


COOLIUS

A30

A/C Service-Unit for refrigerant R134a
Serial Number from AC000140 onwards

Service book

 Original Service Book



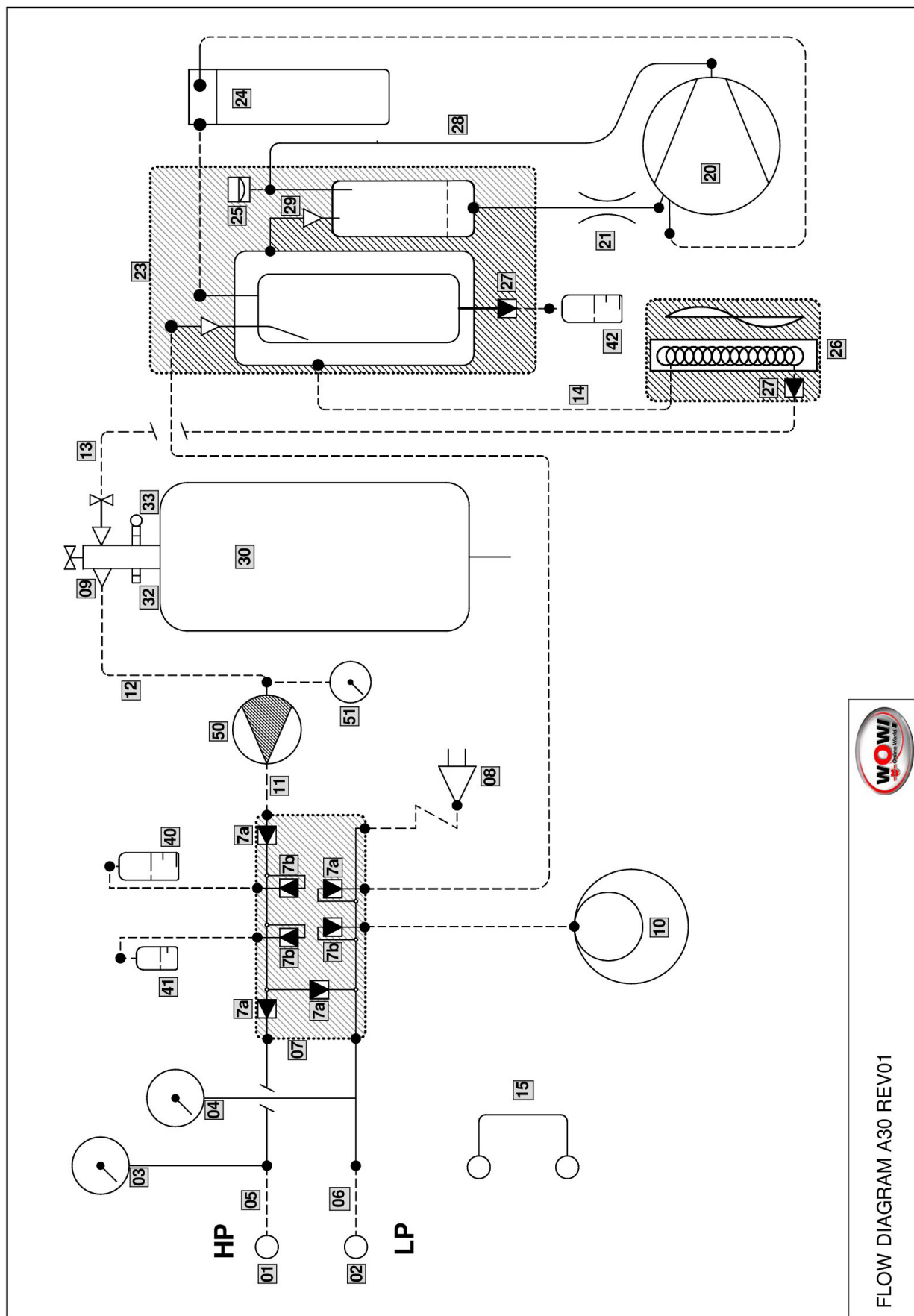


Contents

1	Flow diagram	4
1.1	Flow diagram - SPARE PARTS LIST	6
2	Electric diagram	7
2.1	Electric diagram - SPARE PARTS LIST	8
3	Machine description	9
3.1	Machine - SPARE PARTS LIST	10
3.2	Manifold - SPARE PARTS LIST	11
3.3	Other parts - SPARE PARTS LIST	12
3.4	Accessories - SPARE PARTS LIST	13
4	Maintenance	13
4.1	Filter and Vacuum pump oil replacement	13
4.1.1	Replacing the filter	13
4.1.2	Replacing the vacuum pump oil	14
4.2	Counter reset (UNLOCK CODE required)	15
5	Calibration	16
5.1	Refrigerant weight scale	16
5.2	Used oil weight scale	17
5.3	Pressure transducer	17
6	Mainboard test	19
6.1	Analysis of the displayed values	20
6.2	Output test	21
6.3	Phase / Neutral wires pinout	23
7	Other passwords	24
	Service Passwords	24
	Service Report Passwords	24
	Operator Code (OPC) Managing Password	24
8	Contact and support	25
8.1	Service Portal COOLIUS-AC.COM	25

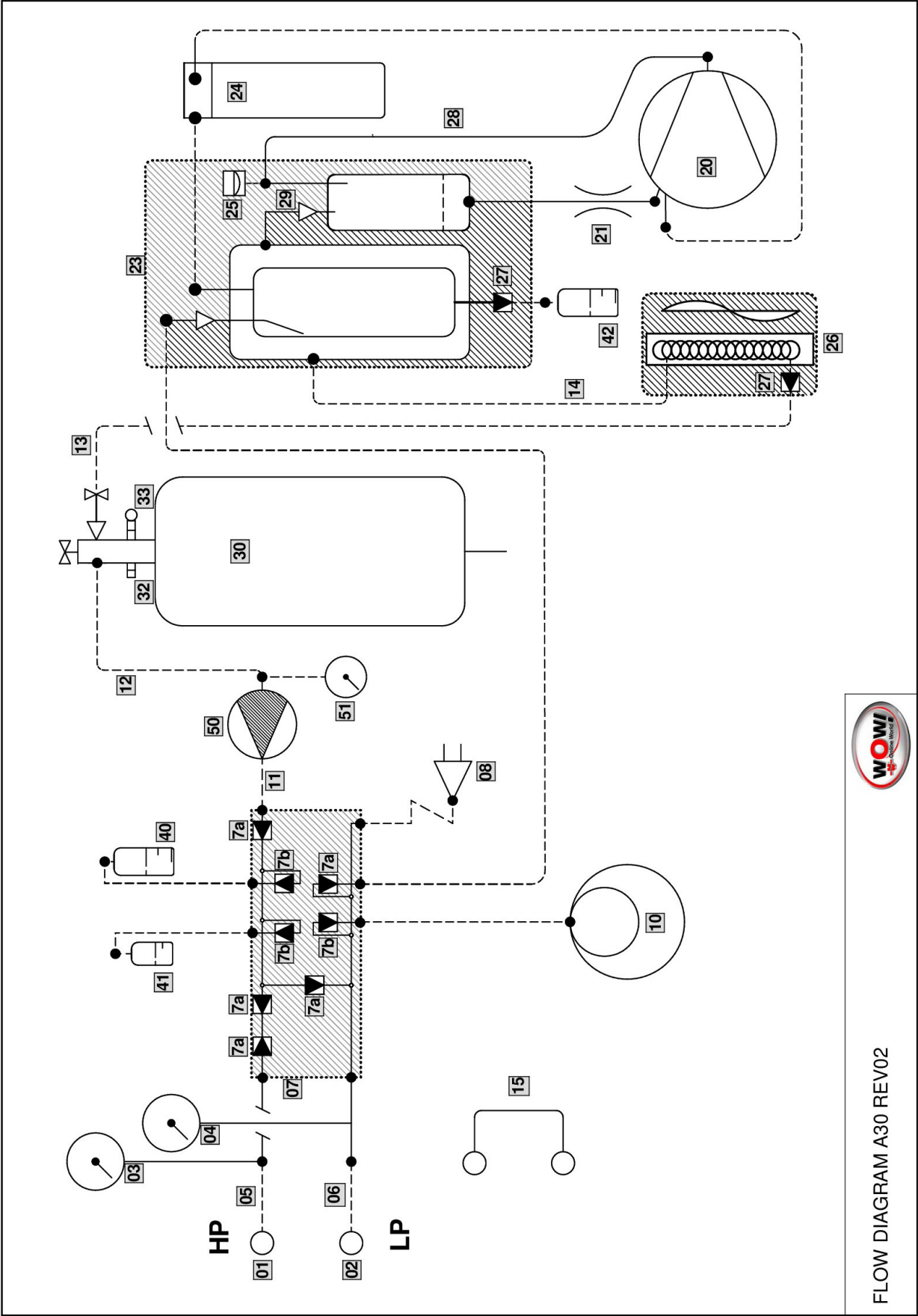
1 Flow diagram

SN FROM AC000140 TO AC000302 AND FROM AC000305 TO AC000311 INCLUDED:



FLOW DIAGRAM A30 REV01

SN AC000303 / AC000304 AND STARTING FROM AC000312 INCLUDED:



FLOW DIAGRAM A30 REV02

1.1 Flow diagram - SPARE PARTS LIST

N°	DESCRIPTION	CODE
01	HP SERVICE COUPLING (A30 R134a)	0605115006
02	LP SERVICE COUPLING (A30 R134a)	0605115001
03	HP GAUGE (R134a/R1234yf)	0710175085
04	LP GAUGE (R134a/R1234yf)	0710145085
05	5 m SERVICE HOSE HP (A30 R134a)	0603015050
06	5 m SERVICE HOSE LP (A30 R134a)	0603010050
07	MANIFOLD (A30 with SN FROM AC000140 TO AC000302 AND FROM AC000305 TO AC000311 INCLUDED)	0512035009
	MANIFOLD v2 (A30 with SN AC000303 / AC000304 AND STARTING FROM AC000312 INCLUDED)	0510005336
08	ELECTRONIC PRESSURE TRANSDUCER	0712350007
09*	CHECK VALVE - A/C CHARGE (1/4SAE FM)	0501014063
10	VACUUM PUMP for A30	0420024009
11	FLEXIBLE HOSE (from REFRIG.PUMP to MANIFOLD)	0603511015
12	CHARGE HOSE (from INT.VESSEL to REFRIG.PUMP)	0603035300
13	RECOVERY HOSE W/VALVE + ADD.CHECK VALVE	0613010401
14	FLEXIBLE HOSE (from DISTILLER to HEAT EXCHANGER)	0603120035
15	INTERNAL BY-PASS KIT for R134a	0612400070
20	COMPRESSOR for A30	0420230236
21	CAPILLARY	0602099420
23	OIL DISTILLER GROUP (A30 R134a)	0610035020
24	MAIN FILTER	0607350344
25	HIGH PRESSURE SWITCH	0703014019
26	HEAT EXCHANGER GROUP (WITH FAN)	0418172635
27	ELECTRIC VALVE GROUP "1A" (LP / XP / RF / A1* / A2 / EO)	0500142050
28	COMPRESSOR COPPER PIPE	0602005020
29	CHECK VALVE - OIL DISTILLER (7/16UNF O-Ring MM)	0501071605
30	LIQUID RECEIVER 35L GROUP (A30 R134a)	0612001035
32	OVERPRESSURE VALVE	0503016045
33	SAFETY VALVE	0503144020
40	UV TRACER BOTTLE 250 ml	0819015257
41	NEW OIL BOTTLE 500 ml	0819015515
42	USED OIL BOTTLE 1000 ml	0819015103
50	REFRIGERANT PUMP	0416590035
	REFRIGERANT PUMP SPARE PARTS	0406930907
51	INTERNAL VESSEL PRESSURE GAUGE	0710040250

(*) **NOT PRESENT** IN A30 WITH SN **AC000303 / AC000304** AND STARTING **FROM AC000312 INCLUDED**.

2 Electric diagram

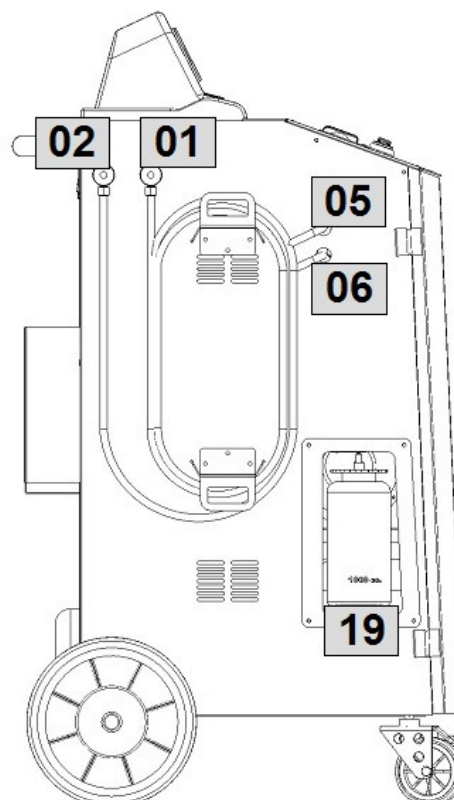
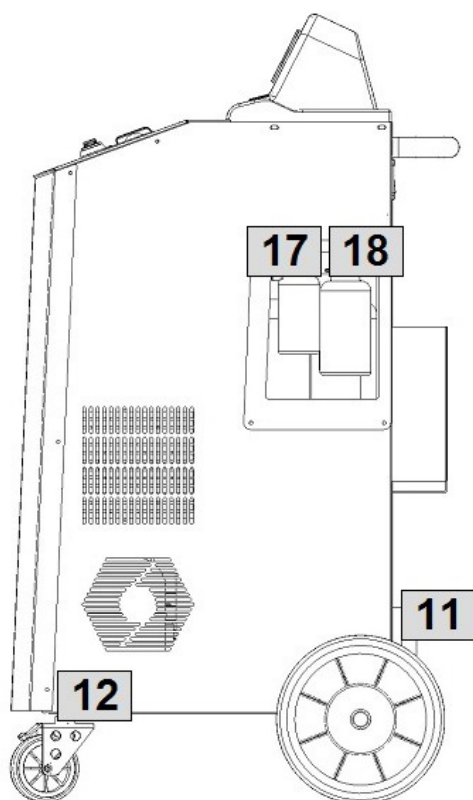
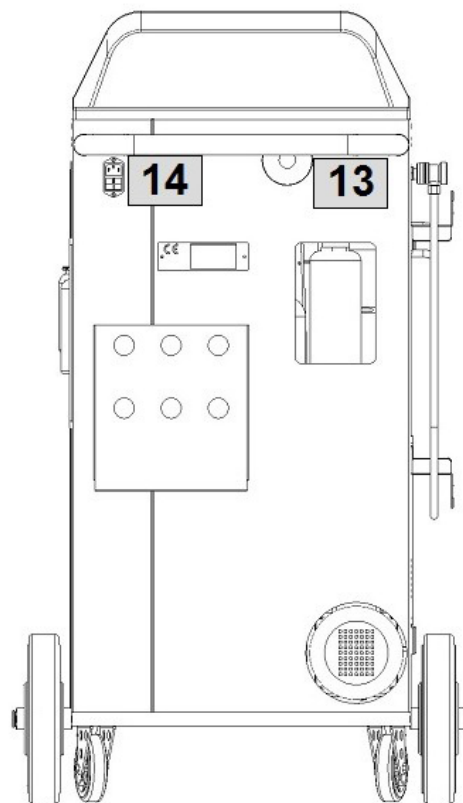
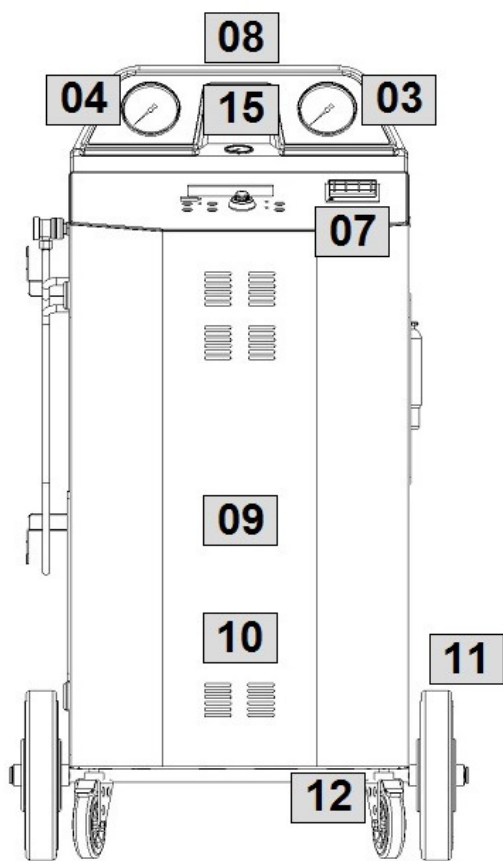
ELECT
230 V

2.1 Electric diagram - SPARE PARTS LIST

N°	DESCRIPTION	CODE
01	MAIN SWITCH	0404230022
03	MAIN FAN 120mm	0408080025
04	HEAT EXCHANGER GROUP (WITH FAN)	0418172635
05	COMPRESSOR A30	0420230236
06	VACUUM PUMP A30	0420024009
8a	ELECTRIC VALVE GROUP "1A" (LP / XP / RF / A1* / A2 / EO)	0500142050
	PISTON FOR "1A" ELECTRIC VALVE (LP / XP / RF / A1* / A2 / EO)	0500142150
8b	ELECTRIC VALVE GROUP "1B" (NO / UV / VP)	0500142075
	PISTON FOR "1B" ELECTRIC VALVE (NO / UV / VP)	0500142175
10	HIGH PRESSURE SWITCH	0703014019
50	REFRIGERANT PUMP	0416590035
	REFRIGERANT PUMP SPARE PARTS	0406930907

(*) **NOT PRESENT** IN A30 WITH SN **AC000303 / AC000304** AND STARTING **FROM AC000312 INCLUDED**.

3 Machine description

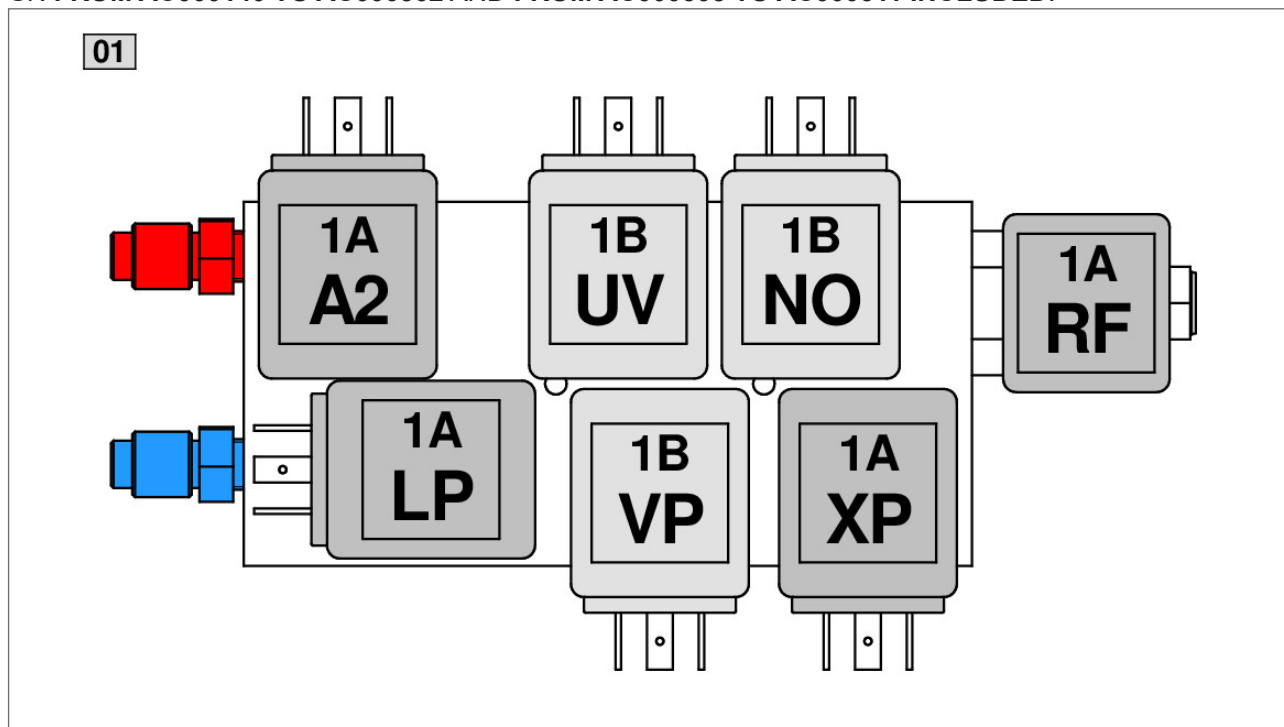


3.1 Machine - SPARE PARTS LIST

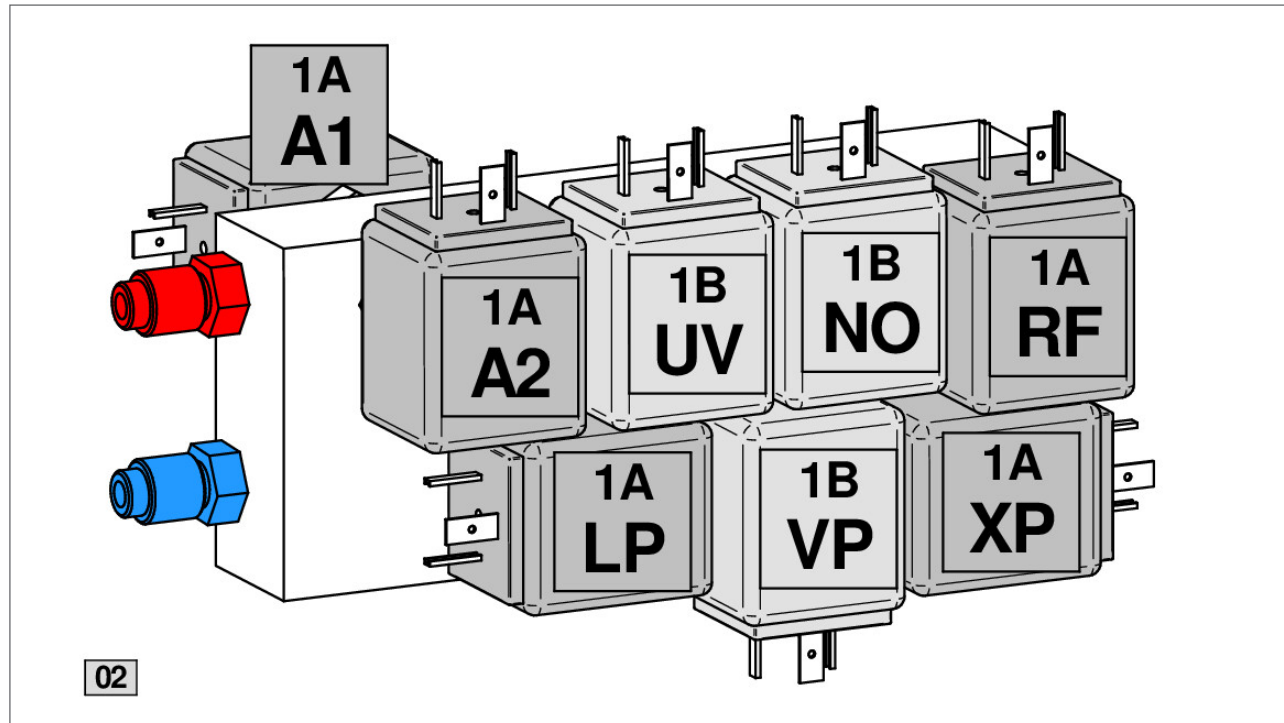
N°	DESCRIPTION	CODE
01	HP SERVICE COUPLING (A30 R134a)	0605115006
02	LP SERVICE COUPLING (A30 R134a)	0605115001
03	HP GAUGE (R134a/R1234yf)	0710175085
04	LP GAUGE (R134a/R1234yf)	0710145085
05	5 m SERVICE HOSE HP (A30 R134a)	0603015050
06	5 m SERVICE HOSE LP (A30 R134a)	0603010050
07	PRINTER KIT	0413002025
08	TOP COVER (PLASTIC)	0800700600
09	STICKER "WABCOWÜRTH"	0807005035
	STICKER "WOW!"	NOT AVAILABLE
10	A30 STICKER	0807005030
11	REAR WHEEL D260 (PNEUMATIC)	0206001261
12	FRONT WHEEL WITH BRAKE D100	0206001100
13	MAIN FAN 120mm	0408080025
14	MAIN SWITCH	0404230022
15	INTERNAL VESSEL PRESSURE GAUGE	0710040250
17	UV TRACER BOTTLE 250 ml	0819015257
18	NEW OIL BOTTLE 500 ml	0819015515
19	USED OIL BOTTLE 1000 ml	0819015103

3.2 Manifold - SPARE PARTS LIST

SN FROM AC000140 TO AC000302 AND FROM AC000305 TO AC000311 INCLUDED:



A30 WITH SN AC000303 / AC000304 AND STARTING FROM AC000312 INCLUDED:



N°	DESCRIPTION	CODE
01	MANIFOLD (A30 with SN FROM AC000140 TO AC000302 AND FROM AC000305 TO AC000311 INCLUDED)	0512035009
02	MANIFOLD v2 (A30 with SN AC000303 / AC000304 AND STARTING FROM AC000312 INCLUDED)	0510005336

1A	ELECTRIC VALVE GROUP "1A" (LP / XP / RF / A1* / A2 / EO)	0500142050
	PISTON FOR "1A" ELECTRIC VALVE (LP / XP / RF / A1* / A2 / EO)	0500142150
1B	ELECTRIC VALVE GROUP "1B" (NO / UV / VP)	0500142075
	PISTON FOR "1B" ELECTRIC VALVE (NO / UV / VP)	0500142175

(*) **NOT PRESENT IN A30 WITH SN AC000303 / AC000304 AND STARTING FROM AC000312 INCLUDED.**

3.3 Other parts - SPARE PARTS LIST

N°	DESCRIPTION	CODE
	INTERNAL SUPPORT BUSHING for 4/6 TUBE	0102107704
	BRASS OGIVE for 2/4 TUBE	0102137404
	INTERNAL SUPPORT BUSHING for 2/4 TUBE	0104999105
	O-RING 4,48x1,78 for 1/4 COPPER PIPE	0106178448
	O-RING 14,00x1,78 for A30 VACUUM PUMP	0106178140
	RILSAN PA11 SR HL NEUTRAL PIPE 6/8	0107106008
	RILSAN PA11 NEUTRAL PIPE 4/6	0107004006
	RILSAN GREEN PIPE 2/4	0107202004
	RILSAN PA11 BLUE PIPE 2/4	0107402004
	RILSAN BLUE PIPE 6/8	0107406008
	RILSAN PA11 RED PIPE 2/4	0107502004
	YELLOW PU PIPE 4/6	0107834006
	BLUE PU PIPE 4/6	0107844006
	CRISTAL PIPE 4/6	0107904006
	USB PROTECTION CAP	0400009009
	MAINBOARD "A" (PWR) for A30 (SN STARTING FROM AC000140 INCLUDED)	0402012014
	MAINBOARD "A" (PWR) for A30 - PROTECTED (SN STARTING FROM AC000140 INCLUDED)	0402035017
	MAINBOARD "B" (DISPLAY) - EUROPEAN VERSION	0402014005
	MAINBOARD "B" (DISPLAY) - CYRILLIC VERSION	0402014007
	PRINTER PAPER ROLL	0403005840
	POWER CORD (CEE7)	0405270005
	CONTROL KNOB (COOLIUS SELECT)	0411210009
	LOAD CELL 200KG (SN STARTING FROM AC000140 INCLUDED)	0714110205
	LOAD CELL 15KG	0714211019
	RED / BLUE RINGS FOR GAUGES	0800101168
	KEYBOARD A30 (POLYESTER PANEL)	0805045041
	MAINTENANCE KIT (DRIER+VACUUM PUMP OIL+GASKETS)	7500100010

3.4 Accessories - SPARE PARTS LIST

N°	DESCRIPTION	CODE
	SERVICE HOSES EXTENSION KIT - ADDITIONAL 3 m (R134a)	2501003134

4 Maintenance

4.1 Filter and Vacuum pump oil replacement

4.1.1 Replacing the filter



NOTE: Always use goggles and gloves!

Contact with the refrigerant can cause blindness and other physical injury to the user!



1. Before dismantling the filter, perform a recovery process in order to reduce the pressure in the internal circuit!



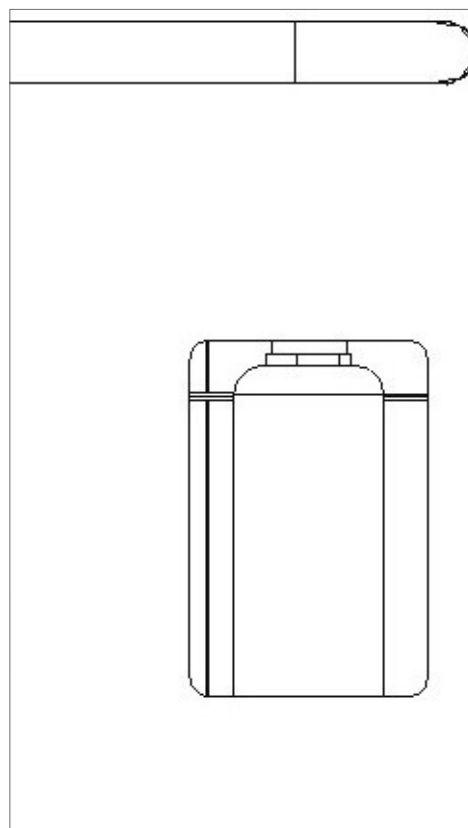
IMPORTANT: Disconnect the plug from the supply!

2. Use a 38 mm wrench to unscrew the filter.



NOTE: Dispose according to local regulations.

3. Lubricate and place correctly the new O-rings.
4. Assemble the new filter.



4.1.2 Replacing the vacuum pump oil



NOTE: Always use goggles and gloves!

Contact with the refrigerant can cause blindness and other physical injury to the user!



IMPORTANT: Disconnect the plug from the supply!

1. Open the front cover (3x large head Phillips screws).
2. Unscrew the oil discharge screw **(C)** and wait for the oil to drain.
Then refit the discharge screw **(C)**.



NOTE: Dispose according to local regulations.

3. Unscrew the muffler **(A)**.
4. Fill with new oil.
The correct oil level of the pump is around half sight glass.
5. Refit the muffler **(A)**.
6. Reassemble the front cover.

NOTE: The picture could show a different type of vacuum pump.

- (A)** Muffler
- (B)** Sight glass to indicate the oil level
- (C)** Discharge screw

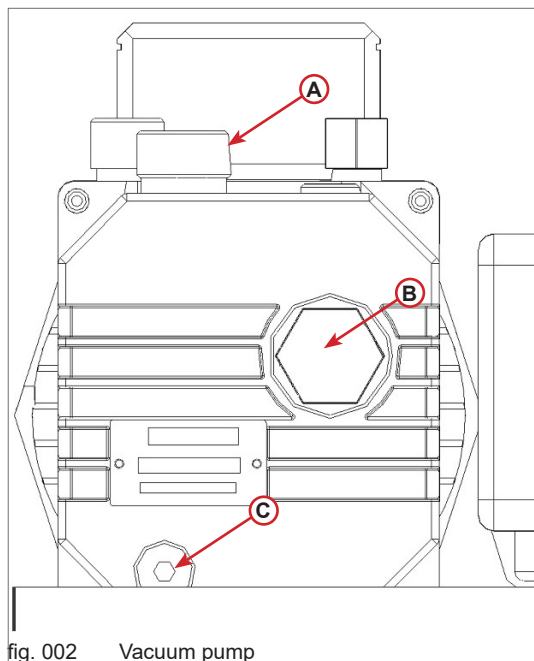


fig. 002 Vacuum pump

4.2 Counter reset (UNLOCK CODE required)

Change filter and vacuum pump oil before resetting maintenance!



NOTE: Only genuine spare parts or their equivalent. The use of replacement parts which are not of equivalent quality may damage the machine!

Go to website www.coolius-ac.com or call the hotline +497940981888188 to get the UNLOCK CODE for maintenance counter reset.

1. Press **START** to continue.

```
Get UNLOCK CODE
register:
BB111111
www.coolius-ac.com
```

2. Use the **COOLIUS SELECT** to enter the maintenance UNLOCK CODE obtained from www.coolius-ac.com.

When done, confirm by **START**.

- If the UNLOCK CODE is wrong, repeat the step 2.
- If the UNLOCK CODE is right, go to step 3.

```
A*****
A
34567890 B C D E F G H I J K
```

3. Press **X (CANCEL)** key to confirm.

```
Counter reset.
Confirm by "X"
min. ///
```

4. Press again **X (CANCEL)** key to confirm and reset the counter.

```
Counter reset.
Confirm again!
```

Maintenance reset successfully completed.

5 Calibration

1. Select **SERVICE** and type password: **311299**

The display shows:

Select:

Refrig. weight scale

2. Turn **COOLIUS SELECT** to select among:

- Refrigerant weight scale
- Used oil weight scale
- Pressure transducer

3. Press **ENTER** to confirm the selection.

5.1 Refrigerant weight scale

The display shows:

Unload weight scale
(safety position)

1. Dismount the top cover (4 screws), then unload the scale by using the screws for transport locking.
2. Press **ENTER** key to confirm the safety position and wait.

The display shows:

Load weight scale
(working position)

3. Load the scale by using the screws for transport locking.

Wait a few seconds then press **ENTER** key to confirm the working position.

The display shows:

Place the sample
weight on the scale.

4. Place a known sample weight (minimum 2 kg, suggested 5 kg) on the centre of the scale bracket.

Wait a few seconds then press **ENTER** key to confirm and wait!

The display shows:

Set the sample
weight value.

5. Turn **COOLIUS SELECT** to set the weight value.
Press **START** to confirm.

Calibration completed.

g.

5.2 Used oil weight scale

The display shows:

1. Remove the used oil bottle.
Press **ENTER** key to confirm that the scale is unloaded and wait!

Unload used oil
scale!

The display shows:

2. Press **ENTER** key to confirm again that the scale is unloaded and wait!

Confirm by "ENTER"
used oil scale
unloaded!

The display shows:

3. Place a known sample weight (minimum 50 g) on the waste oil scale bracket.
Wait a few seconds then press **ENTER** key to confirm and wait!

Place the sample
weight on the scale.

The display shows:

4. Turn **COOLIUS SELECT** to set the weight value.
Press **START** to confirm.

Set the sample
weight value.

g.

Calibration completed.

5.3 Pressure transducer



IMPORTANT: The quick coupler must be assembled on the service hoses and the gauges must show 0 (zero) pressure!

1. Press **START** to begin the calibration of pressure transducer.

Confirm by "START"

2. The vacuum pump starts and perform a short vacuum phase.

After a few seconds, the displayed value (ADC points) must be lower than 250.

Wait!

x x

3. When the vacuum pump stops and the display shows:

Remove the LP service connector (low pressure side quick coupling) from the BLUE service hose, then press **ENTER** to confirm.

Wait for screen change!

Remove the LP
connector from the
service hose.

4. Turn **COOLIUS SELECT** to set the atmospheric pressure (ex. 1010 mb)

When done, press **START** to confirm.

Set the atmospheric
pressure value (abs)
mb. □

5. Wait the end, then press **STOP** to exit.

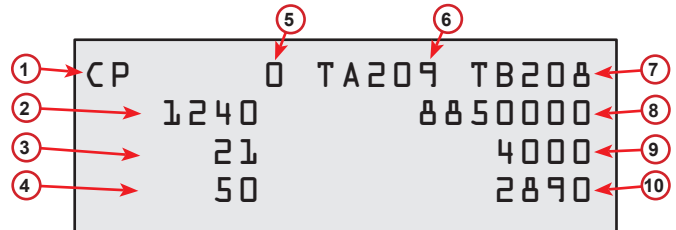
Calibration completed.

6 Mainboard test



IMPORTANT NOTE: Machine disconnected from any A/C system or refrigerant tank!
Check that both **HP** and **LP** gauges show zero pressure!

1. Select SERVICE and type password: **228482**



The display shows:

- | | |
|----------------------------------|---|
| (1) CONTROLLED OUTPUT | |
| (2) REFRIGERANT SCALE | Net compensated value. |
| (3) USED OIL SCALE | Net compensated value. |
| (4) PRESSURE TRANSMITTER | Absolute pressure compensated value. |
| (5) KEY ID. number | |
| (6) TEMPERATURE | Mainboard "A" (PWR) [tenths of °C]. |
| (7) TEMPERATURE | Mainboard "B" (Display) [tenths of °C]. |
| (8) REFRIGERANT SCALE | Analog to digital converter points. |
| (9) USED OIL SCALE | Analog to digital converter points. |
| (10) PRESSURE TRANSMITTER | Analog to digital converter points. |

KEY IDENTIFICATION NUMBER

The number identifies the pressed key as described below:

- | | |
|------------|---|
| 0 | No key pressed |
| 2 | ENTER key (The ENTER key activates the output indicated on the display, read the instructions before use) |
| 4 | STOP key (Not visible) |
| 8 | START key |
| 16 | X (CANCEL) key |
| 32 | RIGHT key |
| 64 | i (INFO) key |
| 128 | LEFT key |

6.1 Analysis of the displayed values

NOTE: *Machine with pressure transmitter and weight scales correctly calibrated.*

Pressure transmitter

Remove the LP quick coupler, then the absolute pressure compensated value shall be around the absolute atmospheric pressure -10 / -15 mb.

Blow compressed air into the LP service hose (blue):

The display has to show an increase of the absolute pressure value and of the ADC points.

Disconnect the pressure transmitter connector from the mainboard "A" (PWR).

The absolute pressure value shall be 1 and the pressure transmitter ADC point should be roughly 1.

Refrigerant weight scale

The display shows the net value (Total–Tare Weight Value)

The ADC point value is the total value.

The first four numbers shall be stable, the last three can float.

The values displayed are directly linked to the weight on the scale.

As a reference, consider that a calibrated scale with all the containers empty shall show roughly 8900000 points. Values that are significantly different from the reference indicate a possible problem.

To check quickly if the weighing system is working correctly it is enough to press on the load cell (scale bracket): both the ADC points and the net value compensated shall increase.

Used oil weight scale

The display shows the net value (Total–Tare Weight Value)

The ADC point value is the total value.

The values displayed are directly linked to the weight on the scale.

Mainboard temperature

The temperature is shown in tenths of Celsius degrees (°C).

The displayed values are the temperatures of each sensor mounted on the two mainboards.

6.2 Output test

It is possible to activate the devices connected to the CPU/Power mainboard (board A).

NOTE: Both quick couplers must be installed!

Use the **COOLIUS SELECT** to select the output that must be activated.

Press **ENTER** to activate the selected OUTPUT.

NOTE: In order to avoid the exit of refrigerant from the vacuum pump outlet or from the Oil/UV bottles, the activation of VP, UV, NO and of all the combinations containing at least one of them, are possible only when the pressure is lower than 1100 mb.

- CP Compressor and Compressor fan
- VP Vacuum pump



The HP and LP gauges must show 0 (Zero) bar!

- EO Drain oil valve
- UV Dye tracer valve



The HP and LP gauges must show 0 (Zero) bar!

- NO New oil valve



The HP and LP gauges must show 0 (Zero) bar!

- RF Refrigerant valve
- XP Recovery valve
- LP Separation valve
- A1 Aggregate valve
- A2 Aggregate valve 2
- A3 Aggregate valve 3
- A4 Aggregate valve 4
- CP+XP
- VP+LP+A2



The HP and LP gauges must show 0 (Zero) bar!

- CP+XP+LP
- VP+LP+A2



The HP and LP gauges must show 0 (Zero) bar!

- CP+XP+LP+A2
- UV+A2



The HP and LP gauges must show 0 (Zero) bar!

- NO+A2

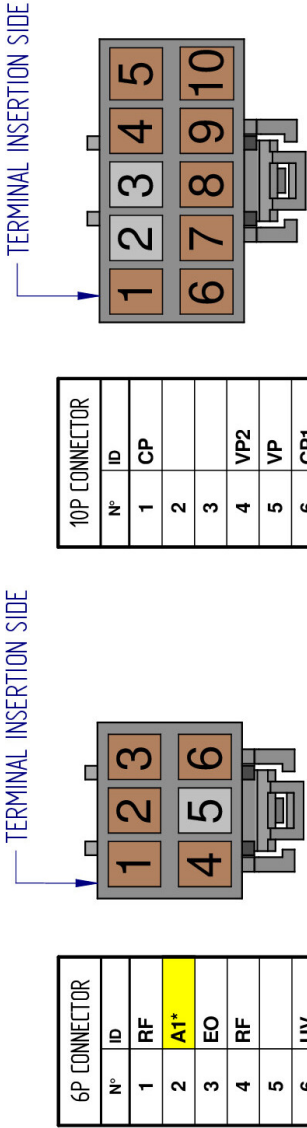


The HP and LP gauges must show 0 (Zero) bar!

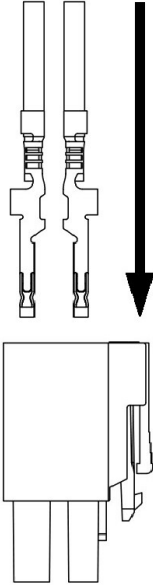
- RF+A2

A30

PHASE WIRES (BROWN) PINOUT:



(*) IF PRESENT



NEUTRAL WIRES (BLUE) PINOUT: TERMINALS CAN BE PLACED FREELY IN THE TWO 8P CONNECTORS

(*) "A1" IS PRESENT ONLY IN A30 WITH SN AC000303 / AC000304 AND STARTING FROM AC000312 INCLUDED.

7 Other passwords

Service Passwords

219829 DOWNLOAD – Reset of the flash memory
This procedure does not modify the machine set-up

885479 Machine registration (SN)

Service Report Passwords

014857 DOWNLOAD and DELETE the Service Report (**CONFIDENTIAL**)

399154 DELETE the Service Report (**CONFIDENTIAL**)


200200 DOWNLOAD and DELETE the Service Report

Operator Code (OPC) Managing Password

585707 OPC managing password (**CONFIDENTIAL**)
(See “COOLIUS Confidential Operating Manual Service DataBase” for additional info)

8 Contact and support

If you have further questions about the product or need help with the installation, our technical hotline staff will be happy to help you.

Contact information for your country's service partner can be found on our website  www.coolius-ac.com

Manufactured by:

WOW ! ITALY

Viale della Stazione 7
39100 Bolzano, Italy

Distributed by:

WOW! Würth Online World GmbH

Schliffenstraße 22
74653 Künzelsau

Phone: +49 7940 981 88 - 0

Fax: +49 7940 981 88 - 10 99

info@wow-portal.com

www.wow-portal.com

WABCOWÜRTH Workshop Services GmbH

Schliffenstraße 22
74653 Künzelsau

Phone: +49 7940 981863-0

Fax: +49 7940 981863-5555

info@wabcowuerth.com

www.wabcowuerth.com

AUTOCOM Diagnostic Partner AB

Grafitvägen 23 B
461 38 Trollhättan, Schweden


Phone: +46 520 470 701

Fax: +46 520 470 727

info@autocom.se

www.autocom.se

8.1 Service Portal COOLIUS-AC.COM

On the website  www.coolius-ac.com the activation of the machine can be carried out independently. In addition, you will find further help and instructions for your COOLIUS device on this website.

COOLIUS

WOW! ITALY
Viale della Stazione 7
39100 Bolzano
www.coolius-ac.com

Doc.No.: ?????_Rev.04.00
© by WOW! ITALY
All rights reserved.
Responsible for content: Product dept.

Reprinting, even in extract, is allowed only after obtaining approval. We reserve the right to make changes to the product at any time, if we consider them to be in the interest of quality improvement, without prior notice or notification. Figures may be examples, which may differ in appearance from the goods delivered. We also reserve the right to errors, and cannot be held responsible for typographical mistakes. Our general terms and conditions apply.