder</b>	W 800 D8/So20	45°	400	0	780.0364
	W 800 D8/So20	25°	463	0	780.0364
	W 800 D8/So20	45°	433	0	780.0364
	W 800 D8/So28	25°	471	0	780.0364
	W 800 D8/So25	25°	468	0	780.0364
<b>RTM holder TCP B/B</b>	W 800 D8/So20	45°	variable in 15° steps		780.0365
	W 800 D8/So20	25°	variable in 15° steps		780.0365
	W 800 D8/So20	45°	variable in 15° steps		780.0365
	W 800 D8/So28	25°	variable in 15° steps		780.0365
	W 800 D8/So25	25°	variable in 15° steps		780.0365
<b>RTM holder TCP B/T</b>	W 800 D8/So20	45°	variable in 15° steps		780.0367
	W 800 D8/So20	25°	variable in 15° steps		780.0367
	W 800 D8/So20	45°	variable in 15° steps		780.0367
	W 800 D8/So28	25°	variable in 15° steps		780.0367
	W 800 D8/So25	25°	variable in 15° steps		780.0367



Alexander Binzel Schweisstechnik GmbH & Co. KG  
P.O. Box 10 01 53 · D-35331 Gießen  
Phone: ++49 (0) 64 08 / 59-0  
Fax: ++49 (0) 64 08 / 59-191

[www.binzel-abicor.com](http://www.binzel-abicor.com)