



ATH-Heinl

**USER'S MANUAL
ATH W62**




4500 kg



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INTRODUCTION


General Information



	<p>THIS MANUAL IS AN INHERENT PART OF THE MACHINE. IT MUST BE READ AND UNDERSTOOD FROM THE OPERATOR. THERE IS NO RESPONSIBILITY FOR DAMAGES, WHICH ARE RESULTING FROM NON-OBSERVANCE OF THIS MANUAL OR THE GUILTY SAFETY REGULATIONS.</p>
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	<p>ATTENTION: Follow the instructions to avoid injuries or damages.</p>
	<p>TIP: Gives further information's to the functions and tips for using the machine efficiently.</p>

	<p>Protective clothes must be worn for all works on the described machine.</p>
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Name plate:

	<p>Note all information's regarding the tire changer into the following gaps. It is forbidden to remove the name plate from the tire changer.</p>
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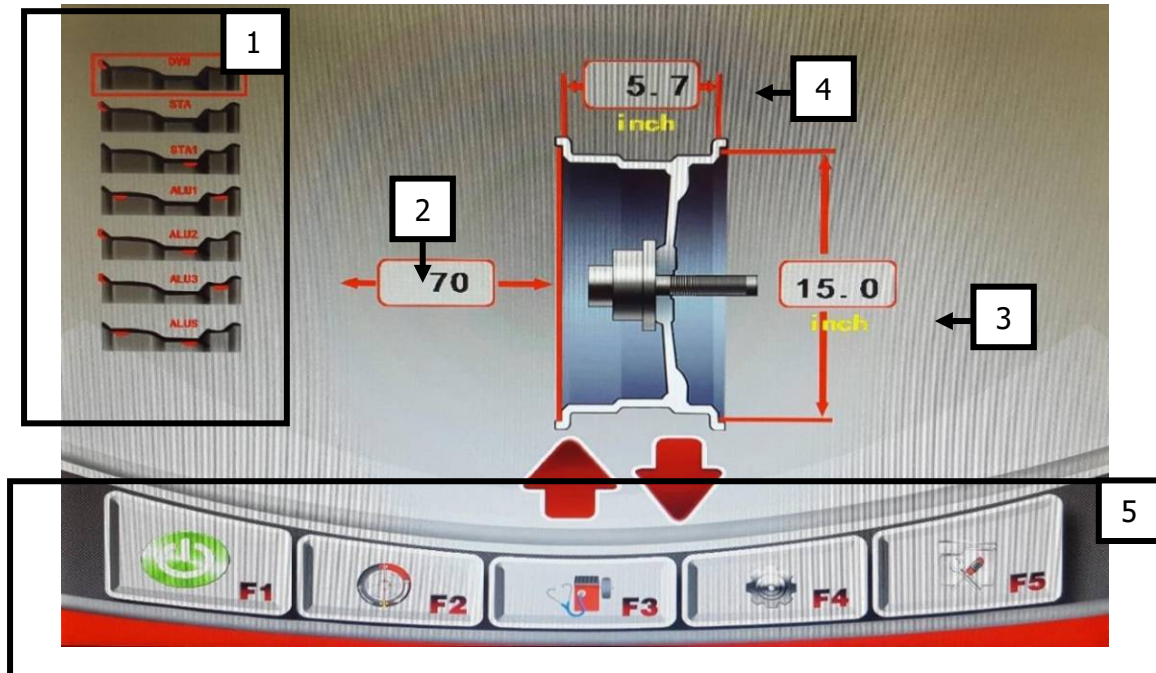
		<p>ATH-Heinl GmbH & Co.KG Kauerhoferstr. 2 - 92237 Sulzbach-Rosenberg - GERMANY</p>		
<div style="background-color: #cccccc; height: 27px;"></div>				
Typ Type	<div style="background-color: #cccccc; width: 100%; height: 44px;"></div>	Volt	<div style="background-color: #cccccc; width: 100%; height: 44px;"></div>	
Serien # Serial #	<div style="background-color: #cccccc; width: 100%; height: 44px;"></div>	Ph Hz	<div style="background-color: #cccccc; width: 100%; height: 44px;"></div>	
Baujahr Year of built	<div style="background-color: #cccccc; width: 100%; height: 44px;"></div>	Amp. kW	<div style="background-color: #cccccc; width: 100%; height: 44px;"></div>	
<p style="text-align: center;">Assembly in China implemented by ATH Co. Ltd. Shanghai</p>				

General specifications

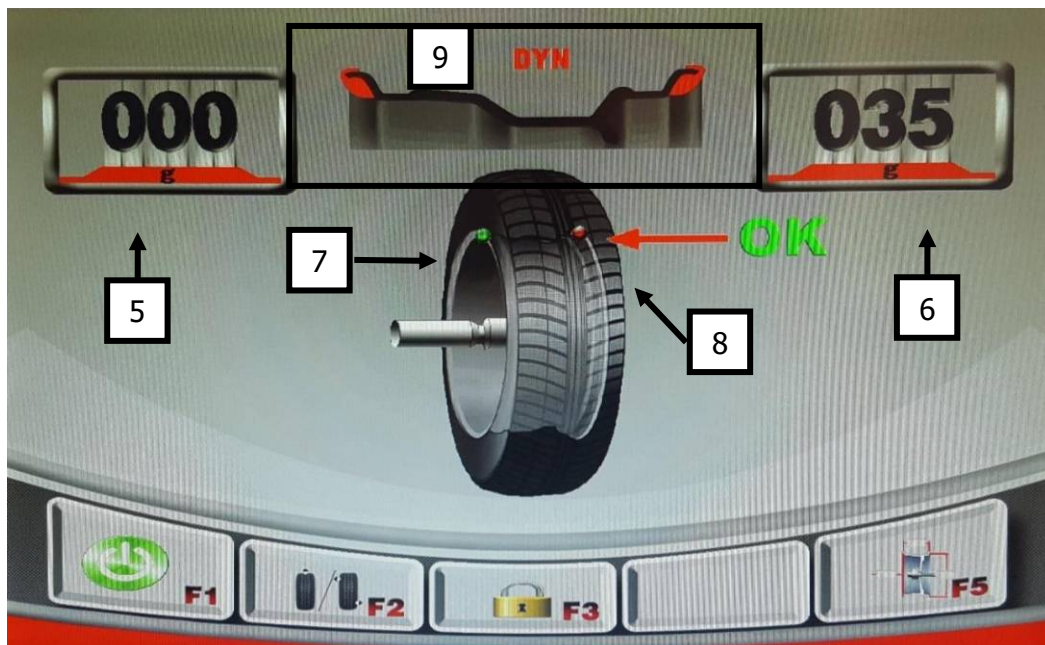


1. Main switch with emergency stop function for switching on and off
2. Cone holder
3. Weights rack
4. Protective bow
5. Measuring device
6. Balancing shaft
7. Display
8. Operation panel
9. Brake pedal
10. Rim width measuring device

Display of unbalance:




1) Selection of balancing programs	2) Distance from balancer to first position of counter-weight
3) Diameter of wheel	4) Width of the wheel
5) Main menu	F1) Start
F2) Optimization program	F3) Diagnosis
F4) Settings	F5) Calibration program



5) Value of unbalance INSIDE	6) Value of unbalance OUTSIDE
7) Location of counter-weight INSIDE	8) Location of counter-weight OUTSIDE
9) Position of counterweight location	



10) Buttons for direction up-down-right-left [OK]-button	11) Function buttons
12) [ESC]-button to cancel	13) [STOP]-button to exit
14) [START]-button to start	

 Operate the keys exclusively with your fingers. Never use sharp objects.

Technical specifications

Maximum wheel weight	< 65 kg
Wheel diameter	12 - 24 inch
Wheel width	1,5 - 20 inch
Maximum wheel diameter	800 mm
Balancing accuracy	+/- 1 g / 0,1 Oz
Measuring accuracy	>99%
Measuring time	7 - 12 s
Motor	0,25 kW
Electrical system	1/220V/50 Hz
Power consumption	<15W in Standby
Balancing speed	180 rpm
Protection class	IP 54
Noise level	<70 dB(A)
Shaft diameter	40 mm
Balancing programs	Dynamic mode (default) Static mode Standard „ALU-1“, „ALU-2“ mode „ALU-S “mode
Additional functions	OPT (Optimization) mode HID (Behind spokes location) mode Unit set up in g / Oz, mm / inch
Anchoring	Anchor bolts: M8 x 100
Anchor quantity	4 pieces
Dimension of the machine (L x W x H)	approx. 1330 x 800 x 1700 mm
Weight net / gross	190 / 219 kg

Packing

Check the goods in the presence of the transporter.



Check the package for visible damage.

In the case of damage or defect, do not accept the goods.

Record the defect and amount of missing parts on the delivery note and report to the supplier.

Instructions for transport and storage:

- Carefully raise the load properly with suitable, in faultless condition tools.
- Avoid jerks. Beware of bumps, crossbows, etc.
- Keep the removed packing parts in an area which is inaccessible to children and animals until disposal.
- Storage temperature: $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$
- Humidity: 20%-95%

Dimension	
Length	850 mm
Width	950 mm
Height	1270 mm



In the picture you will find the current scope of delivery.



Additionally, you will find an accessory package
INSIDE the wheel balancer.
To get it you must tilt the machine slightly.

If something is missing in the scope of the delivery
(see packing list), please contact our sales
department.

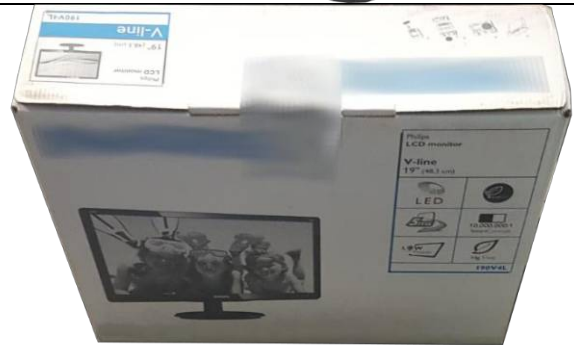


Scope of delivery

Wheel guard
 Consisting of two plastic parts and one frame with handle



19-inch LCD Monitor with bracket



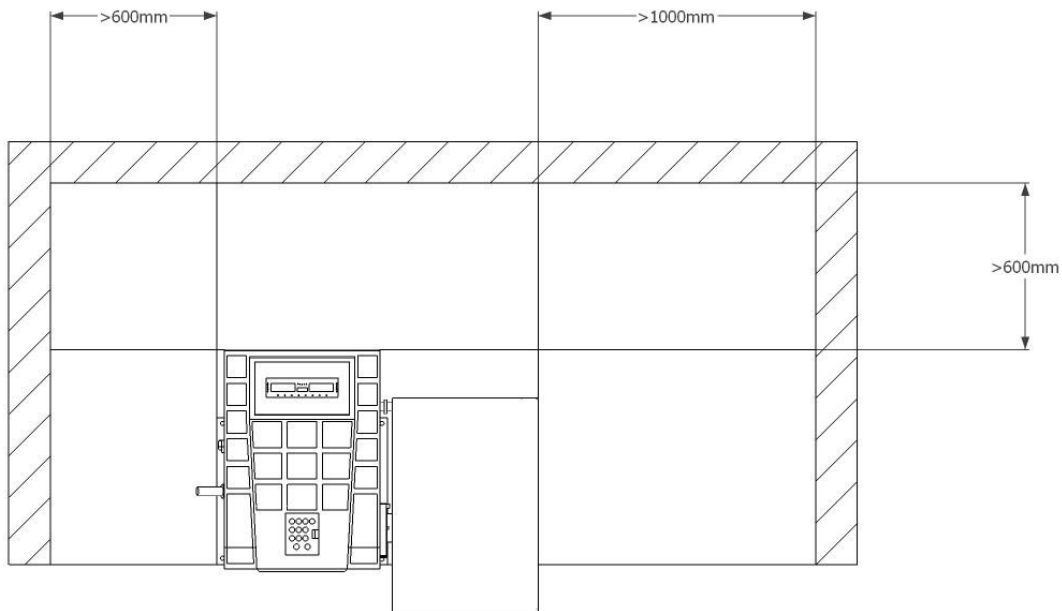
<p>Wheel calliper Measuring range diameter: 10 – 23 inches Measuring range width: 3 – 14 inches Packing dimensions: 455 x 430 x 50 mm</p>	
<p>Mechanism for wheel cover Screw for fixing of wheel cover Fixing materials Packing dimensions: 350 x 230 x 160 mm</p>	
<p>Accessory box Packing dimensions: 385 x 240 x 280 mm</p> <p>Adhesive weight remover Counter-weight 5g Counter-weight 10g Counter-weight 35g Counter-weight 50g Counter-weight 100g Counter-weight plier Hex-keys Cup for quick-nut Rubber lip for cup Tension spring Anchor bolts</p>	

Shaft
Screw for shaft
Quick nut
Cone 45 – 75 mm
Cone 70 – 90 mm
Cone 88 – 110 mm
Cone 105 – 130 mm
Spacer for Cone 105 – 130 mm



INSTALLATION


Place of installation



Operating temperature:	0-50 °C
Humidity:	≤85% by 30 °C
Sea level	≤1000m
Power connection & grounding cable (see technical data) is too made with plug or direct connection.	
Necessary cable	See technical data

 The installation of the machine is **not allowed** in **wet** rooms as well as in rooms with a **risk of explosion**.

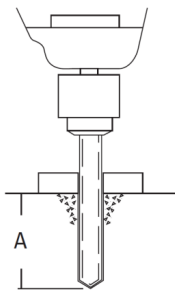
Mounting

 This manual is **not** to be mounting instructions but only as a help for skilled technicians. For the following works, suitable clothes must be worn and individual safety devices must be made. An incorrect mounting and setting excludes warranty and liability.

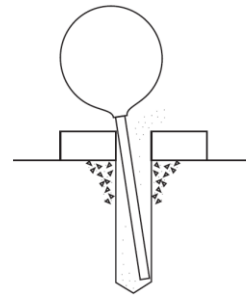
1. Mounting of the wheel balancer
 - a. Lift the wheel balancer from the pallet, use hereby solely the intended support points. In no case lift the machine at other points as e.g. the shaft, the display or the accessory plate.
 - b. The machine must stand firmly on the floor at the intended support points, if necessary there must be used washers.

2. Fixing with security anchors:

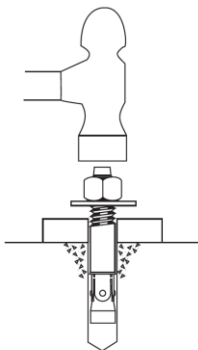
- a. Bore holes, pay attention in doing so to the necessary boring depth A and the boring diameter of the anchor manufacturer



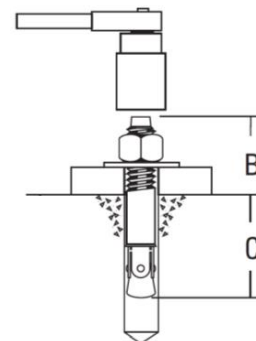
- b. Clean the inner of the holes




- c. Put the anchor bolts into the holes until you reach the bottom of the hole.



- d. Tighten the nut with the necessary torque specified by the manufacturer. Clamping thickness B depends on flooring.



 The wheel balancer must be fixed firmly on the floor for achieving an exact balancing result.

3. Installing of balancing shaft

Clean the adaptor before mounting the balancing shaft



!!! Before fixing it must be payed attention to that both markings fit together!!!

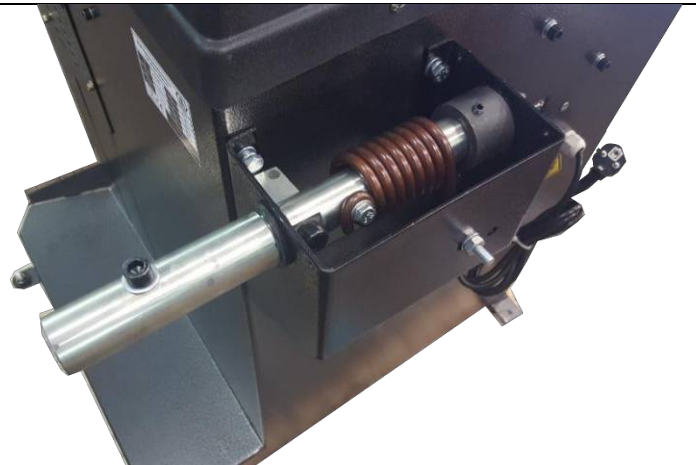


Now fix the balancing shaft to the clamping cup with the attached screw.



4. Installing of wheel cover

Remove the upper cover of the box.
Fixing the mechanism on the balancer chassis by help of the screws, spring rings and washers.



Connect the mechanism on the specified connection port. Add cover of the box again on top and fix it.



Remove the handle of the frame for the wheel cover.
Remove the fixing screw on the shaft of the mechanism.



At first place the backside of wheel cover on the shaft.

Then take the frame and slide it through the backside wheel cover onto the shaft.



Now slide the front side of the wheel cover on the frame.

Connect both parts together and fix them by using two screws on the side.

Locate again the fixing screw on the shaft of the mechanism.

Install the handle on the frame.



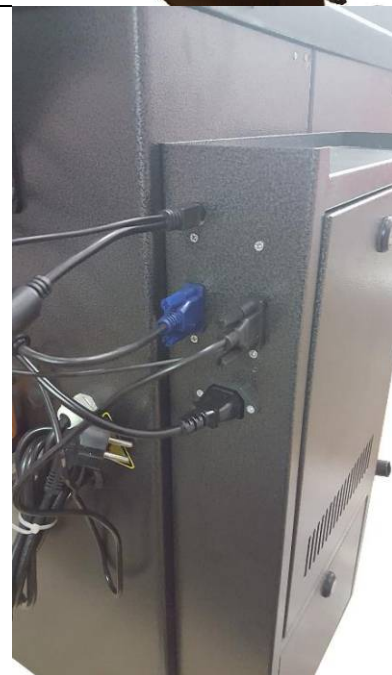
5. Install the monitor

Attach the monitor support on the balancer by using the four screws.

Remove the upper two screws of the cable channel to place the connection cables of the monitor inside of this channel.



Now connect the cables to the balancer.



Install the monitor on the holder by using the four screws,

Connect the cables to the monitor.
Add again the two top screws on the channel.



6. Install of tire width gauge (optional)

Install the support on the frame of the wheel cover.



Install the arm on the frame of the wheel guard by using two hex bolts with washer, spring ring and nut.



Fix the connection cable by using tie strips on the frame of the wheel cover.

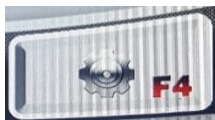


Finally, the arm can be connecting on the specified connection port on the balancer.




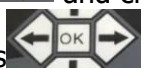
7. Activate the width measuring gauge

Now you can activate the measuring device inside the system.




Hereby press the F4 button in the main menu.

Switch in the setting to point 7 "wheel width

device" by using the arrow keys  and change to "Yes" by using the arrow keys .



8. Electrical connection

 Please observe the general as well as the local regulations. Therefore, this step may only be carried out by a trained specialist.

Pay attention to the necessary supply cable as well as the specified voltage (see technical data).



The main connection cable of the machine must be provided with a plug which corresponds to the relevant standards. If the machine is connected directly (without a plug), it is recommended to secure the circuit breaker for the balancer with a padlock so that only the appropriate personnel has access. Connect the machine via its own connection and its own suitable circuit breaker.

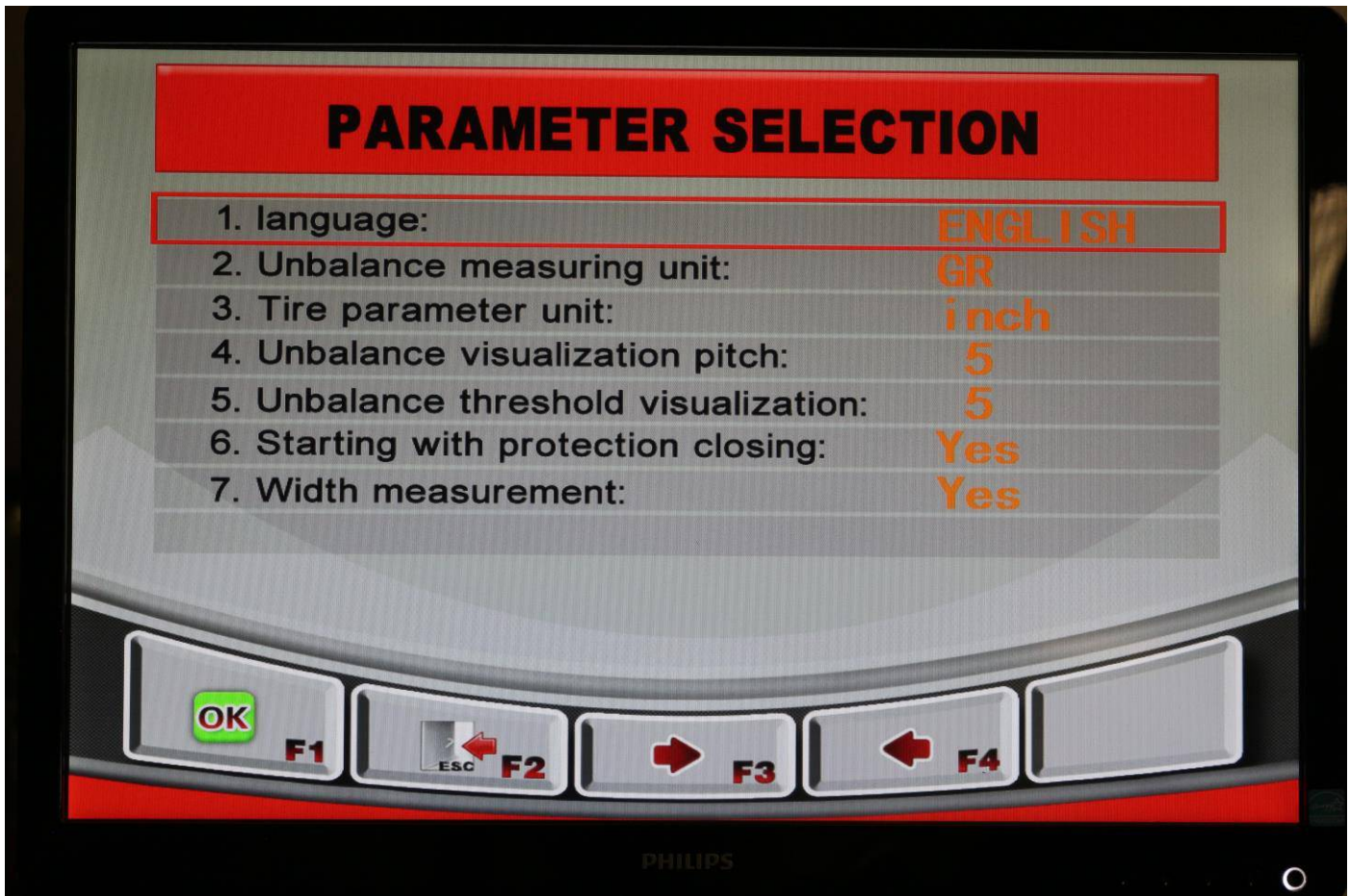
SETTING AND CALIBRATION

System setting

Basic settings can be set with the system settings.



To access the setup menu, press F4 button in the main menu.

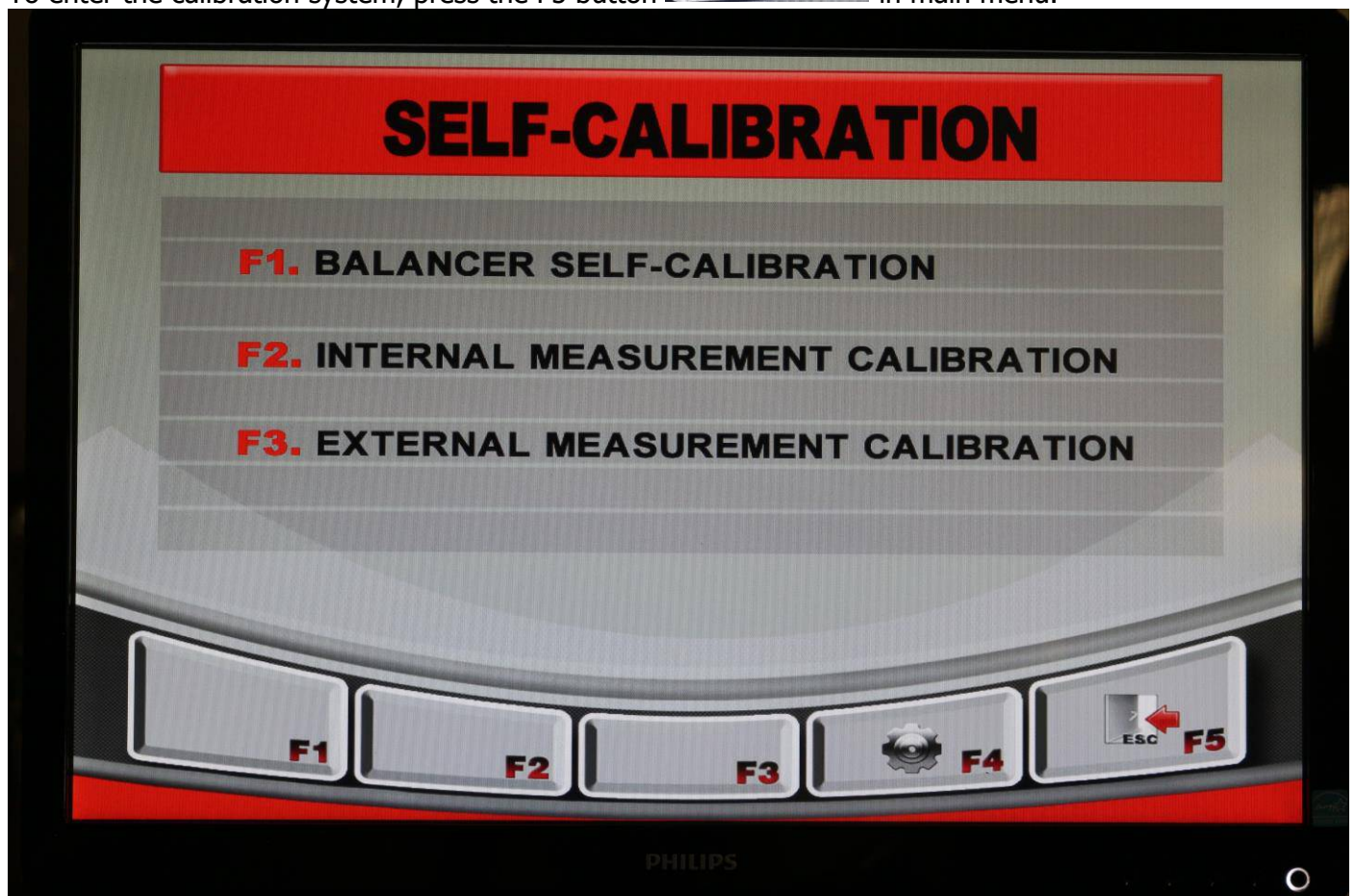


Calibration menu

The balancer **MUST** calibrate after installing the balancer, before each main season or longer rest without use.

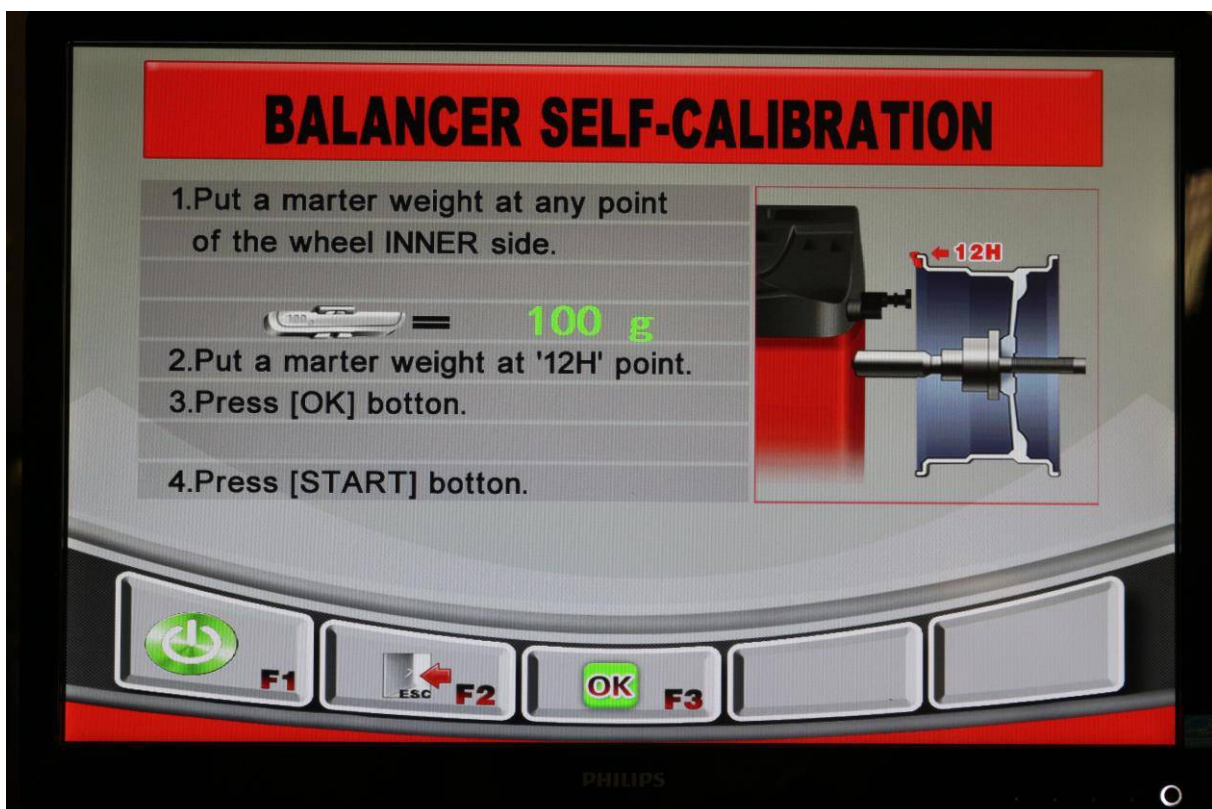
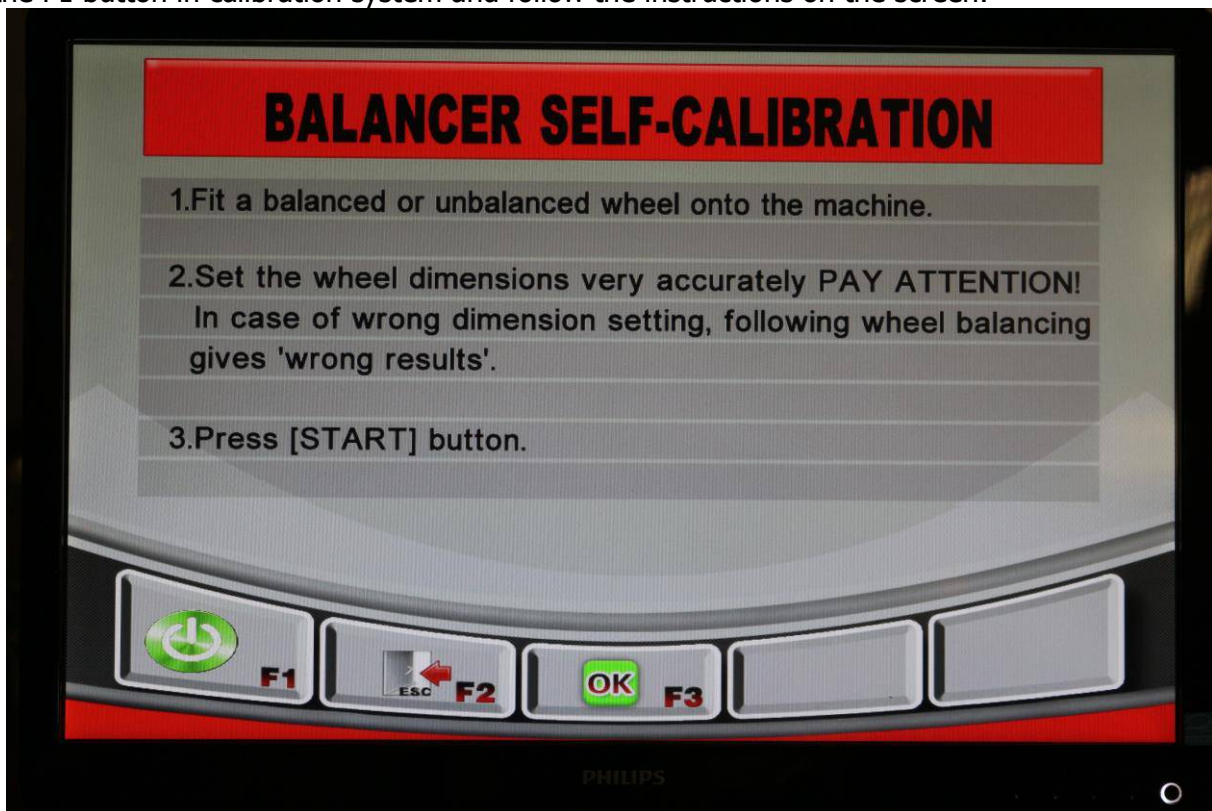


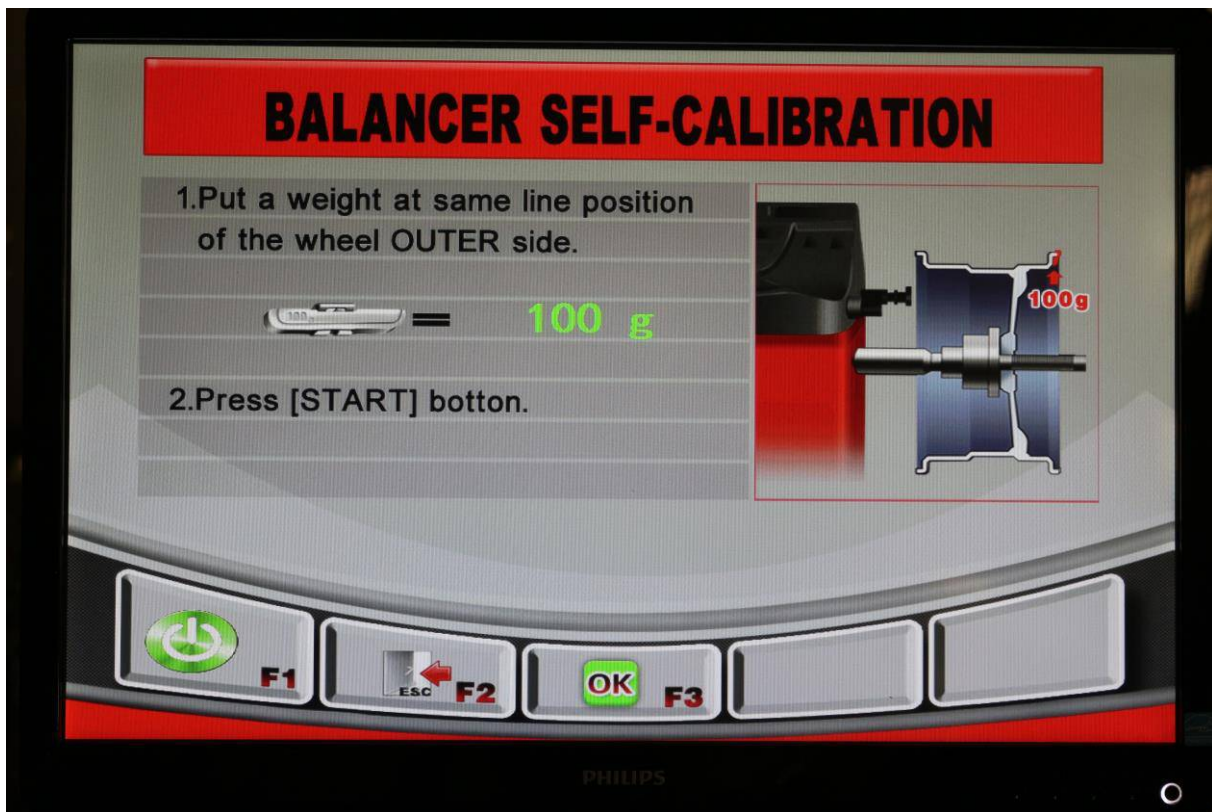
To enter the calibration system, press the F5 button in main menu.



Calibration of piezo transducer

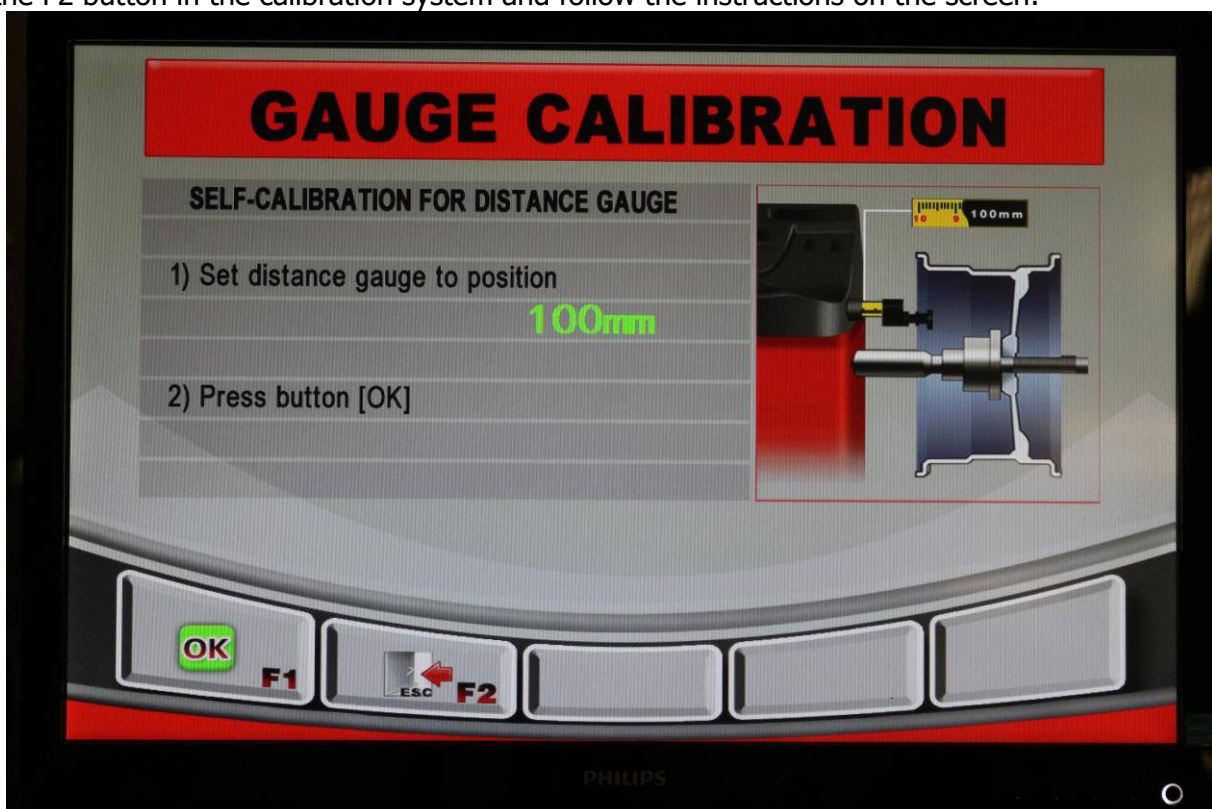
Press the F1 button in calibration system and follow the instructions on the screen:





Calibration of the measuring device

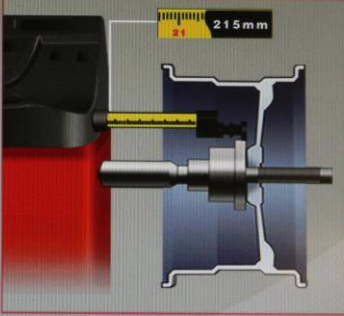
Press the F2 button in the calibration system and follow the instructions on the screen:




GAUGE CALIBRATION

SELF-CALIBRATION FOR DISTANCE GAUGE

- 1) Set distance gauge to position
215mm
- 2) Press button [OK]



The diagram shows a cross-section of a wheel hub with a distance gauge probe inserted. A yellow scale bar above the probe indicates a distance of 215 mm.



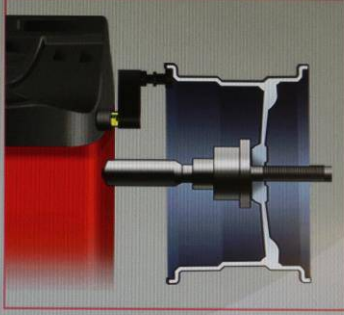
The control panel shows the 'OK' button (F1) highlighted in green. The 'ESC' button (F2) is also visible.

PHILIPS


GAUGE CALIBRATION

SELF-CALIBRATION FOR DIAMETER GAUGE

- 1) Set diameter of the rim
Used: 15.0 inch
- 2) Press button[OK]



The diagram shows a cross-section of a wheel hub with a diameter gauge probe inserted.

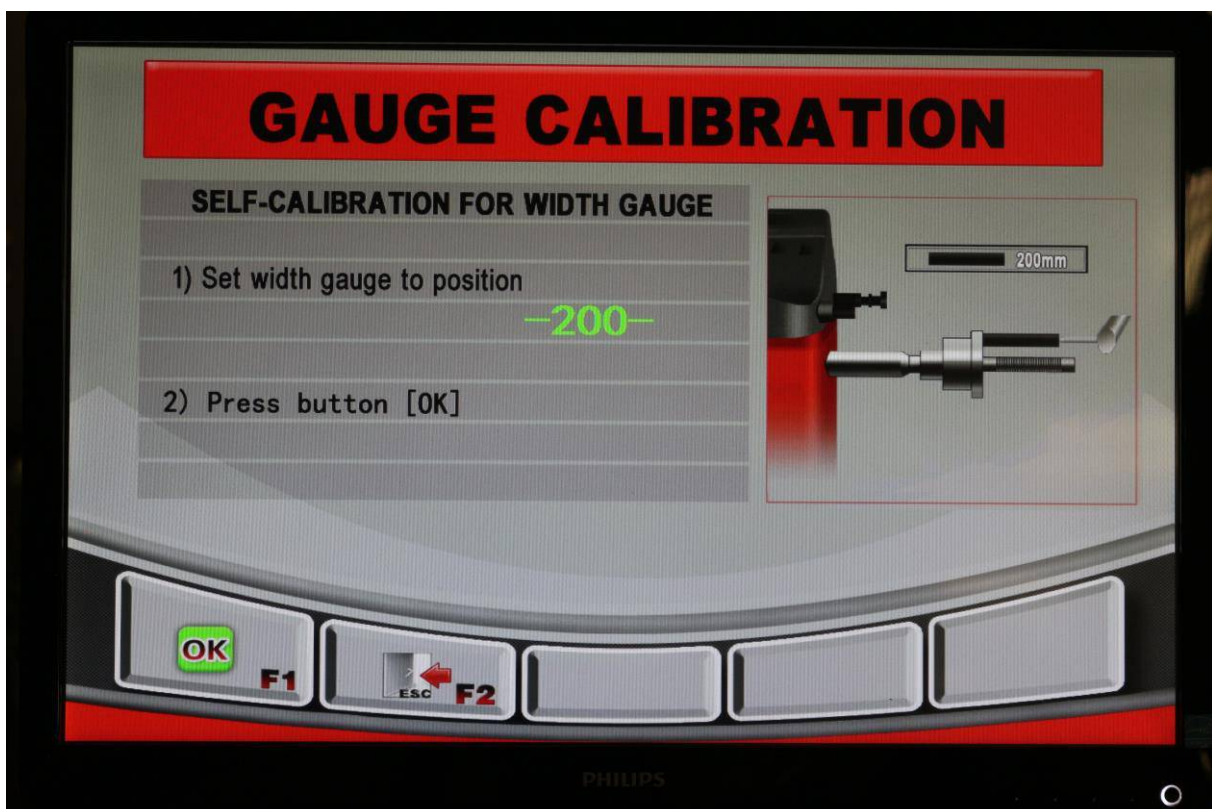
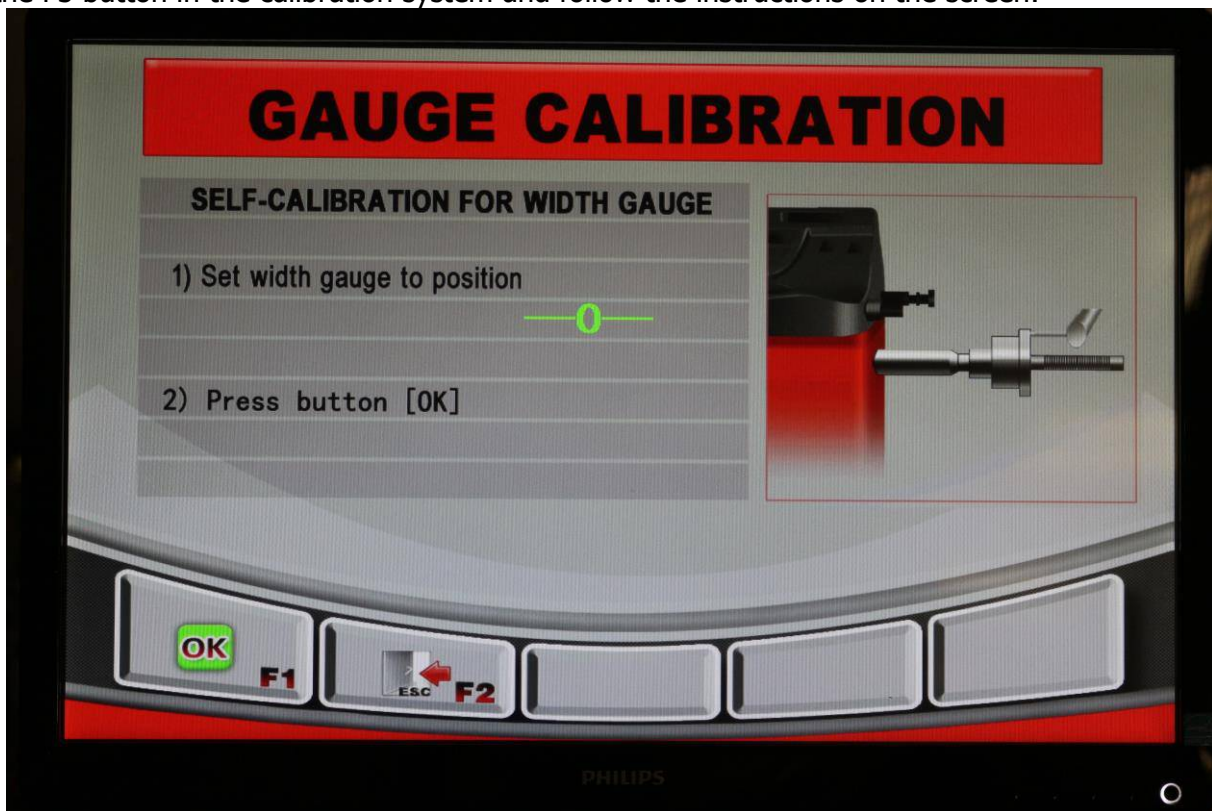


The control panel shows the 'OK' button (F1) highlighted in green. The 'ESC' button (F2), an up arrow button (F3), and a down arrow button (F4) are also visible.

PHILIPS

Calibration of the wheel width measuring device (optional)

Press the F3 button in the calibration system and follow the instructions on the screen:





Es empfiehlt sich beim ALU S Programm die Anzeige-Schwelle auf 10 g einzustellen.

Warum:

- Da die Maschine die dynamische und statische Unwucht ermittelt, wird die Laufeigenschaft des Rades bei der Gewichts-anbringung verändert.
- Da die Gewichte weiter in die Mitte der Felge positioniert werden, werden diese automatisch größer umso korrekte Auswuchtergebnisse zu erlangen.
- Da die Maschine die Ausgleichsgewichte an einem Punkt benötigt und es unterschiedliche Klebegewichtssysteme gibt, können diese eine große Gewichtstreuung verursachen.
- Die Klebegewichte werden nicht 100%ig an der benötigten Stelle angebracht.

OPERATION

Operation instruction

WHEEL BALANCER

RISKS FOR HUMAN AND ENVIRONMENT



- Risk of tilting or slipping of the machine
- Risk of slackened wheels
- Risk of flying away dirt or dust particles
- Risk of loose hanging clothing or long hair
- Trip hazard and falling
- Hardness of hearing by hurtful noise
- Disease of the backbone by lifting and carrying heavy loads

PRECAUTIONS AND RULES OF CONDUCT

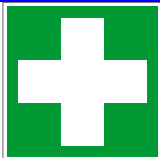


- Ensure proper stability
- Wear personal protective clothes:
Safety shoes,
Protective goggles and gloves,
ear protection
- Put protective device in operation
- Use proper adapters
- Clean the wheel from dirt (wet cleaning, do not use compressed air!)
- Wear close-fitting working clothes, possibly with Velcro fastener on arms and legs
- Protective cap for long hairs
- If possible, use transport devices and lifting devices and transport in pairs
- Pay attention to an ergonomic workplace design
- Right lifting and carrying for the backbone

BEHAVIOUR IN CASE OF ERROR

- In case of security relevant errors stop immediately the operation and secure it against use
- Inform responsible person in case of defects
- Do not make any alterations/changes on the machine!

FIRST AID



- Keep in mind in case of an accident not only to save the injured person and to render first aid but also to secure the scene of accident.
- Report every accident immediately to the responsible person.
- Place of first aid kit and first aid book: _____
- Record all information in the first aid book.

Emergency call:

MAINTENANCE, DISPOSAL

Reparations are only allowed to be made by the after sales service of the manufacturer.

Safety instructions

- Only skilled persons can operate the machine.
- If the operator makes unauthorized alterations and/or changes on the machine the CE verification is invalidated and ATH-Heinl is excluded from liability for damages resulting from such alterations and/or changes.
Safety devices are not allowed to be removed or to be taken out of operation
- Only use the machine according to its intended and specified use.
- As there is always a residual risk which cannot be foreseen while working with technical work equipment, there are different self-explanatory warning symbols on the balancing machine. This warning symbols signalize the operator a possible residual risk and shall provoke a special care to avoid accidents and/or damages of the product to be treated.
- In general, the operator shall eliminate possible residual risks before by a proper and careful attitude.
- Always use correct and proper working materials.
- Wear suitable protective clothing respectively protective agents (e.g. protective glasses, ear protection, safety shoes and so on).
- Consider given information, instructions and technical data of the machine producer respectively of the manufacturer of the product to be treated.
- Power-operated wheel balancing machines are only allowed to be used in Germany with a protection bow.
- Do not use compressed air when cleaning the machine.
- Clean plastic surfaces with alcohol (do not use solvent cleaner).
- It must be paid attention to that the wheel is clamped fix on the adapter before beginning the balancing process.
- The operator must pay attention to that there are no other persons in the danger zone during the balancing process.
- Do not put big objects on the machine as this could affect the accuracy of the balancing result.

Further safety instructions in detail are indicated in the single chapters.

Utilization

1. Self-diagnostic

After switching on, the device makes a self-test and then automatically switches to "Dynamic" mode

2. Mounting of a wheel

Select a suitable cone to centre the wheel on the balancing shaft.
As shown below, there are 2 easy ways to fix the wheel.

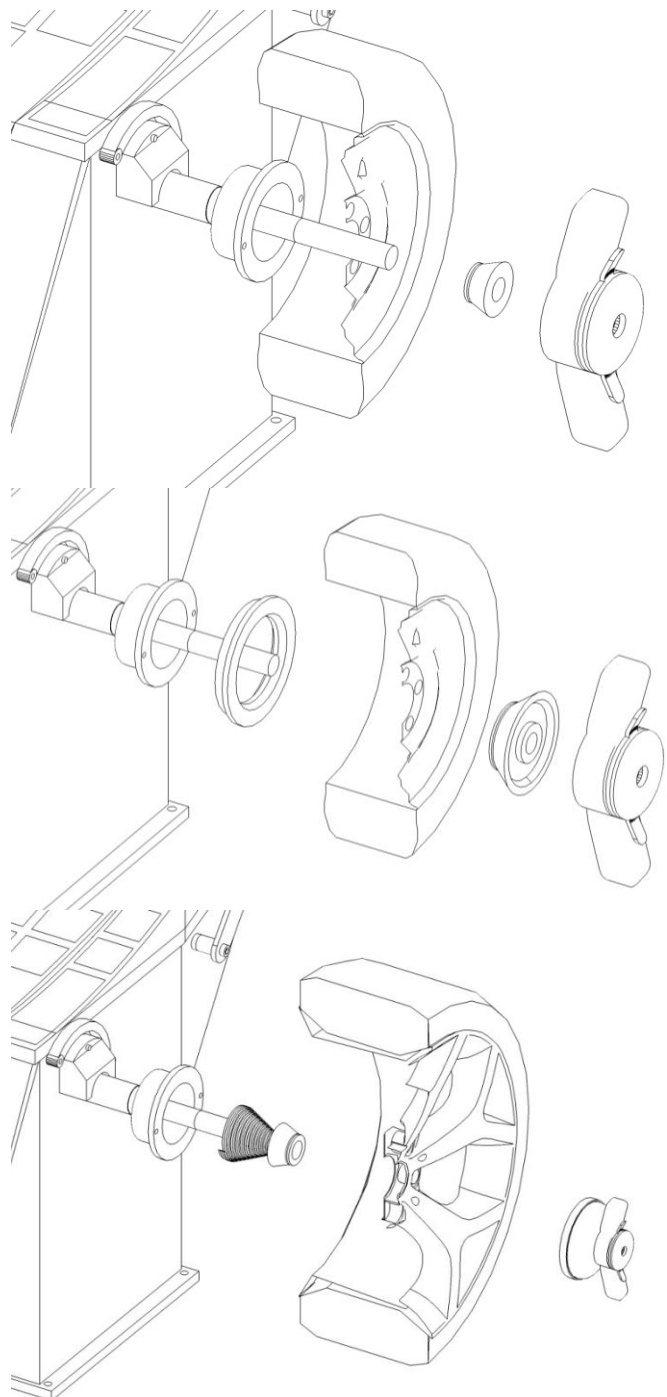
- a. The first way to mount a wheel is shown in the picture.
The rim is fixed by using a cone from the outside of the rim.

When using the largest cone, the spacer ring must be used additionally.



This possibility increases the risk of clamping errors and is therefore only recommended for steel rims.

- b. By the second possibility, at first you place the spring on the shaft. Then you can use a suitable cone. After positioned the wheel on this cone you can fix it by help of a pressure cap on the shaft.



3. Chose the balancing mode

The adjustment can be made in the main menu:



DYN

Dynamic mode (default):

This function determines the height and side balance of a steel rim.

The counter weights are attached to the outside and inside of the wheel.

STA

Static mode:

This function determines the height balance of a steel rim.

The counter weights are attached to an inner position of the rim.

STA1

Static mode:

This function determines the height balance of a steel rim.

The counter weights are attached to a middle position of the rim.

ALU -1-

This function determines the height and side balance of an alloy rim.

The counter weights are attached to defined position on the wheel.

ALU -2-

This function determines the height and side balance of an alloy rim.

The counter weights are attached to defined position on the wheel.

ALU -3-

This function determines the height and side balance of an alloy rim.

The counter weights are attached to defined position on the wheel.

ALUS

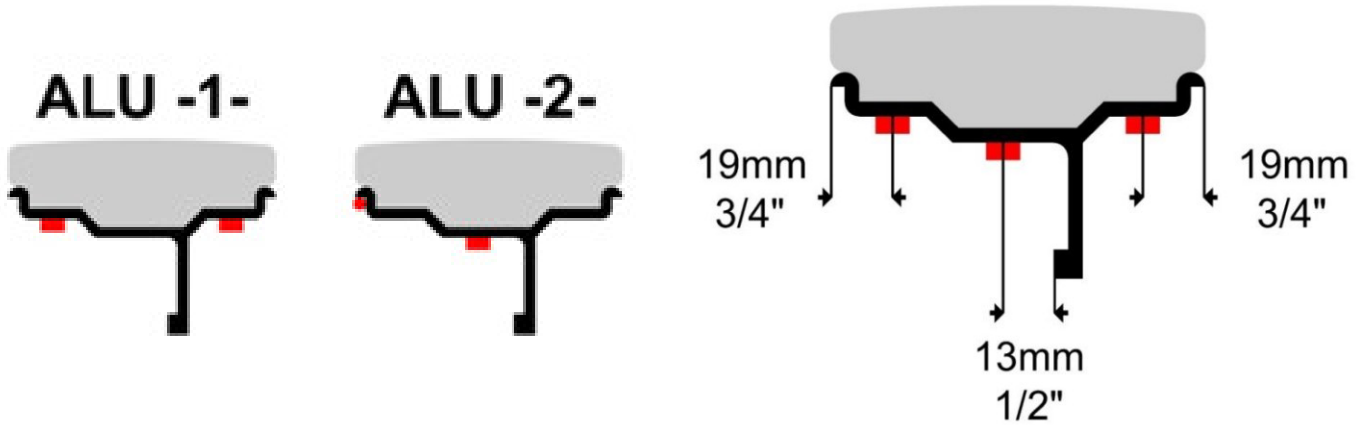
This function determines the height and side balance of an alloy rim.

The counter weights are attached to user-defined position on the wheel.



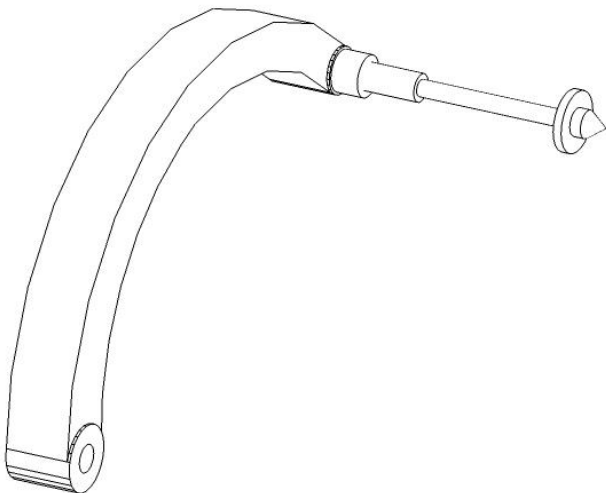
For balancing alloy rims, we recommend selecting the ALU S mode. This not only considers the exact cross-section of your rim, but also helps you to accurately position the adhesive weight.

For ALU 1, the following dimensions must be observed when applying adhesive weights:



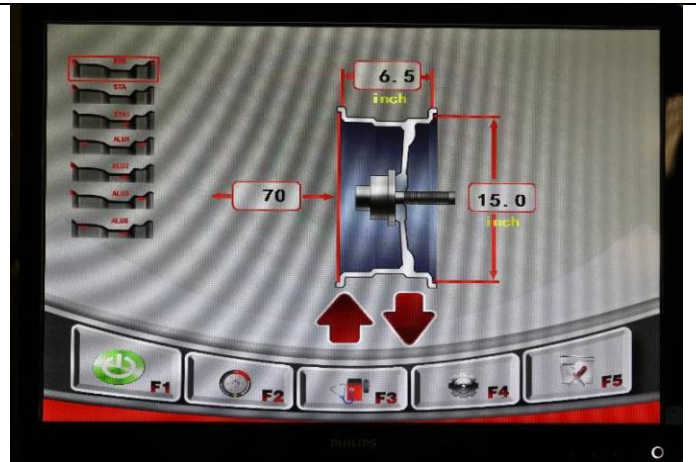
4. Input of tire dimension
 - a) Basics:

In motorcycle mode an optional measuring finger (+100mm) must be used.



b) Wheel parameters and input for calculating the unbalance:

In Modes DYN, STA and ALU1 following dimensions must be recoded:
 [A] Distance between balancer and wheel
 [B] Tire width
 [D] Rim diameter

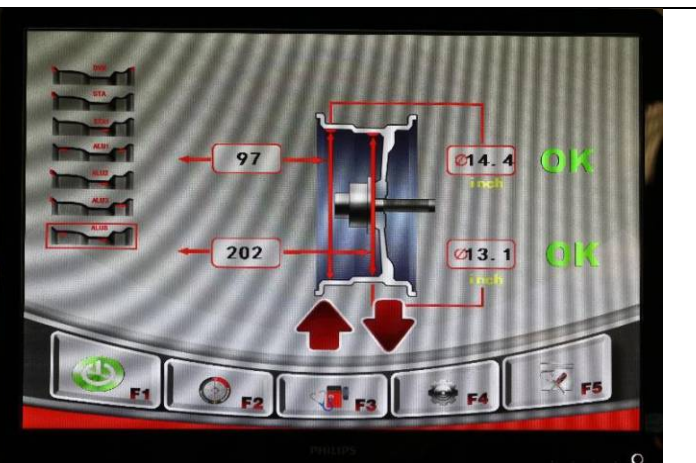


The input will be done automatically by locate the measuring device on the edge of the rim. Hereby the Values [A] and [D] will be input automatically.



Now the tire width [B] can be measured by the second measuring device.

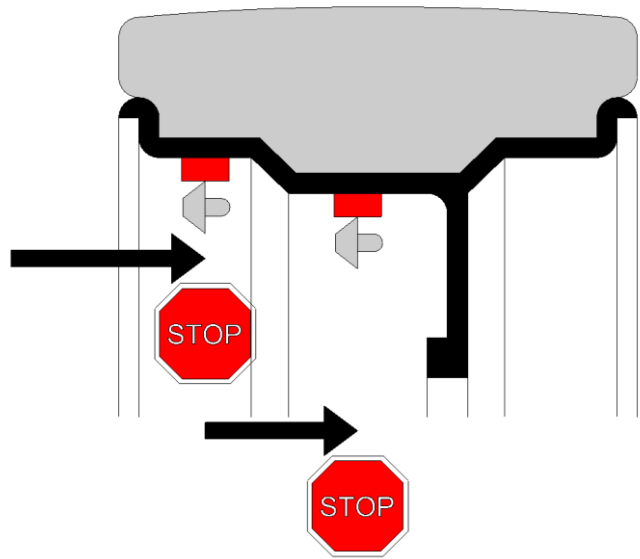
In Modes ALU2 and ALUS following dimensions must be recoded:
 [A] Distance between balancer and first point for adhesive weight
 [B] Distance between balancer and second point for adhesive weight
 [D] Rim diameter by first point for adhesive weight
 [dE] Rim diameter by second point for adhesive weight



During the measuring process, the measuring finger should be moved to the first point. After a short wait, the measuring finger can be directly moved to second point.
The [A]; [B]; [D] and [De] data are automatically input.

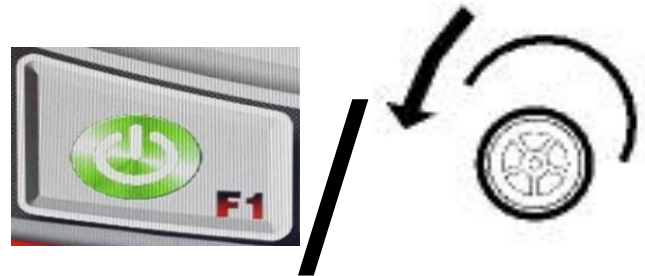
DANGER:

To balance in ALUS mode, the program does not need to be selected before.
To balance in ALU2 mode, the program must be selected beforehand.



Starting balancing

Start the balancing by pressing F1-button or close the wheel cover.

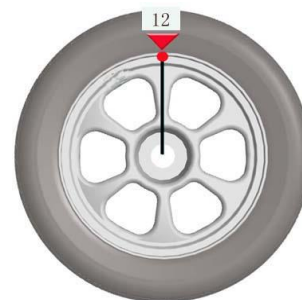


Turn the wheel until the mark is positioned on the 12 o'clock position. In this position the brake is activated automatically. This can be released by pressing the F3 button.



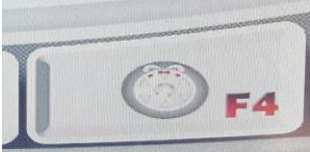
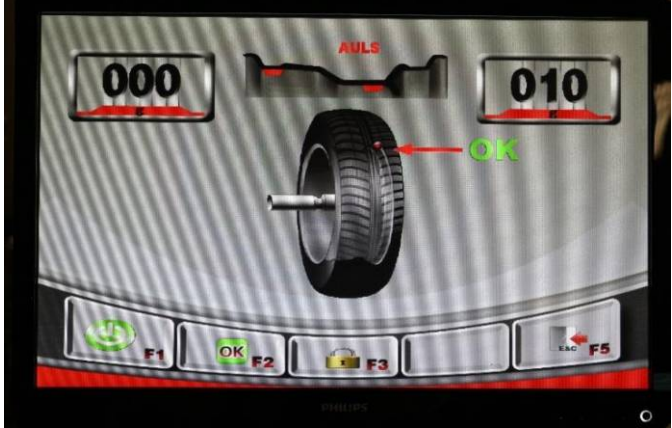

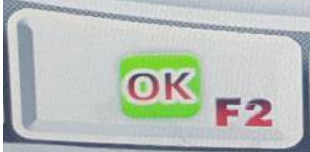

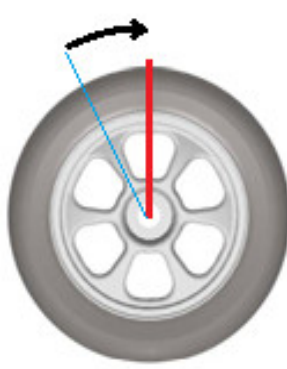
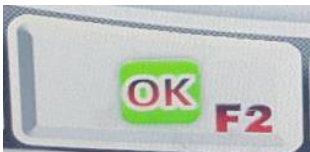
Now the counter weight must be attached to the wheel. The balancer supports the customer by positioned the counter weight precise position:

Program	INNER	OUTER
DYN	12 o'clock position (laser)	12 o'clock position
STA	12 o'clock position (laser)	
ALU1	12 o'clock position (laser)	12 o'clock position
ALU2	12 o'clock position (laser)	Weight location on the arm
ALUS	Weight location on the arm	Weight location on the arm

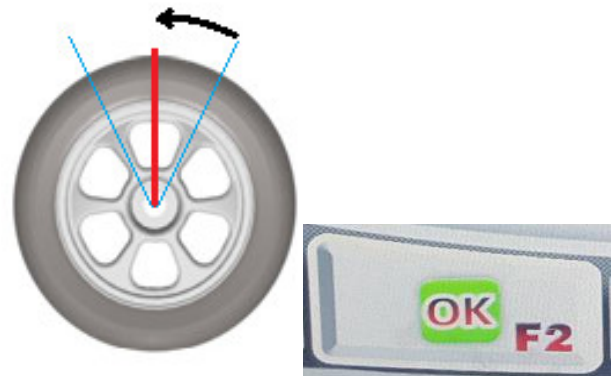


a) HID-Mode

With the HID function, it is possible to place the outer balancing counter-weight behind the spokes. This function is available in ALU2 and ALUS mode.

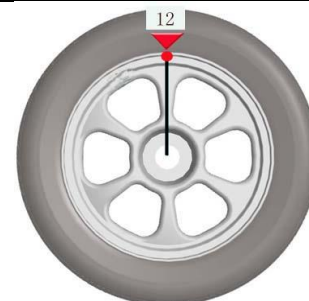
<p>After the balancing the HID-Mode can be started by pressing the F4 button.</p>	
<p>Rotate the wheel until the counter weight position is on the 12 o'clock position. Confirm with F2 button.</p>	  
<p>After this the display show P1: 12h Rotate the wheel until the left spoke is on the 12 o'clock position. Confirm this position with F2 button.</p>	  

After this the display show P2: 12h
 Rotate the wheel until the right spoke is on the 12 o'clock position.
 Confirm this position with F2 button.





After this, the display shows again the UNBALANCE INSIDE.
 The OUTER display, the weight is dimmed until one of the two positions is at 12 o'clock.

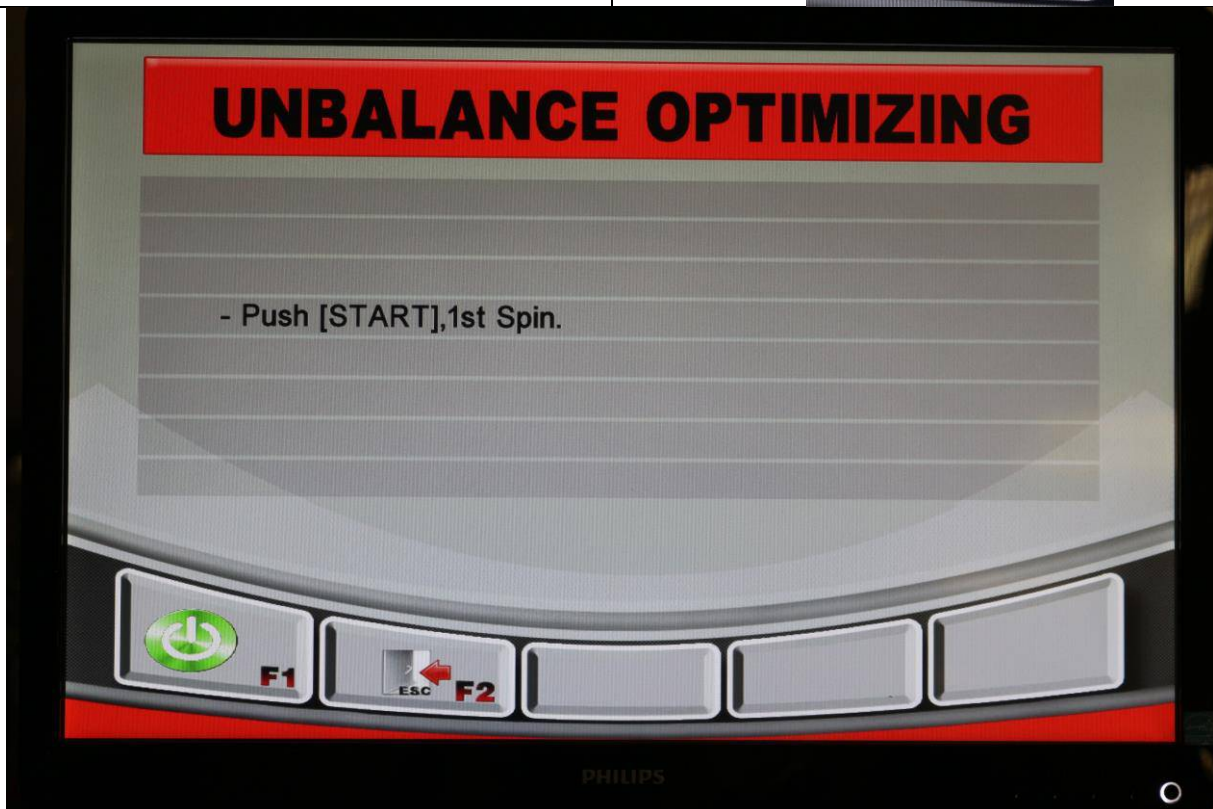
Now position the counter weight on the gauge and add the weight at the rim by using this.

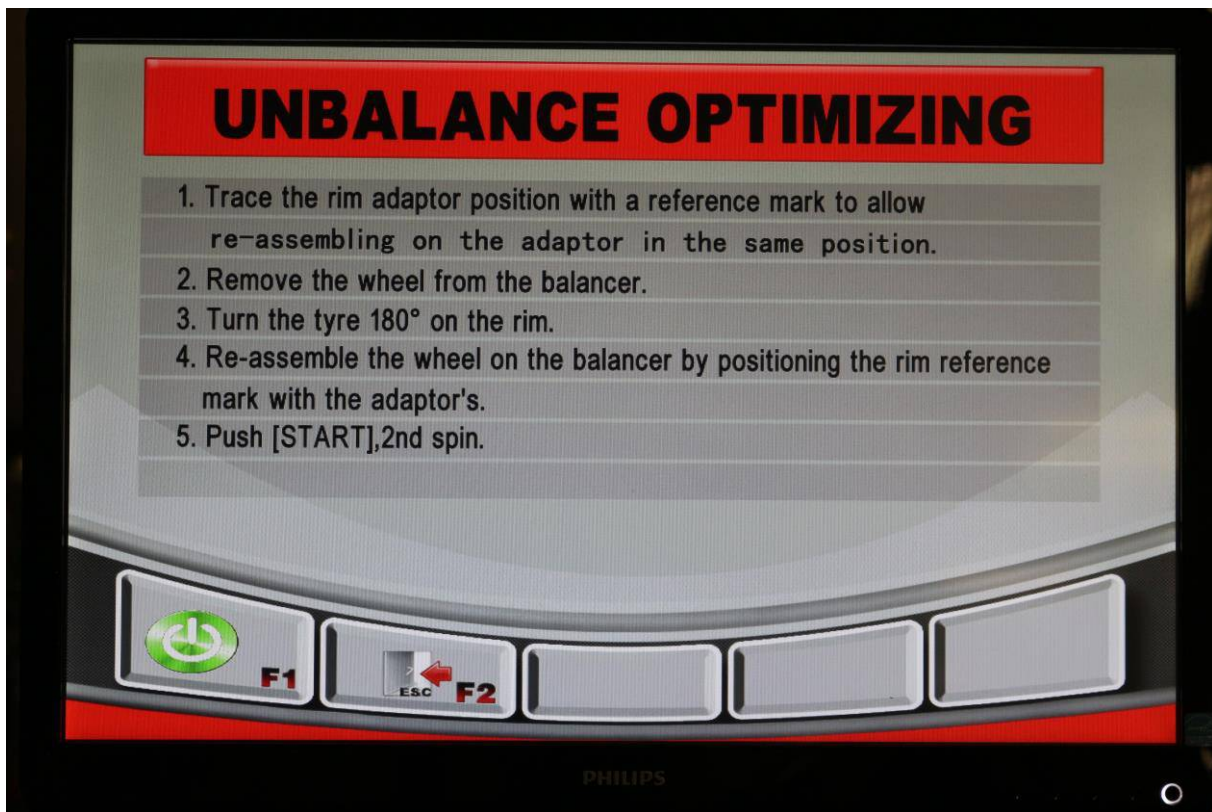


b) Optimization

By help of the OPT function it is possible to minimize the static imbalance of the wheel. The unbalance of the rim is matched with the unbalance of the tire.

<p>After a balancing run, you can check the static imbalance by pressing the F2 button. If the unbalance is more than 30g, it is recommended to perform an optimization.</p>	
<p>Hereby you can exit the unbalance site by pressing the F5 button. After this you can go to Optimization program by pressing F2 button</p>	



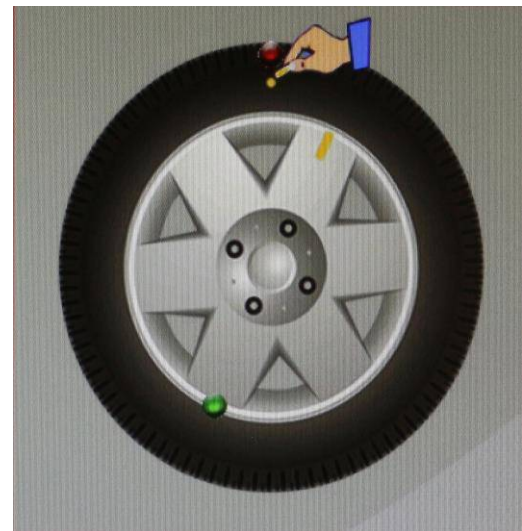
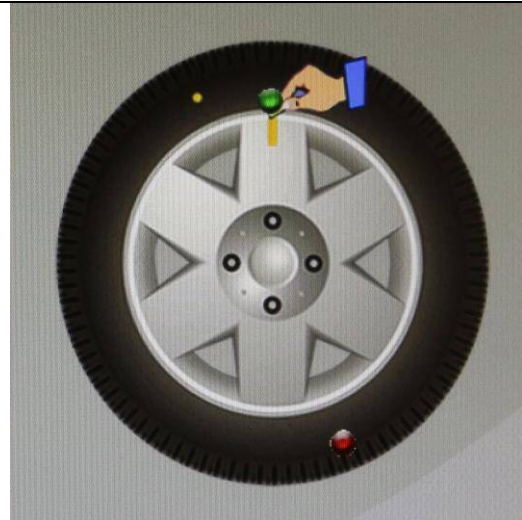


Add a mark on tire, cones position of shaft to the rim in line with valve.

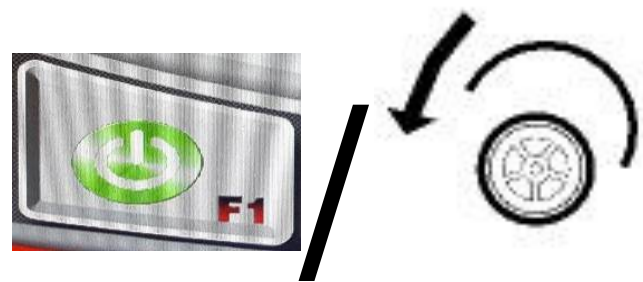
In the site the balancer shows the maximum unbalance optimization.

Mark the shown positions on rim and tire.

After this you can use a tire changer to match both point in one line.




After this you can re-start the balancing by pressing F1 button or close the wheel cover.



MAINTENANCE

Reparation works are only allowed to be done by authorized service partners or, after consulting ATH, by the customer.

 Before maintenance and reparation works the machine must be switched off from the power supply. (Main switch off, disconnect plug). There must be taken measures against switching on.

Works on the electrical parts respectively the supply lines are only allowed to be done by skilled personal/technicians.

Error and remedy

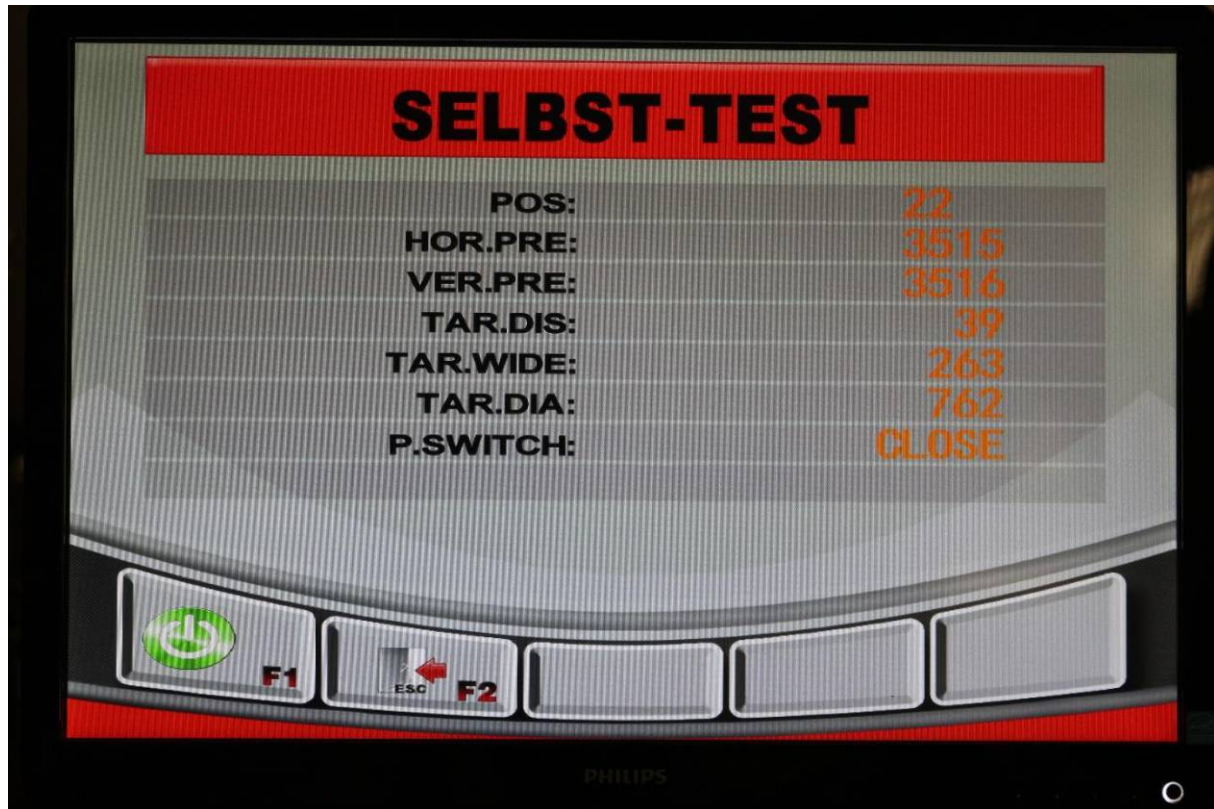
The wheel balancer can display the following errors:

Error code	Reason
Err -1-	See service instruction
Err -2-	1. To less weight on the shaft 2. Balancing shaft is not fixed 3. Loosen wheel on the balancer 4. Loosen belt
Err -3-	To big unbalance of the wheel
Err -4-	Pressure sensor defect
Err -5-	Wheel cover not closed
Err -7-	Saved data are lost
Err -8-	100g counterweight missing Pressure sensor defect Power or main board is broken

Troubleshooting



To access the diagnosis menu, press the F3 button on the main menu.



Symptoms	Cause	Solution
Different weight result ¹	Balancer is not fixed on the floor	Check the anchor bolts
	Incorrect calibration	Re-Calibrate the machine
	Shaft not fixed	Check the fixing of the shaft
	Shaft bent	Check the shaft
	Piezo-Sensor not fixed or broken	Check the tightness of the nuts or replace them
	Rim not clean or bent	Check the rim
Buttons not react	Keyboard not connected or loosen connection	Check the connection
Motor / Electronic		
Doesn't brake	Brake resistor defect or not connected	Check brake resistor or connection
Noises from the motor	Brake resistor defect or not connected	Check brake resistor or connection
	Main board broken	Contact ATH-Service team
	The capacitor is defect or not connected.	Check capacitor or connection
Circuit breaker activated	Main switch is not connected correctly or there is a contact error.	Check the connection

	Main board broken	Contact ATH-Service team
--	-------------------	--------------------------

¹More causes of "bad" results:

- Use of different adapters and resulting clamping errors.
- When using adapters, please pay attention to the installation instructions.
- Clamping by means of cones via a worn centre hole of the rim, differences of up to 10g may be possible.
- Unbalance of the tire on the vehicle can cause an imbalance on the brake drum or disc or worn mounting holes in the rim or brake. In such a case, readjustment is advisable without first removing the wheel.

Adjustment of drive belt tension

1. Carefully remove the cover (weight tray).
2. Unscrew the engine mounting bolts.
3. Move the motor by means of a tensioning screw, paying attention to the correct belt tension.
4. Re-tighten the engine mounting bolts.
5. Make sure that the belt does not run sideways.
6. Replace the cover.

Change fuses

1. Carefully remove the cover (weight tray).
2. Remove the fuse from the power supply panel.
3. Replace the new fuse with the old one using only fuses with the same values.

If the error persists, the ATH service should be contacted.

DECLARATION OF CONFORMITY



Declaration of conformity

For
Wheel balancer

Type
ATH W62

The following EG-directives are considered:

2006/42/EC (Machine-Directive)

The following harmonized standards are applied:

EN ISO 12100:2010
EN 60204-1:2006/AC:2010

Manufacturer:

ATH-Heinl GmbH & Co. KG
Kauerhofer Street 2
92237 Sulzbach-Rosenberg
GERMANY

Institute of Quality:

SGS Supervice Gözetme Etüd Kontrol Servisleri A.S.
Baglar Max. Osmanpasa Cad. No. 95
Is Istanbul Plaza, A Girisi
Günesli 34209 Istanbul
TURKEY

Reference number for the technical data:

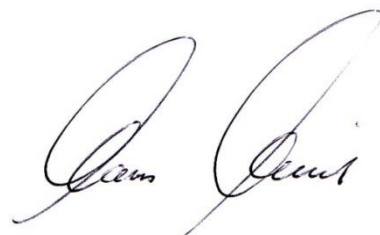
TCF-MD-140526-048

Number of the certificate:

0263/IN-IST-14
502756/AOO/AKC
(OUCE 141003)

Herewith we confirm that the above-named machines are according to the named EC-directives.

ATH-Heinl GmbH & Co. KG
Kauerhofer Street 2
D-92237 Sulzbach-Rosenberg
GERMANY
in June 2014



Hans Heinl (General Manager)
ATH-Heinl GmbH & Co. KG

BY MODIFICATION AND / OR CHANGES TO THE MACHINE, THE CE EXAMINATION IS EXCLUDED AND EXCLUDES ANY LIABILITY.

WARRANTY NOTE

Dealer address:	Customer address:
Company (or Customer Number)	Company (or Customer Number)
Contact person	Contact person
Street:	Street:
ZIP code & Town:	ZIP code & Town:
Tel. & Fax:	Tel. & Fax:
e-Mail:	e-Mail:
Manufacturer & model Serial number	Year of manufacture Reference number

Description of the message:

Description of required spare parts:		
Spare part	Article number	Quantity

IMPORTANT NOTES:

Damage caused by improper handling, lack of maintenance or mechanical damage, does not fall into the warranty. For machines that are not installed by a licensed technician from the company ATH, the warranty is limited to the provision of necessary spare parts.

Damages in transit:

- Obvious defect (note on carrier's delivery note, a copy of delivery note, Photos of the delivery must be sent immediately to ATH-Heinl)
- Latent defect (Shipping damage is discovered upon unpacking the goods, send damage report with pictures within 24 hours to ATH-Heinl)

Place & date

Signature & stamp

Scope of product warranty

- five years on the device structure
- power supply units, hydraulic cylinders and all other wear components such as turntable, rubber plates, Ropes, chains, valves, switches, etc., are limited to one year under normal circumstances / use under the guarantee
- ATH-Heinl repairs or replaces the returned parts during the warranty period after their own investigation

The warranty does not cover ...

- Defects caused by normal wear and tear, misuse, transport damage, improper installation, voltage or lack of necessary maintenance.
 - Damage caused by negligence or non-compliance with the instructions given in this manual and / or other accompanying instructions.
 - The normal wear and tear on parts requiring a service to keep the product in a safe operating condition.
 - Any component that has been damaged during transport.
 - Other components which have not been explicitly listed but are handled as general wear parts.
- Water damage, e.g. Rain, excessive moisture, corrosive environments, or other contaminants.
- Beauty errors; Do not interfere with the function

WARRANTY DOES NOT APPLY IF WARRANTY CARD IS NOT ATH-HEINL.

It should be noted that damage and malfunctions caused by failure to observe maintenance and adjustment procedures (as described in the operating instructions and / or instruction), incorrect electrical connections (rotating field, rated voltage, fuse) or improper use (overload, outdoor installation,), Do not rule out the warranty!

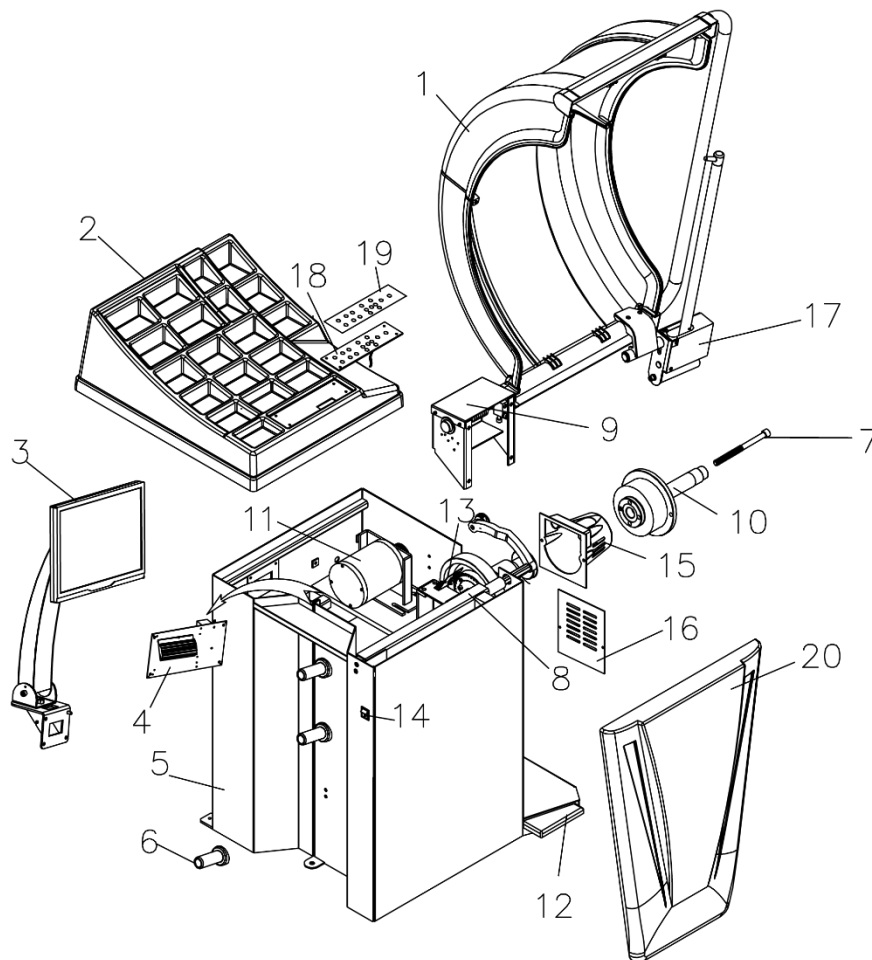


ATH-Heinl

SPARE PART BOOK

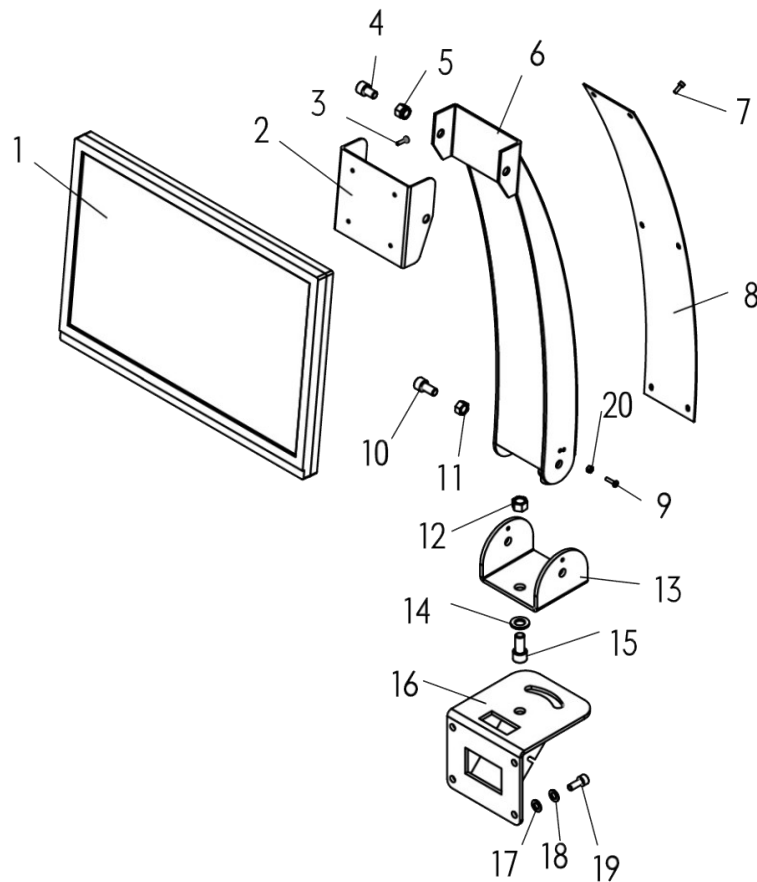


Machine



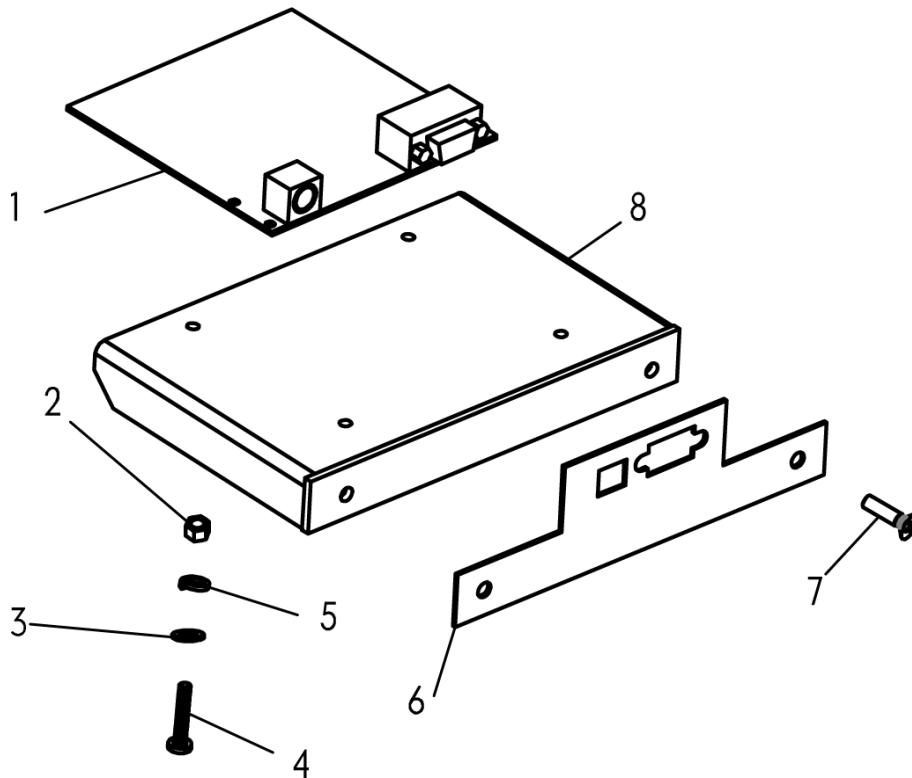
#	ATH #	Reference	Description	Note	x
1	RSB0005	0520230040	wheel cover		1
2	RKA0103	020602066	weight tray		1
3	RDA0001	060211011	display		1
4	RSP0002	0520210010	power board		1
5	RGE0003	0530203520	machine body		1
6	RKH0085	020601008	tool handle		3
7		030201172	screw	M14x60	1
8	RMA0001	0520204020	internal gauge		1
9	RSM0007	0520202020	support for wheel cover		1
10	RGW0062	0520201060	main shaft		1
11	RMO0755	0520212010	motor		1
12	RBM0001	0520206010	brake		1
13	RRP6000	0520215020	photocell		1
14	RHS0001	0520216030	switch		1
15	RRB7001	0520229020	laser head		1
16	RGE0002	0530203214	plate		1
17	RMF0115	0520205010	external gauge		1
18	RTP0172	021101013	key board		1
19	RSF1100	021101026	key panel		1
20	RAB0015	020602075	front cover		1

Display



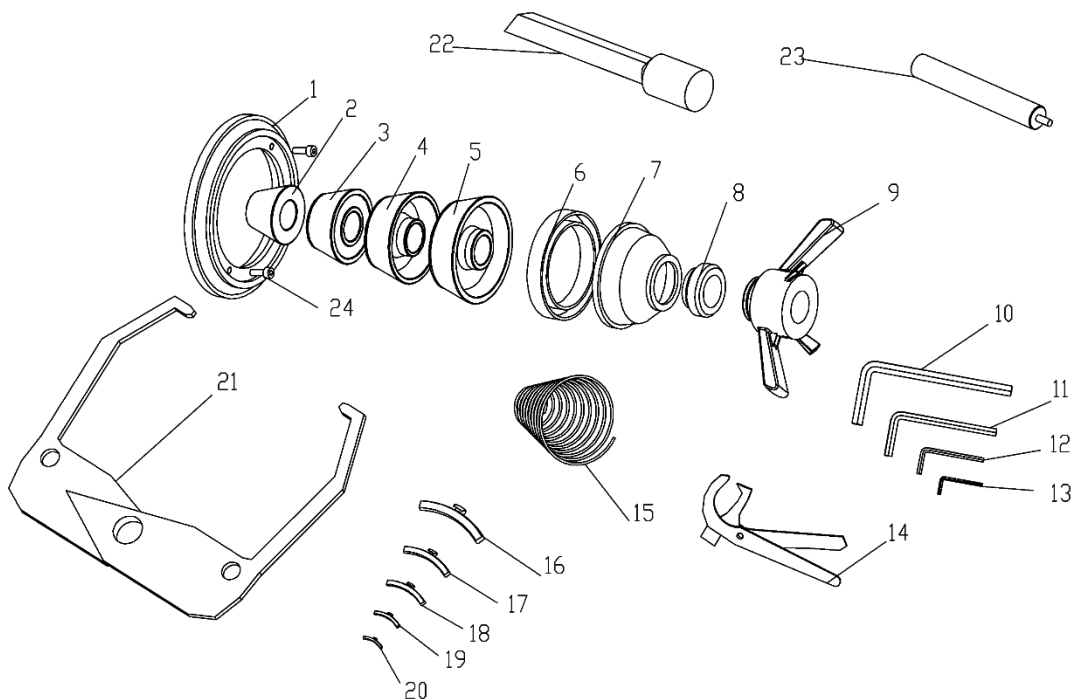
#	ATH #	Reference	Description	Note	x
1		020405005	LCD monitor	17"	1
2		030201337	screw	M4x16 GB/T 818-2000	1
3		030201082	screw	M10X20 GB/T 70.1-2000	2
4		030301055	self-locking nut	GB/T 889.1-2000 M10	2
5		030201004	welded support	M4X12 GB/T 70.1-2000	6
6		05020110200	Screw		1
7		030201006	back plate	M4x20 GB/T 70.1-2000	2
8		05020110209	Screw		1
9		030201082	screw	M10x20 GB/T 70.1-2000	2
10		030301055	lock nut	GB/T 889.1-2000 M10	2
11		030301056	lock nut	GB/T 889.1-2000 M12	2
12		05020110264	base support		1
13		030501007	washer	12mm GB/T 96.1-2002	2
14		030201112	screw	M12x30 GB/T 70.1-2000	2
15		05020110205	connection plate		1
16		030204004	screw	GB 845-1985 ST2.9X1	2
17		030501005	washer	8mm GB/T 96.1-2002	4
18		030502005	washer	8mm GB/T 93-2002	4
19		030201063	screw	M8x20 GB/T 70.1-2000	4
20		030301103	nut	M4 GB/T 6170-2000	2

Display board



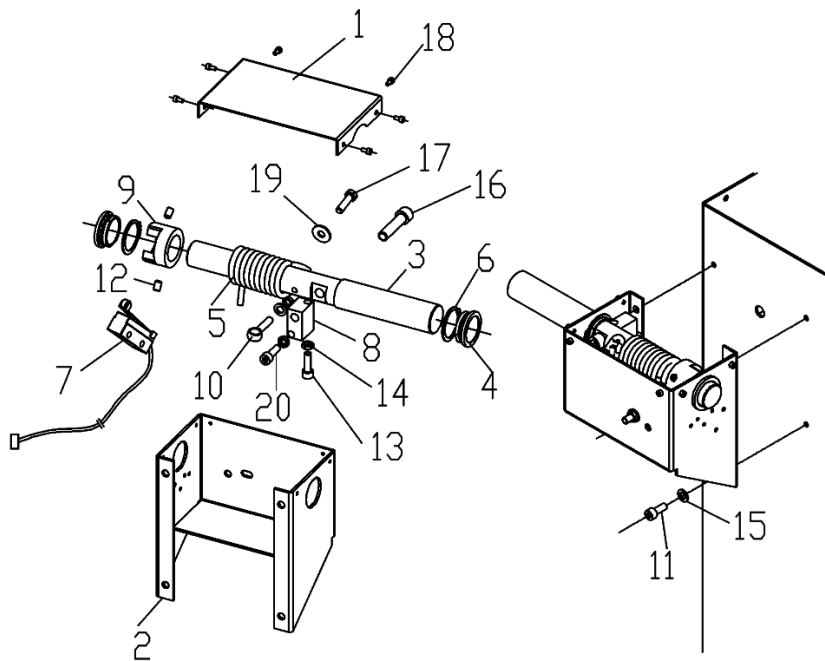
#	ATH #	Reference	Description	Note	x
1		021003021	display		1
2		030301013	nut	GB/T 41-2000 M3	12
3		030501001	washer	GB/T 96.1-2002 3	4
4		030201270	screw	GB/T 818-2000 M3X25	4
5		030502001	washer	GB/T 93-1987 3	1
6		05020060037	plate		1
7		030201443	screw	GB/T 819.1-2000 M6X16	2
8		05020060038	support		1

Accessory



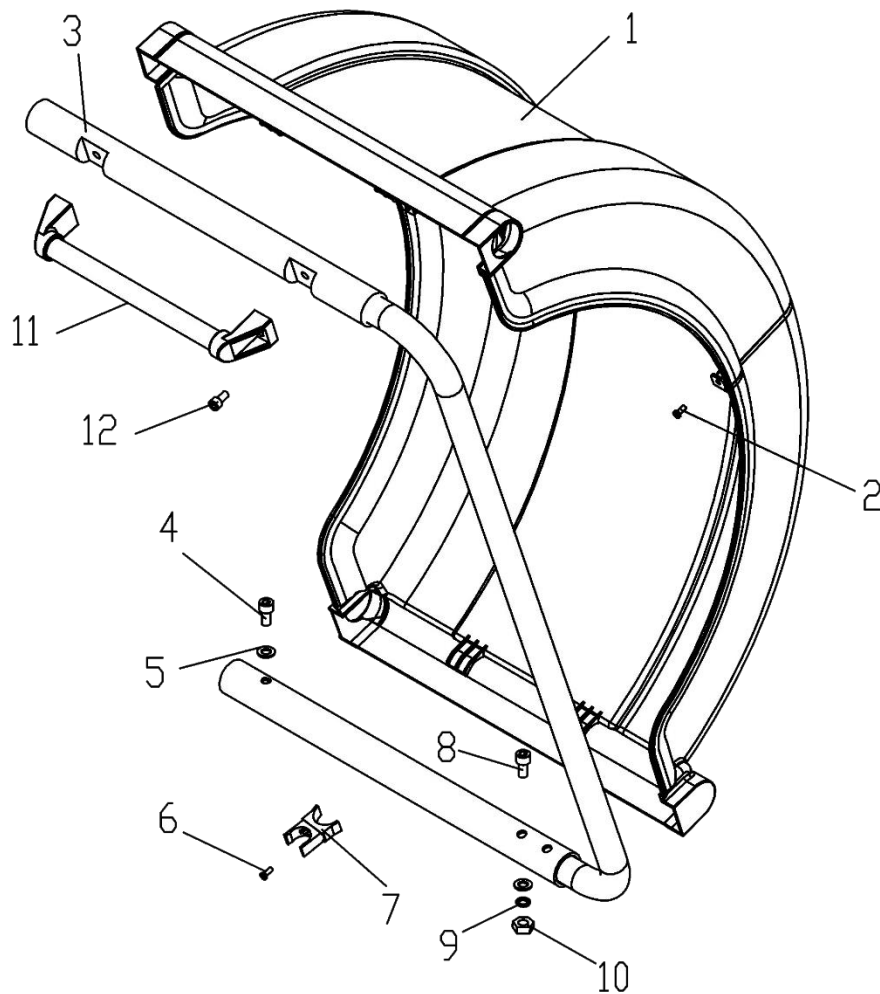
#	ATH #	Reference	Description	Note	x
1	RAF0033	0530201001	plate		1
2	RKO0085	0530201016	cone5	45-75 mm	1
3	RKO0086	0530201037	cone2	70-90 mm	1
4	RKO0087	0530201038	cone3	88-110 mm	1
5	RKO0088	0530201039	cone4	105-130 mm	1
6	RGL0065	020101001	rubber ring		1
7	RDH0034	020601001	bowl		1
8	RKE0192	020601002	small bowl		1
9	RSM0199	020601003	quick nut	40mm	1
10	RIS0060	022102001	wrench	12mm	1
11	RIS0063	022102002	wrench	6mm	1
12	RIS0065	022102003	wrench	4mm	1
13	RIS0066	022102004	wrench	3mm	1
14	RGZ0057	022102005	hammer		1
15	RSF0208	020701012	spring	Ø 40mm	1
16	RPG0195	022102006	weight	100g	1
17	RPG0196	022102010	weight	50g	1
18	RPG0197	022102011	weight	35g	1
19	RPG0198	022102013	weight	10g	1
20	RPG0199	022102027	weight	5g	1
21	RFL0038	020601004	calliper		1
22	152004-05	020601105	Plastic scraper		1
23	RMF0116	0530210003	calibration block	OPTIONAL	1
24	HIS2535	030201064	screw	M8x25 GB/T 70.1-2000	12

Support for protection cover



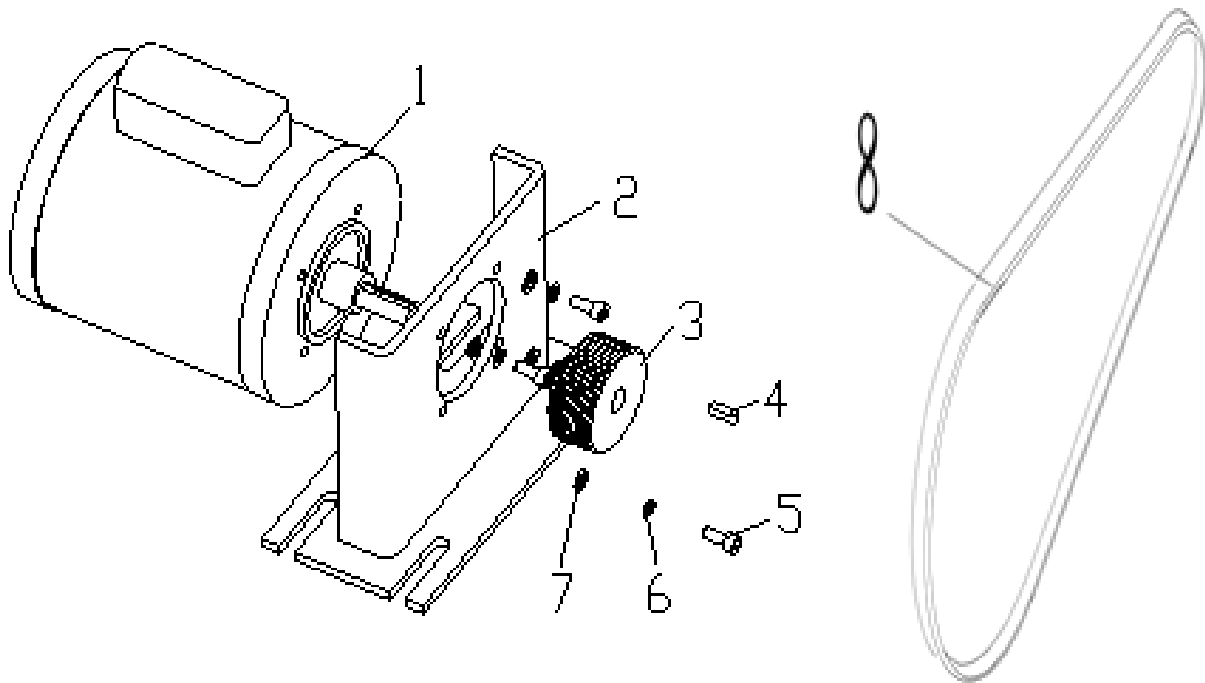
#	ATH #	Reference	Description	Note	x
1	RSM0001	0530208004	upper cover		1
2	RSM0002	0530208001	support		1
3	RSM0003	0530208008	shaft		1
4	RSM0004	020601035	shaft bush		2
5	RSM0005	020703001	spring		1
6		030604115	circlip for shaft	38mm GB 894.2-86	2
7	RMS6000	021006031	microswitch	V-156-1C25	1
8	RSM0006	0530208002	set piece		1
9	RSM0007	020601034	shaft bush		1
10	RSM2001	021301004	screw		1
11		030201063	bolt	M8x20 GB/T 5783-2000	4
12		030202025	screw	M8x12 GB/T 77-2000	2
13		030201064	screw	M8x25 GB/T 70.1-2000	1
14		030301002	nut	M8 GB/T 41-2000	2
15		030501005	washer	8mm GB/T 95-2002	4
16		030201114	screw	M12x40 GB/T 70.1-2000	1
17		030101506	screw	M8x30 GB/T 5783-2000	1
18		030201002	screw	M4x8 GB/T 70.1-2000	6
19		030501105	washer	8mm GB/T 96.2-2002	1
20		030201067	screw	M8x40 GB/T 70.1-2000	1

Wheel cover



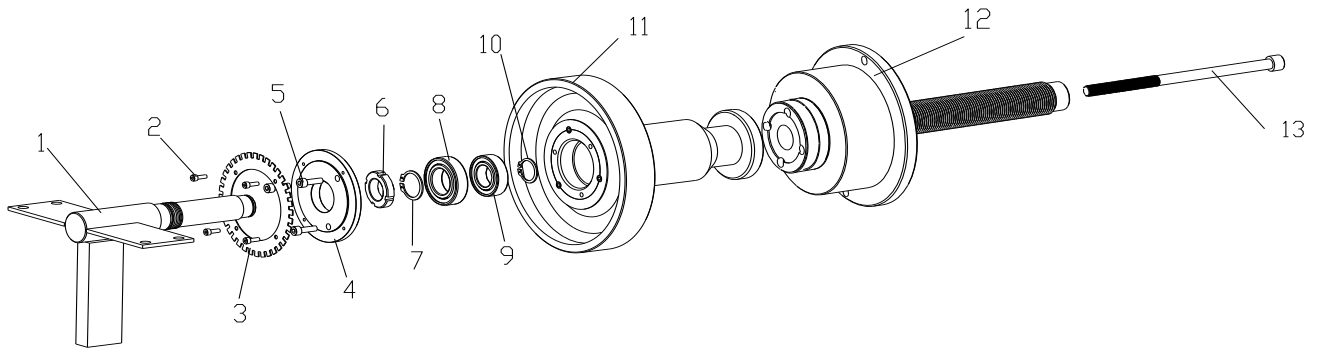
#	ATH #	Reference	Description	Note	x
1	RSB0006	020602029	protection cover		2
2		030201364	screw	M5x12 GB/T 818-2000	2
3	RSB0007	0530205035	support		1
4		030201084	screw	M10x30 GB/T 70.1-2000	1
5		030501006	washer	10mm GB/T 95-2002	3
6		030201337	screw	M4x16 GB/T 818-2000	1
7	RSB0008	020601049	clips	OPTIONAL	1
8		030201092	screw	M10x70 GB/T 70.1-2000	2
9		030502006	washer	10mm GB/T 93-1987	2
10		030301003	nut	M10 GB/T 41-2000	2
11	RSB0004	020601196	handle		1
12		030201063	screw	M8x20 GB/T 70.1-2000	2

Motor



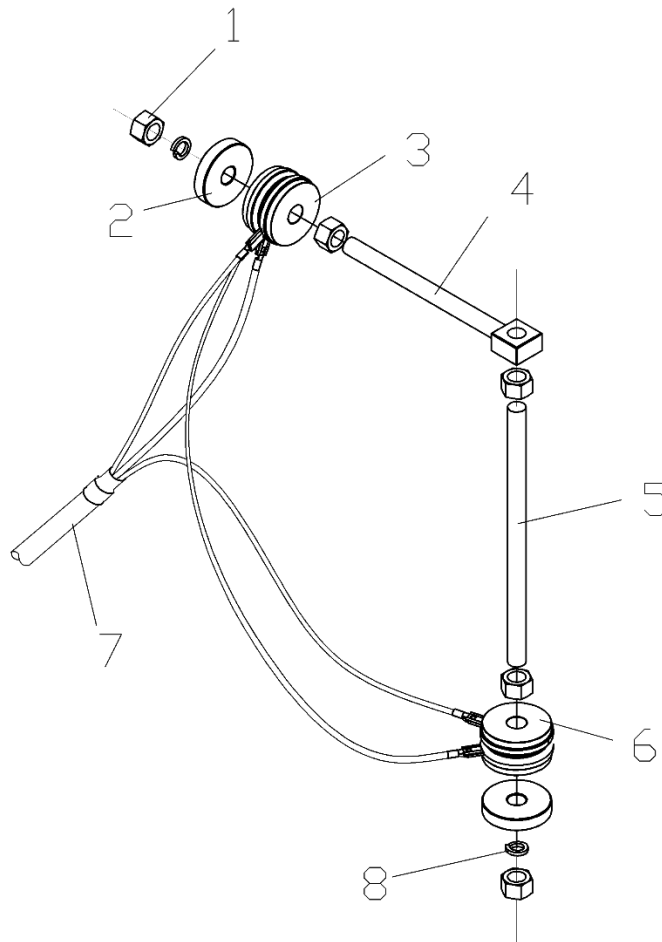
#	ATH #	Reference	Description	Note	x
1	RMO0755	020401009	Motor	JY7116 / 220V	1
2	RMH0123	0530206002	Motor Basement		1
3	RRR0134	0530206003	Motor Belt Pulley		1
4		030701010	Key	5x5x30 GB/T 1096-1979	1
5		030201043	SHCS	M6x16 GB/T 70.1-2000	4
6		030502004	Washer; Spring	6mm GB/T 93-1987	4
7		030501004	Washer; Flat	6mm GB/T 95-2002	4
8	RRR0133	020403001	Motor Belt	4PJ965	1

Main shaft



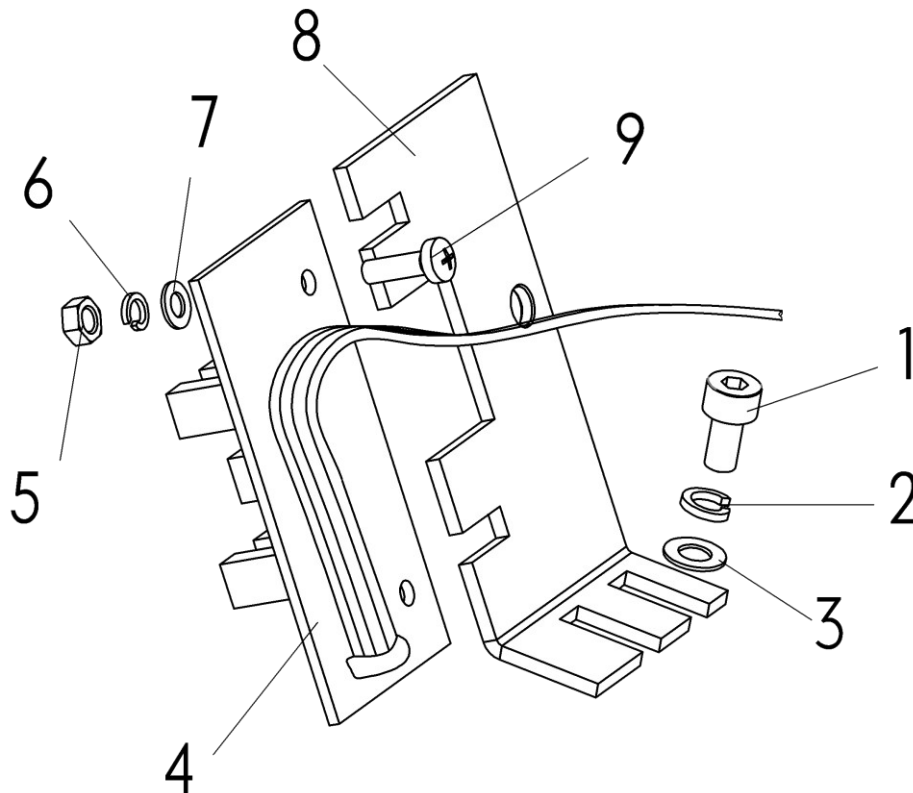
#	ATH #	Reference	Description	Note	x
1	RWA0001	0530207004	Deformation of Beams		1
2		030201004	SHCS	M4x12 GB/T 70.1-2000	4
3	RWZ0001	0530207009	Tooth	64T	1
4	RWA0002	0530207005	Bear Cover		1
5		030201044	SHCS	M6x20 GB/T 70.1-2000	3
6		030303101	Nut Round	M30x1.5 GB/T 812-1988	1
7		030604023	Snap Ring	30mm GB 894.1-86	1
8	RWL0845	030802002	Bearing	6006 GB/T 276-94	1
9	RWL0184	030802001	Bearing	6005 GB/T 276-94	1
10		030604105	Snap Ring	25mm GB 894.2-86	1
11	RWW0214	0530207006	Main Shaft		1
12	RGW0062	0530207054	Threaded Shaft/Spindle		1
13	RGW0063	030201172	SHCS	M14x260 GB/T 70.1-2000	1

Sensor



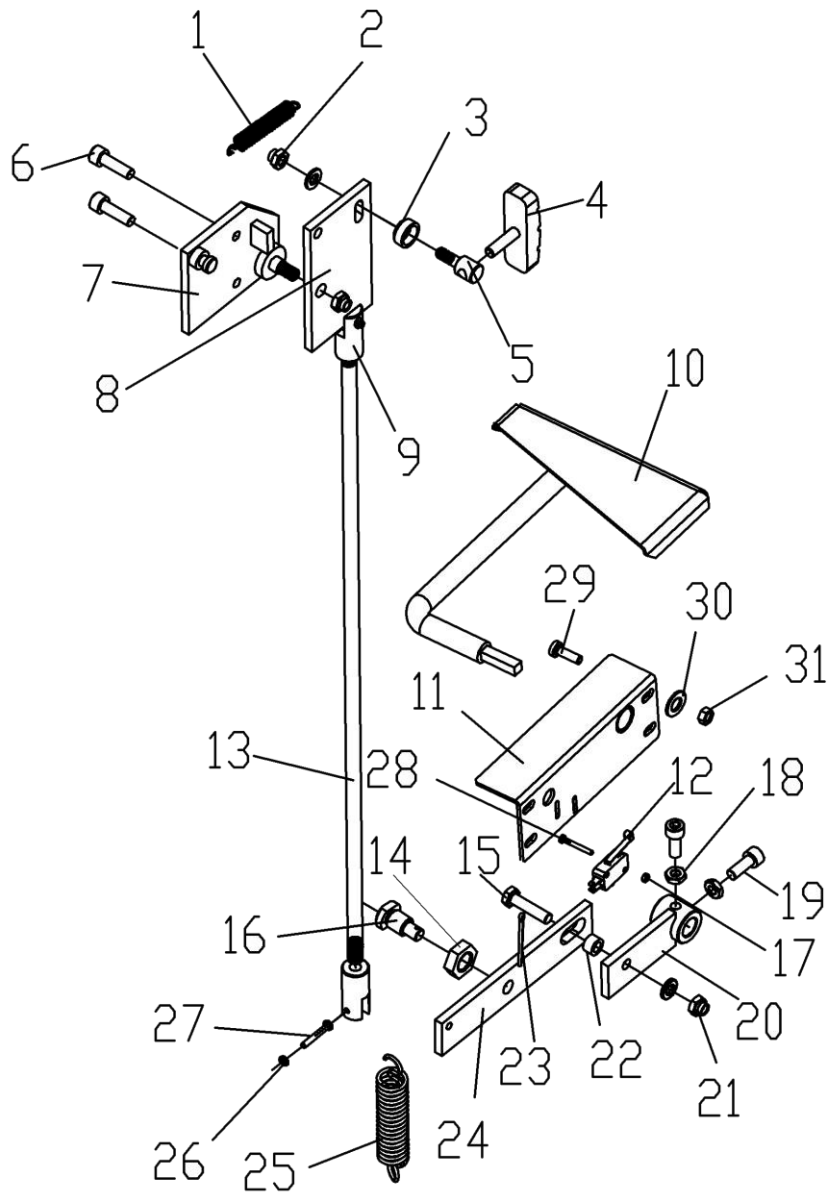
#	ATH #	Reference	Description	Note	X
1		030301003	Nut	M10 GB/T 41-2000	5
2		0530207043	Sensor flat washer		2
3	RPA0128	021006032	Piezo Sensor; Horizontal	Ø10 + Ø 10 / 3x0.75mm ² x1.5m	1
6		021301007	Sensor Horizontal Shaft		1
7		021301008	Sensor Vertical Shaft		1
4	RPA0129	021006033	Piezo Sensor; Vertical		1
5	RPA0130	020402015	Sensor Wire		1
8		030502006	Washer; Spring	10mm GB/T 93-1987	2

Encoder



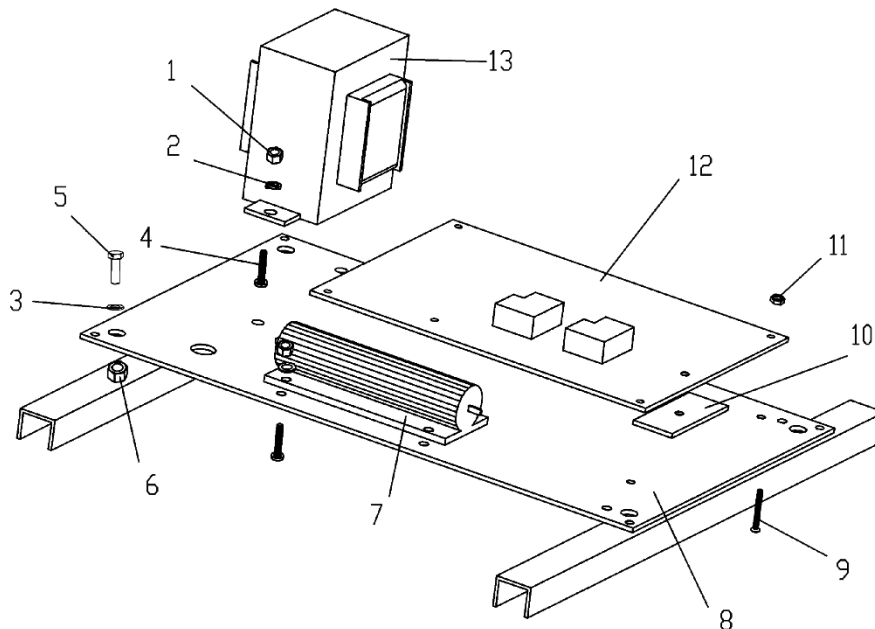
#	ATH #	Reference	Description	Note	x
1		030201002	SHCS	M4x8 GB/T 70.1-2000	2
2		030502002	Washer; Spring	4mm GB/T 93-1987	2
3		030501002	Washer; Flat	4mm GB/T 95-2002	2
4	RRP0138	021003004	Encoder Board	64T	1
5		030301101	Nut	M3 GB/T 6170-2000	2
6		030502001	Washer; Spring	3mm GB/T 93-1987	2
7		030501001	Washer; Flat	3mm GB/T 95-2002	2
8	RRP0139	0530207003	Encoder Board Support		1
9		030201265	Cross recessed	M3x10 GB/T 818-2000	2

Brake



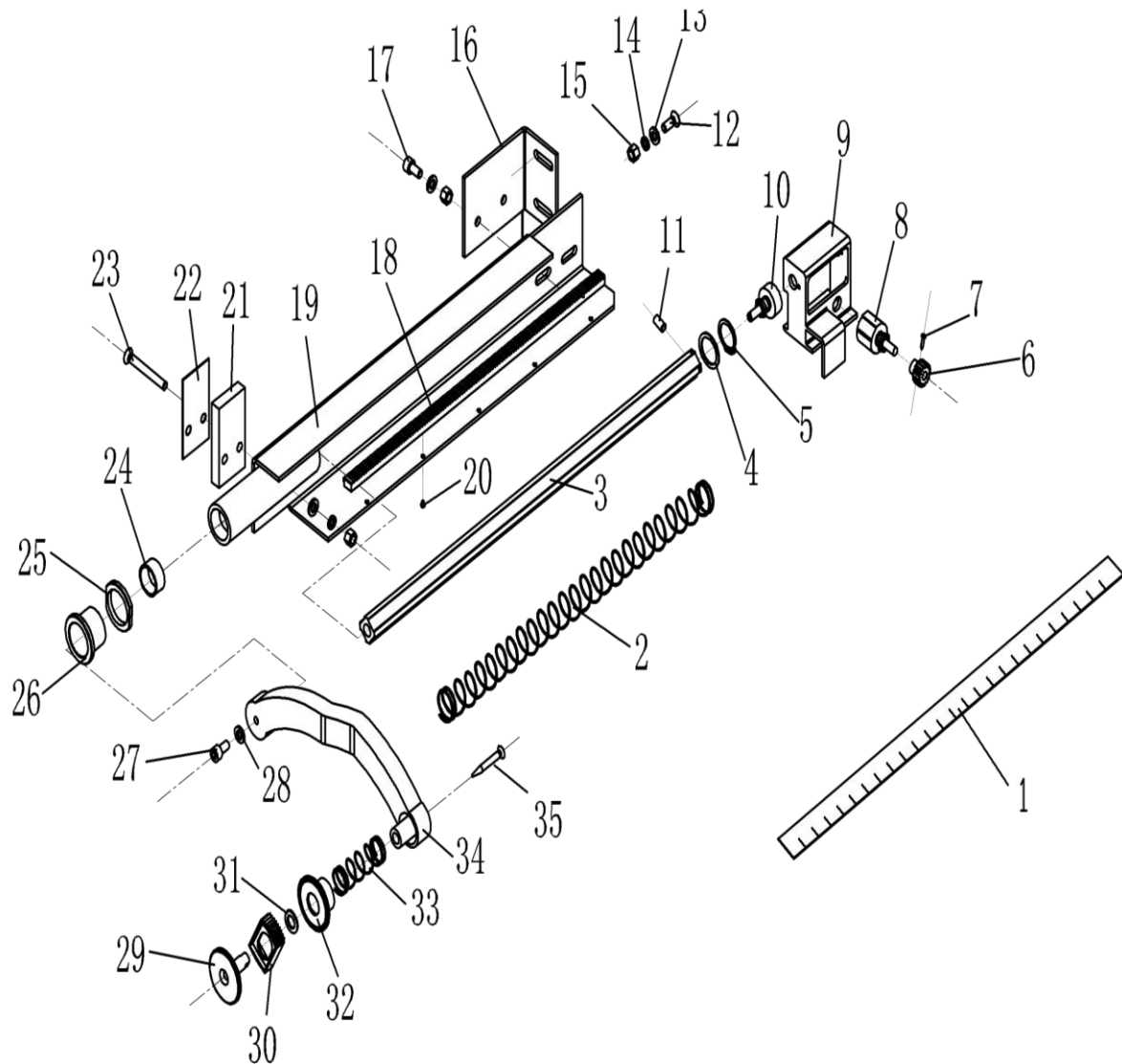
#	ATH #	Reference	Description	Note	x
1	RFB0001	020702001	Upper Braking Return Spring		1
2		030301082	Nut	M6 GB/T 6182-2000	1
3	RBA0012	0530202002	Brake Pad Spacer		1
4	RBK1000	020101002	Brake Pad		1
5	RBA0002	0530202001	Brake Pad Bracket		1
6		030201042	SHCS	M6x12 GB/T 70.1-2000	2
7	RBA0003	0530202003	Brake Fix Mounting Plate		1
8	RBA0004	0530202004	Brake Movable Mounting Plate		1
9	RBA0005	0530106010	Brake Rod Connector		2
10	RBP0001	0530202009	Brake Pedal Weldment		1
11	RBA0006	0530202022	Brake Pedal Bracket		1
12	RMS6001	021006031	Brake Switch		1
13	RBZ0001	0530202005	Braking Rod		1
14		030301138	Nut	M12 GB/T 6172.1-2000	1
15		030101024	HHB	M6x25 GB/T 5780-2000	1
16	RBA0007	0530202012	Brake Fix Axle		1
17		030301101	Nut	M3 GB/T 6170-2000	2
18		030301105	Nut	M6 GB/T 6170-2000	2
19		030201043	SHCS	M6x16 GB/T 70.1-2000	2
20	RBA0008	0530202008	Brake Pedal Link		1
21		030301105	Nut	M6 GB/T 6170-2000	3
22	RBA0009	0530202007	Brake Linkage Bushing		1
23		030903006	Slick pin	2x20 GB/T 91-2000	1
24	RBA0010	0530202006	Brake Rod Link		1
25	RFB0002	020702002	Lower Braking Return Spring		1
26		030301102	Nut	M4 GB/T 6170-2000	2
27		030201006	SHCS	M4x20 GB/T 70.1-2000	2
28		030201269	Cross recessed pan head screw	M3x20 GB/T 818-2000	2
29		030201044	SHCS	M6x20 GB/T 70.1-2000	4
30		030501004	Washer; Flat	6mm GB/T 95-2002	4
31		030301105	Nut	M6 GB/T 6170-2000	4
32	RBA0011	0530106033	Brake Rod Connector Linkage		1

Power board



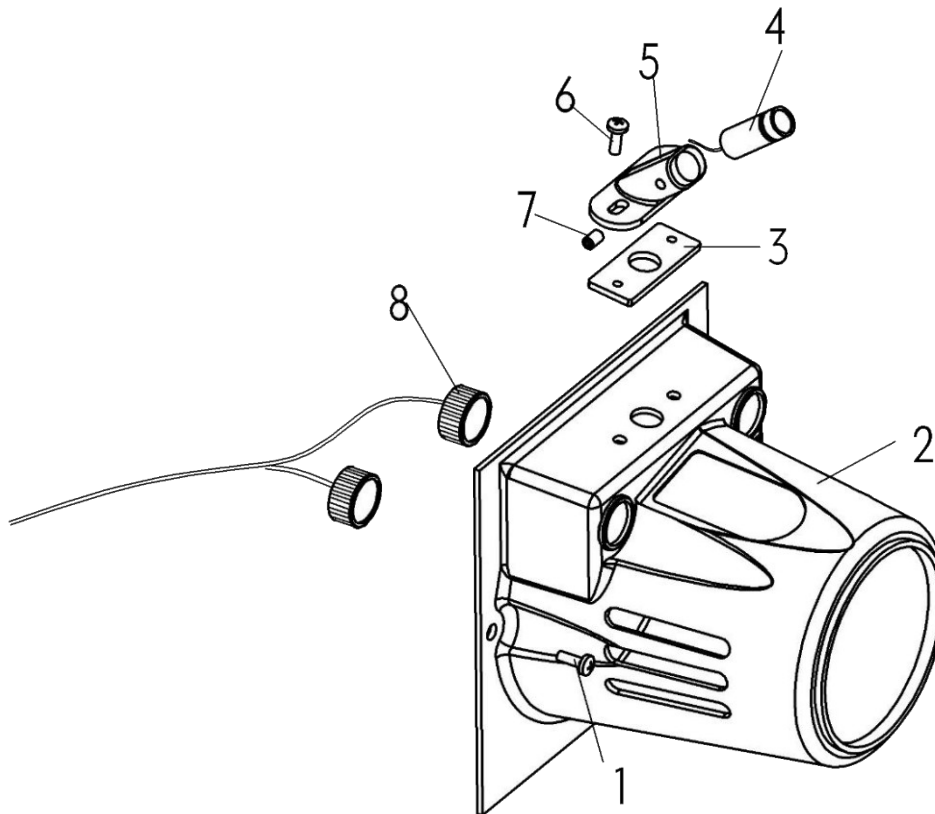
#	ATH #	Reference	Description	Note	x
1		030301103	Nut	M4 GB/T 6170-2000	4
2		030502002	Washer; Spring	4mm GB/T 93-1987	4
3		030502004	Washer; Spring	6mm GB/T 95-2002	4
4		030201337	Cross recessed pin head screw	M4x16 GB/T 818-2000	4
5		030101022	HHB	M6x16 GB/T 5780-2000	4
6		030301106	Nut	M8 GB/T 6170-2000	4
7	RWI0183	021002001	Resistance	100W/15Ω RXG-100-15RJ	1
8	RSP0170	0530206001	Power Board Liner		1
9		030201614	Cross recessed socket screw	M3x25 GB/T 819.1-2000	5
10	RSP0171	0530206056	Air-Cooling Fin		1
11		030301101	Nut	M3 GB/T 6170-2000	15
12	RSP0169	021003003	Power Board		1
13	RTR0174	020404006	Transformer	220V~Double 9V 25W	1

Distance arm



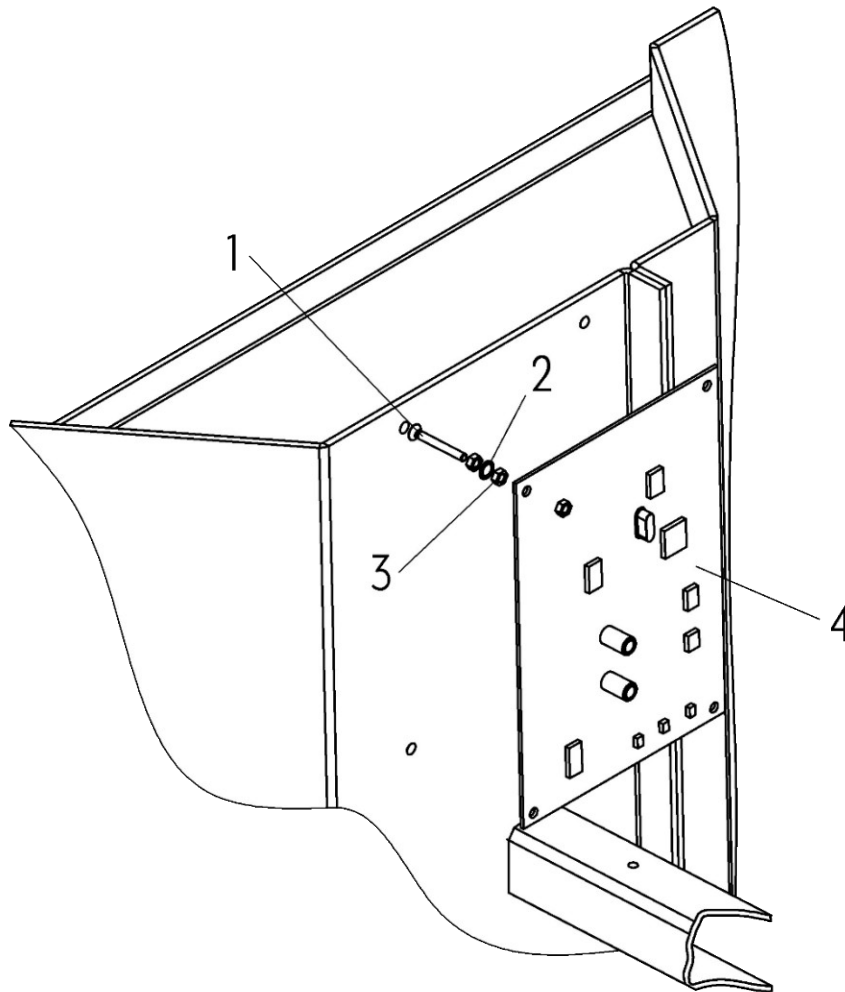
#	ATH #	Reference	Description	Note	x
1	RAL0001	020801005	Distance Arm Sticker		2
2	RFA0001	020701005	Distance Arm Spring		1
3	RAL0002	0530204010	Distance Arm Rod		1
4		0530204008	Distance Arm Rod Washer		1
5		030604101	Snap Ring	20mm GB/T 894.2-86	1
6	RGA0001	0530204013	Distance Arm Gear		1
7		030204002	Cross recessed tapping screw	GB/T845-1985 ST2.9x9.5	1
8	RPO0131	021006025	Wheel Distance Potentiometer; Double Round	R10KL.25	1
9	RPH0001	0530204012	Distance Arm Slide Block		1
10	RPO0130	021006024	Wheel Distance Potentiometer; Single Round	CPP22A1S20B103	1
11		030202011	Hexagon socket set screw	GB/T 77-2000 M4x4	1
12		030201443	Cross recessed pan head screw	M6x20 GB/T819.1-2000	2
13		030501004	Washer; Flat	6mm GB/T 95-2002	6
14		030502004	Washer; Spring	6mm GB/T 93-1987	6
15		030301011	Nut	M6 GB/T 41-2000	6
16	RPH0002	0530204022	Distance Arm End Metal Plate		1
17		030201043	SHCS	M6x16 GB/T70.1-2000	2
18	RGA0002	0530204009	Distance Arm Gear Rail		1
19	RAA0001	0530204004	Distance Arm Basement		1
20		030204001	Cross recessed tapping screw	GB/T845-1985 ST2.9x6.5	5
21	RPH0003	0530204018	Distance Arm Pad		1
22	RPH0004	0530204024	Distance Arm Adjustable Spacer		1
23		030201444	Countersunk Flat Phillips Head Screw	M6x40 GB/T819.1-2000	2
24	RBA0001	030818001	Distance Arm Sleeve		2
25	RBA0002	0530214002	Distance Arm Sleeve Nut		2
26	RBA0003	0530214001	Nut Bush		1
27		030201043	SHCS	M6x16 GB/T70.1-2000	1
28		030501004	Washer; Flat	6mm GB/T 95-2002	1
29	RES0002	020601076	Distance Arm Head Pivot Bushing		1
30	RSS0001	020602040	Distance Arm Head Weight Holder		1
31	RBS2000	030501007	Washer; Flat	12mm GB/T 95-2002	1
32	RKP0001	020601069	Distance Arm Head Bushing		1
33	RSF2000	020701005	Distance Arm Head Spring		1
34	RGM0001	020601104	Distance Arm Head Connect Rod		1
35	RBS2001	030204100	Cross recessed tapping screw	ST4.9x32 GB/T845-1985	1

Laser



#	ATH #	Reference	Description	Note	x
1		030201335	Cross recessed pan head screw	M4x12 GB/T 818-2000	2
2	RKA0104	0530206034	Threaded Shaft Plastic Cover		1
3	RLG0001	0530206033	Laser Basement Plate		1
4	RLA0001	02106035	Laser Line Optical Transmitter	Ø12x35—5V	1
5	RLA0002	0530206032	Laser Basement		1
6		030201335	Cross recessed pan head screw	M4x12 GB/T 818-2000	2
7		030202301	Hexagon taper head set screw	M5x5 GB/T 78-2000	1
8	RRB7000	020402010	Weight Indicator Light		1

Computer board



#	ATH #	Reference	Description	Note	x
1		030201614	Screw	GB/T 819.1-2000 M3x25	4
2		030502001	Spring washer	GB/T 93-1987 3	8
3		030301101	Nut	GB/T 6170-2000 M3	12
4	RSP0168	021003016	Computer board		1

NOTES

ATH-Heinl GmbH & Co.KG

Kauerhofer Str. 2
D-92237 Sulzbach-Rosenberg
GERMANY

Tel: +49 (0)9661 87764 00

Fax: +49 (0)9661 87764 01

info@ath-heinl.de
www.ath-heinl.de



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