

# Automatic welding machine type LarOn H, BL

## OPERATING MANUAL



## SAFETY



### **Danger to life**

Unplug the tool before opening it as live components and connections are exposed.



**Danger of fire and explosion** in case of incorrect use of the automatic welding machine, especially near combustible materials and/or explosive gases.



### **Danger of burns**

Allow the tool to cool down.



Connect the tool to a socket outlet with protective earth conductor. Any interruption of the protective earth conductor within or outside the tool is dangerous! Use only extension cables with a protective earth conductor.



The **voltage rating** stated on the tool should correspond to the mains voltage.



For personal protection, we strongly recommend to connect the tool to a **RCCB** (**R**esidual **C**urrent **C**ircuit **B**reaker) before using it on construction sites.



**Do not leave the tool unobserved.** Heat may reach inflammable materials that are not visible or obvious. The tool must not be used by children or people with limited physically, sensory or mental ability. Children must be supervised to prevent that they play with the tool.



**Protect the device from damp and wet!**

## WARRANTY AND LIABILITY

Warranty and liability apply from the date of purchase (documented by the invoice/delivery note) according to the currently valid general terms of business from BAK. BAK refuses to honour any warranty for devices which are not in their original condition. BAK devices may never be reconfigured and/or modified.

BAK reserves the right to deny any responsibility if this is ignored. No liability can be assumed by BAK for incorrect installation and/or use as well as natural wear and tear of components (e.g. heating elements).

### **Note:**

This operating manual must be available to the installation and operating personnel at all times. Read these operating instructions carefully before installing and using the device.

### **Copyright:**

This document must not be disclosed to third parties without the explicit written approval of BAK. Any forms of reproduction or copying and electronic storage are prohibited.

## INTENDED USE

The LarOn H is an automatic welding machine for overlap welding of roofing membranes made of PE, PVC, TPO, ECB, EPDM, CSPE and bitumen. The machine can also be used in areas close to edges and on uneven surfaces.

Any improper use may result in danger for the operator or third parties or may adversely affect machines and assets.

Only use the automatic welding machine if in technically perfect condition and for the purposes for which they are intended while observing the operating instructions.

The tool can be used for the applications mentioned in the present operating instructions only!

### **Stop operating the automatic welding machine if:**

- connecting line or plug have been damaged.
- safety installations have been damaged.
- changes occur in the operating state.

## EXTENSION CORDS

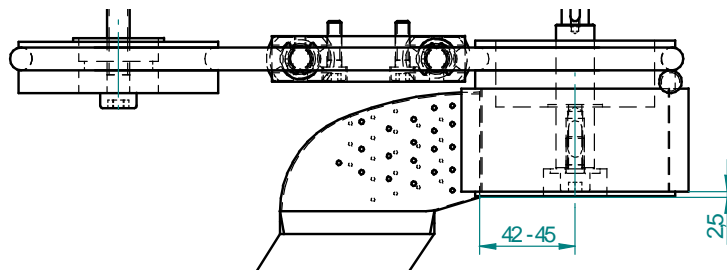
When using extension cords the minimum diameter of cables must be observed. Extension cords must be approved and marked for their place of utilisation.

Before operating the machine examine the tool adjustment.

**Proceed with adjustments only in cold condition (danger of burns).**

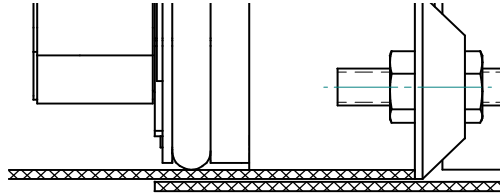
## NOZZLE ADJUSTMENT

Changes of the nozzle adjustments can be done if screws are loosened  
For recommended settings use the following sketch:



## GUIDE ROLLER ADJUSTMENT

- Bring the automatic welding machine into the welding position.
- Push the transport roller to the right in welding position, take care that the spring sheet engages.
- Push the guide roller downward and fix it with the hexagon nut on the threaded bar.
- Outside edge of the overlap, outside edge of pressure roll and outside edge of guide roller must form a line. Please refer to the sketch below:



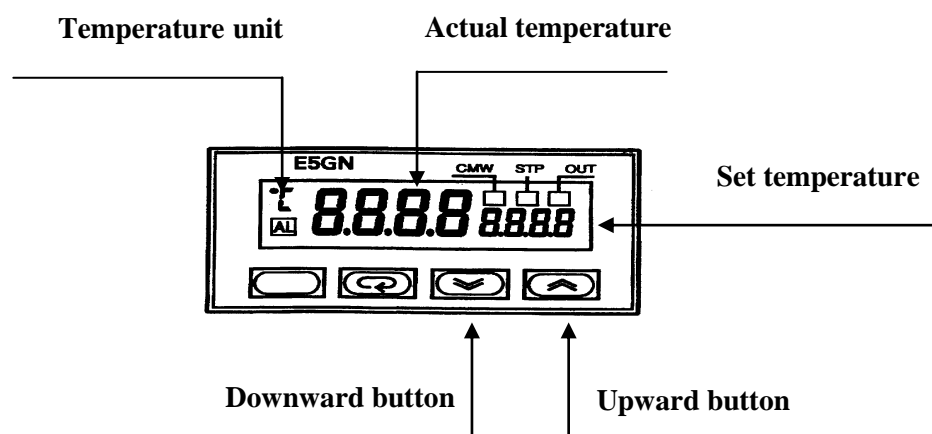
## START UP OF THE WELDING MACHINE

- If it is not possible to start the motor, a reset is needed.
  - Reset: Turn off main switch – wait for 3 seconds – Turn on main switch

### Before connecting the tool to the mains supply please check that:

- Main switch is on pos. 0 OFF.
  - Drive switch is on pos. 0.
  - Heating switch is on pos. 0.
  - Potentiometer of the air flow is on pos. 0 (100%).
  - The hot air blower is on pos. stand by (lifted up).
  - Put the plug into the socket.
  - Put the main switch on pos. 01.
- The tool now heats up to the last selected set temperature.

## CONTROLLER ADJUSTMENT



- Select on the potentiometer the desired welding speed.
- On switching position ON the drive starts immediately and is constantly running.
- On switching position AUTO the drive starts only after sliding the nozzle into the welding seam and stops immediately after taking out the nozzle.
- To separate the automatic welding machine from the electric system, change the main switch to “OFF” and unplug the mains plug.

## **ASSISTANCE AND SUPPORT**

The BAK group and its authorised service centres offer free support and assistance in the area of applications technology.

Our specialists will be pleased to help you.

### **Customer service and orders:**

BAK Thermoplastic Welding Technology AG

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CH-6064 Kerns/Switzerland

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E-Mail: info@bak-ag.com

## **ACCESSORIES**

Get the best results by using BAK-accessories and spare parts.

Further information can be found in our brochures.

## **SERVICE AND REPAIR**

Repairs should only be carried out by authorized BAK service centres. These guarantee a professional and reliable 24-hour repair service with original spare parts. A heating element can be changed by qualified personal.

If the mains connection of the device is damaged, it should be replaced by the manufacturer, from an authorized BAK service centre or a qualified person to avoid danger.

## **SHIPPING**

For repairs, please return the device appropriately packed for transport to your next BAK service centre.

### **Shipping to CUSTOMER ACCOUNT.**

Technical modifications reserved. In case of doubt, consultation with BAK is required.

Images and drawings may deviate from the original. Changes reserved.

## TRANSPORT – HANDLING – STORAGE

### Transport:

The welding machine is packed appropriately and must be protected from moisture.

### Handling:

The shipment must be checked if complete and for transport damage. In the event of transport damage, the defect must be confirmed in writing at the time of the delivery by the carrier. The seller must be promptly informed in writing!

### Storage:

In the case of temporary storage, the welding machine should be kept packed and must be protected from moisture. In the case of damage resulting from improper storage, no warranty claim will be honoured.

## DISPOSAL



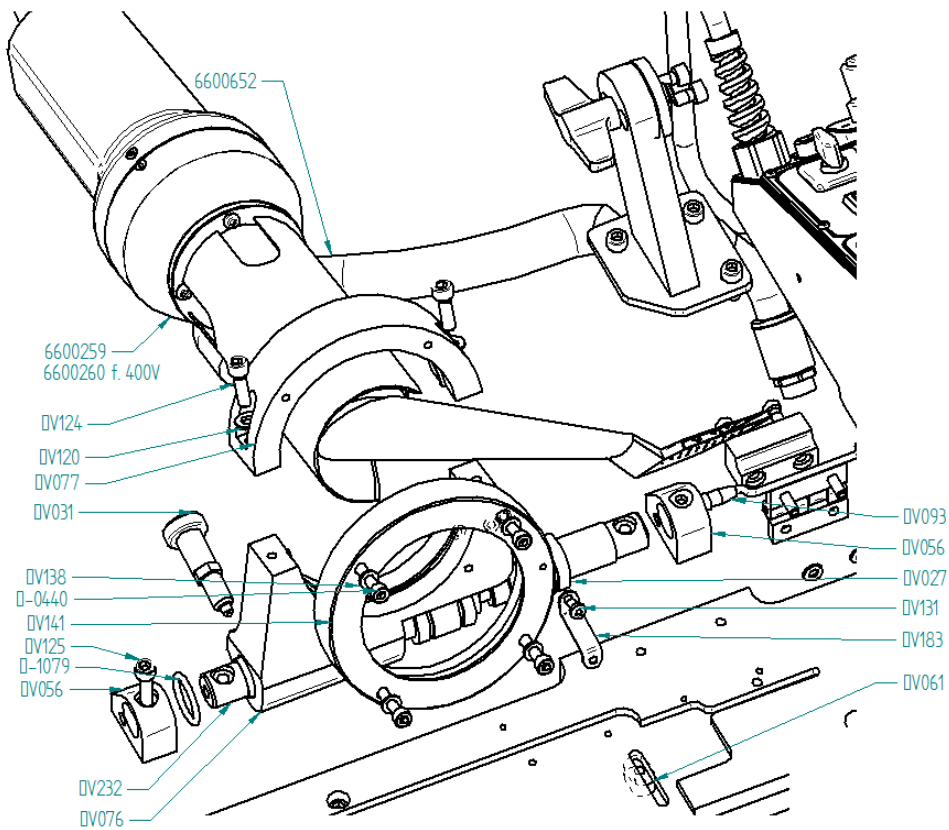
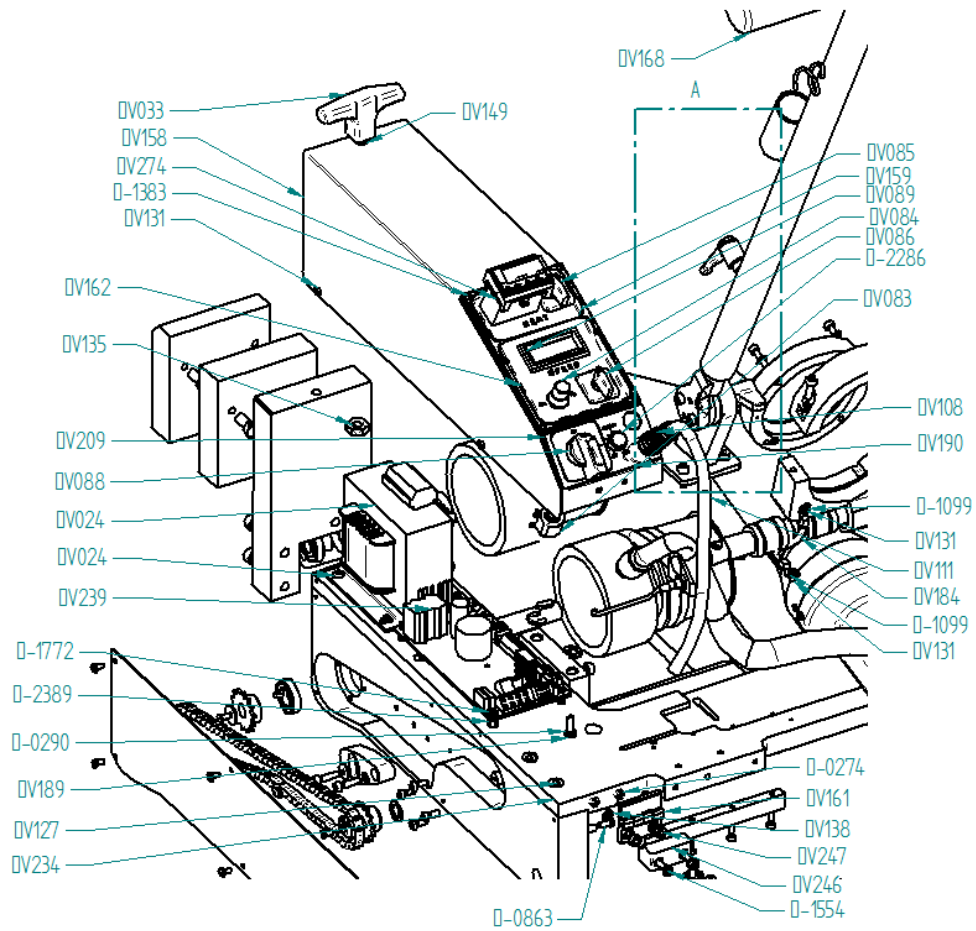
Power tools, accessories and packaging should be sorted for environmental friendly recycling.

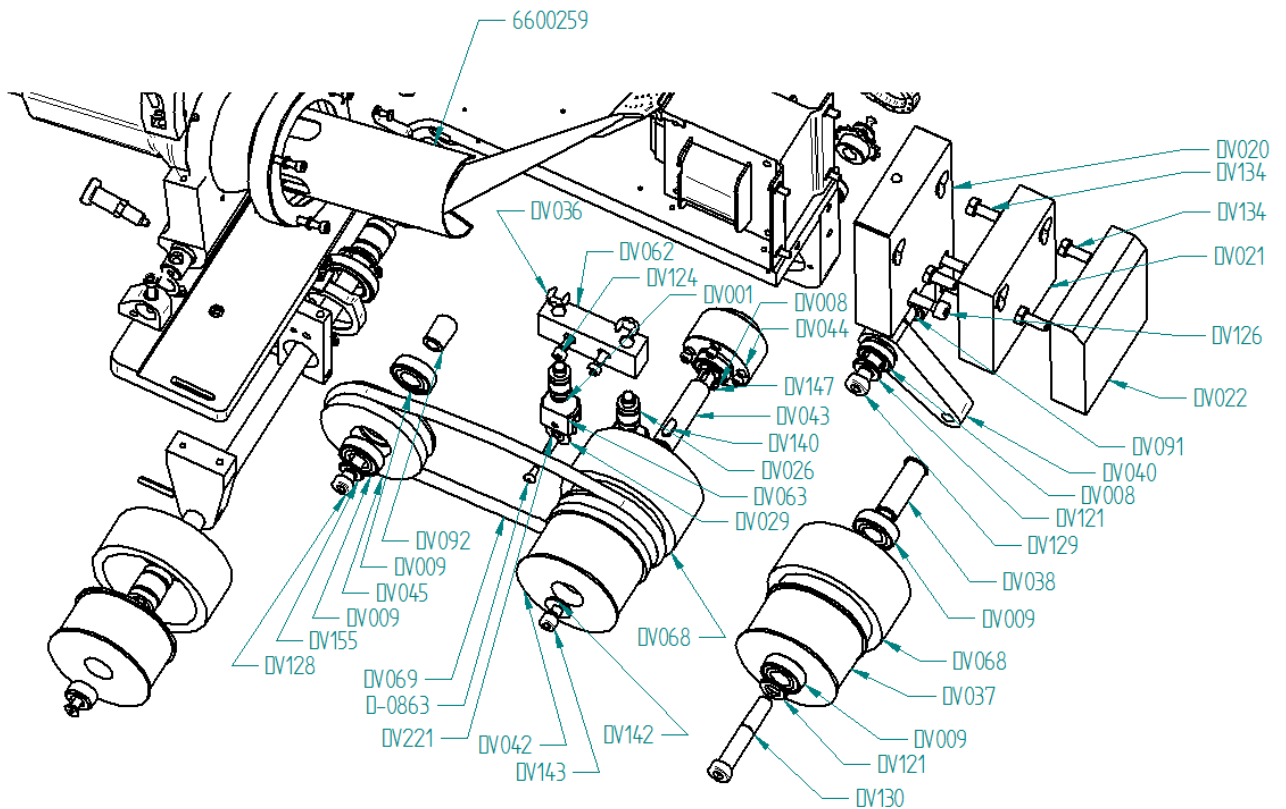
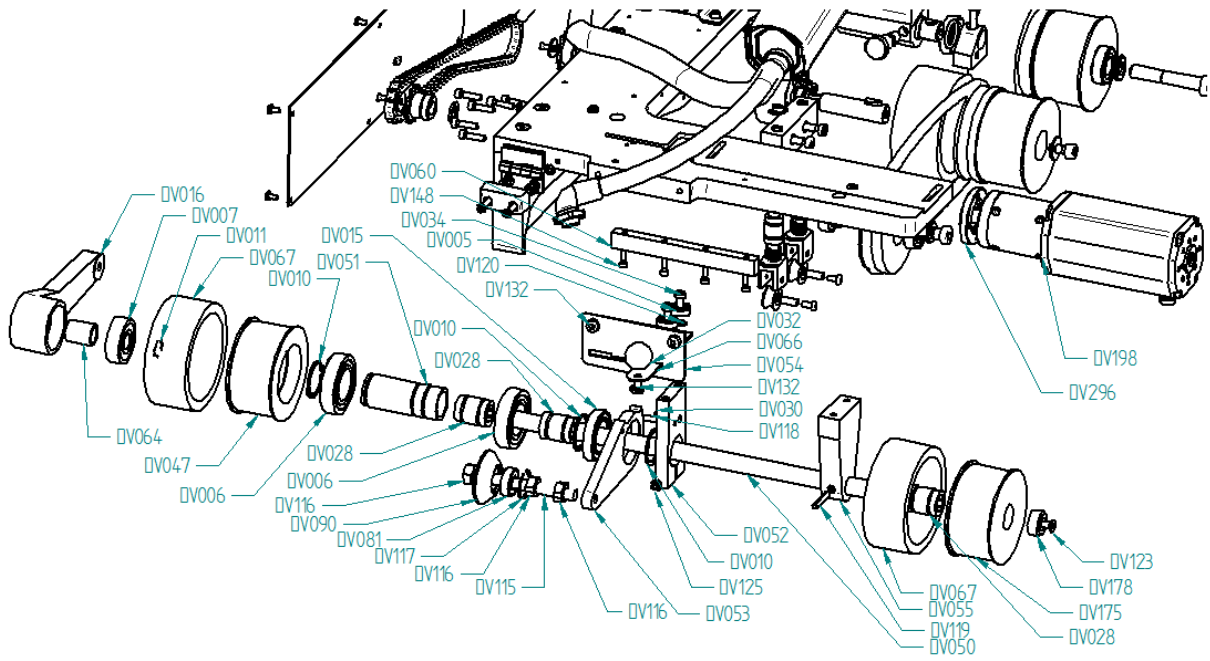
**Do not dispose power tools together with household waste!**

Only EU countries: According to the European Directive 2012/19/EU on waste electrical and electronic equipment and its incorporation into national law, power tools that are no longer operational must be separately collected and sent to be environmental friendly recycled.

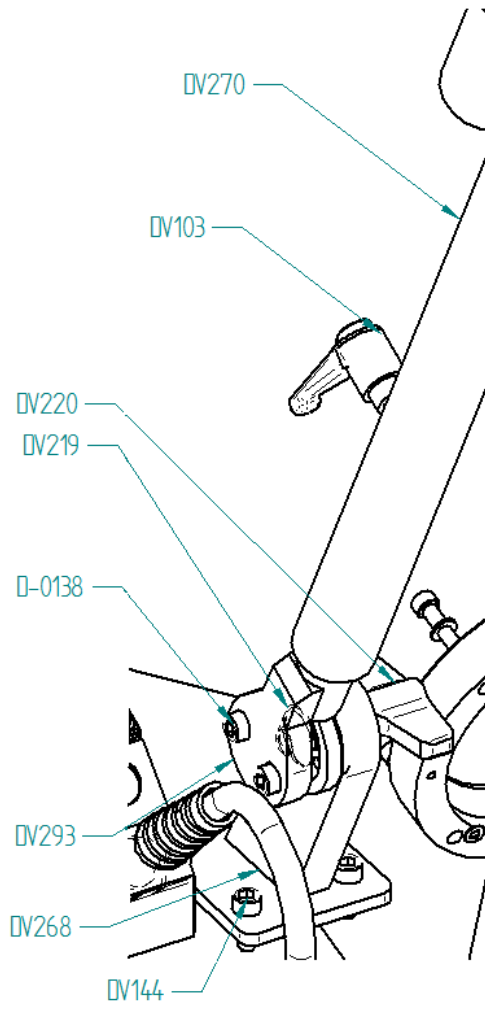
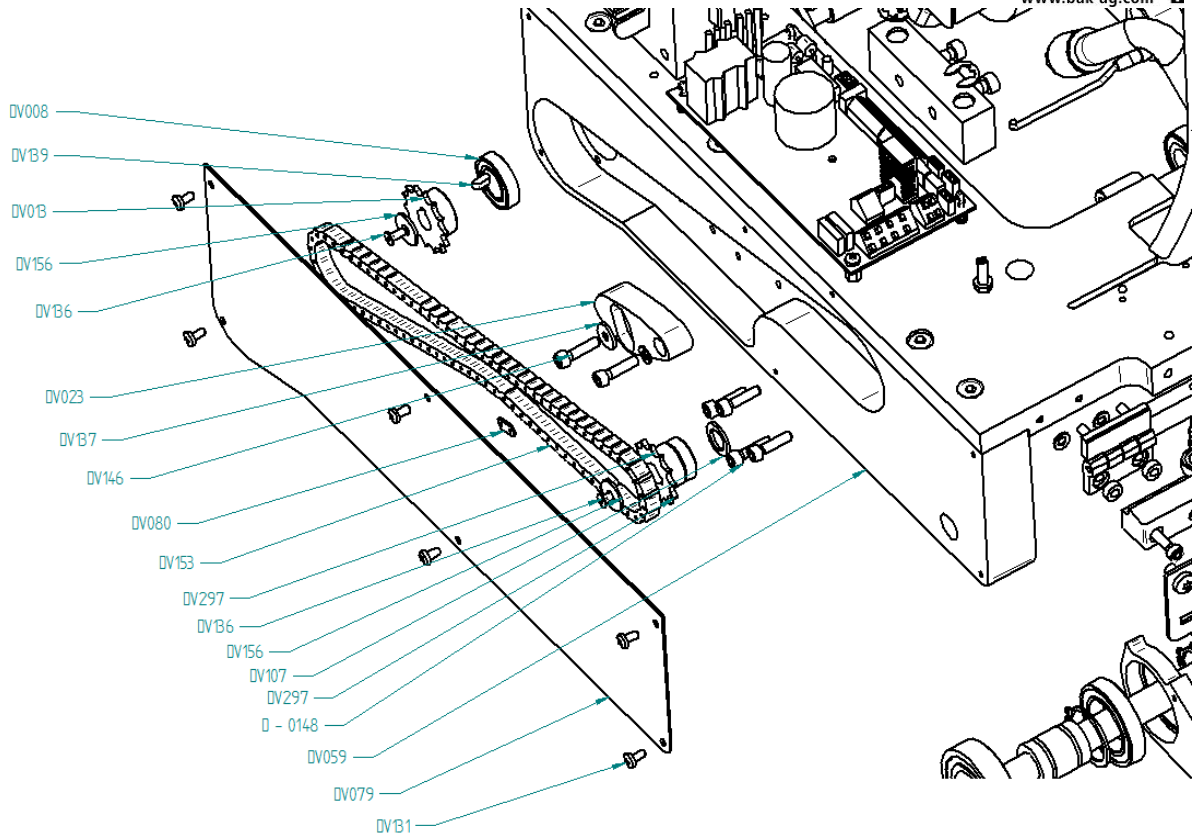
## TECHNICAL DATA

Technical data		LarOn H, BL	
Voltage	VAC	230	400
Frequency	Hz	50 / 60	
Power consumption	W	4100 / 6000	
Temperature	°C	30 – 620, stepless adjustable	
Drive	m/min	0.5 – 20, stepless adjustable	
Weight	kg	35	
Size LxWxH	Mm (LxBxH)	610 x 410 x 320	
CE	CE		
Protection of class 1			





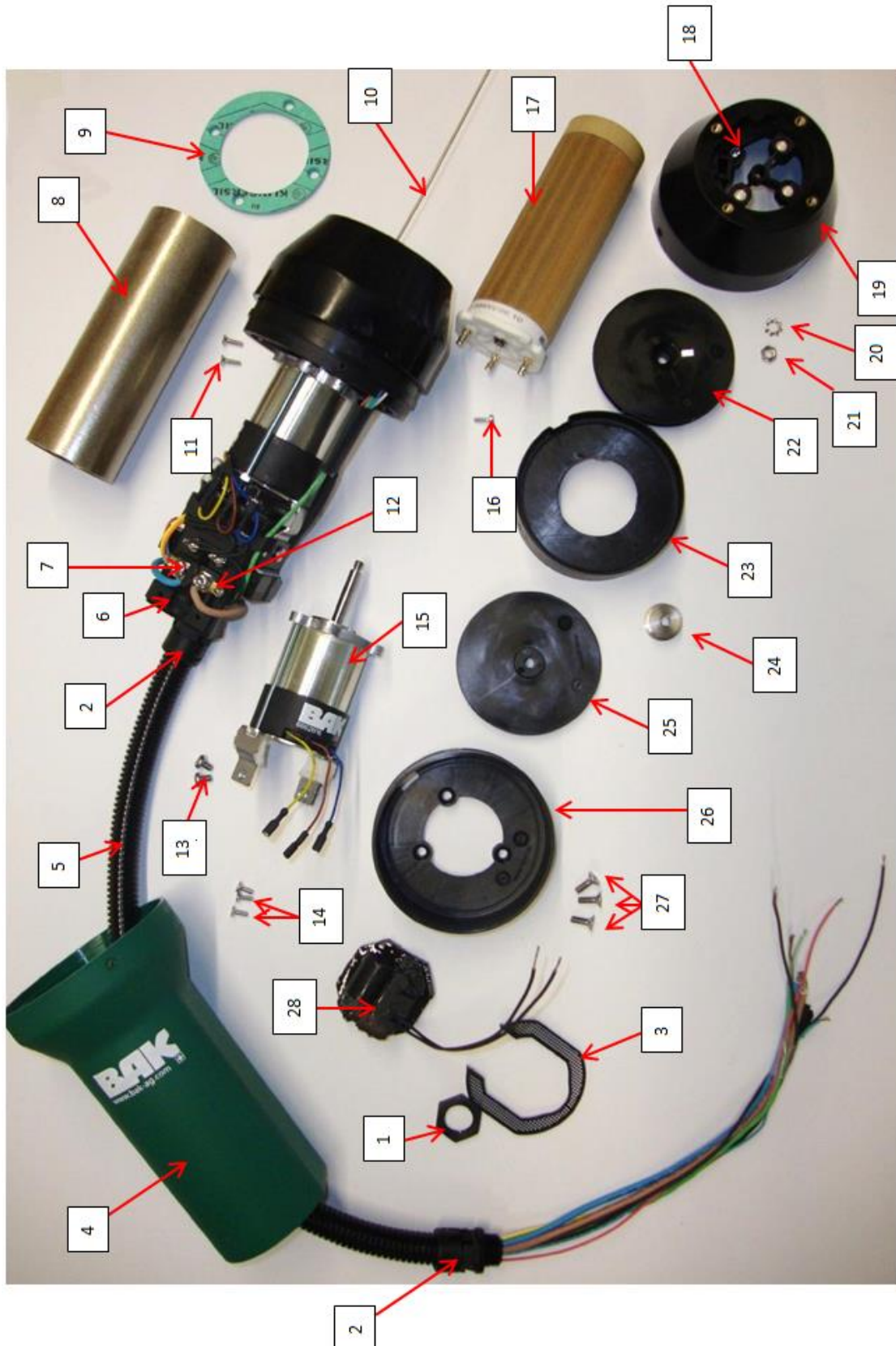




Art.-no.	Description	Art.-no.	Description
6600259	ErOn BL to LarOn 230V without nozzle for LarOn High Speed	6601124	Shoulder bolt M5x16 (DV034)
6600260	ErOn BL to LarOn 400V without nozzle for LarOn High Speed	6601125	Circlip (DV036)
6600652	Flex hose 430mm	6601126	Drag roller complete with 1xDV038, 2xDV009, 1x5100985 (DV037)
D-0138	Fillister head screw M6x10	6601200	Bushing drag roller (DV038)
D-0274	Hex nut M5	6601127	Rocker drag roller (DV040)
D-0290	Lock washer 5,3	6601128	Drive pressure roller (DV042)
6601310	Cheese head screw M5x30 (D-0440)	6601203	Drive shaft (DV043)
D-0863	ULS screw M5x20	6601204	Drive bearing housing (DV044)
6601246	O-ring 19x3,5 (D-1079)	6601129	Round belt roller complete with 2xbearing and bush (DV045)
D-1099	Lock washer 4.3	6601130	Roller (DV047)
D-1308	Transformer	6601132	Shaft roller (DV050)
D-1383	Fillister head screw 2,9x9,5	6601207	Slide bush (DV051)
D-1447	Cylinder pin 6x10	6601133	Fixation block (DV052)
D-1554	Cheese head screw M5x25	6601208	Fastener (DV053)
D-1772	Fillister head screw M4x6	6601190	Grid metal plate 40mm (DV054)
D-2286	Potentiometer 47K	6601134	Clamp (DV055)
D-2388	Spacer M4/9,5	6601135	Bearing (DV056)
D-2389	Distance bush	6601138	Gear sheet (DV059)
D-2427	Shim washer 8x14x0,3	6601209	Guide bar (DV060)
6601111	Pressure spring (DV001)	6601268	Key woodruff (DV061)
6601192	Ball bearing (DV005)	6601139	Guide handle block (DV062)
6601282	Ball bearing (DV006)	6601140	Guide handle (DV063)
6601283	Ball bearing (DV007)	6601210	Bushing 15.2x24 (DV064)
6601251	Ball bearing (DV008)	6601211	Spring sheet (DV066)
6601252	Ball bearing (DV009)	6601212	Rubber ring white (DV067)
DV010	Retaining ring Ø30	6601142	Silicon ring (5100985)
DV011	Retaining ring Ø15	6601143	Round belt (DV069)
6601113	Sprocket wheel, Z=14 (DV013)	6601144	Locking ring ErOn, lower part (DV233)
DV015	Ball bearing	6601145	Locking ring ErOn, upper part (DV077)
6601115	Rocker round belt (DV016)	6601305	Side cover (DV079)
6601117	Head plate (DV020)	6601147	Chain lock (DV080)
6601118	Weight 1 (DV021)	6601214	Deep groove ball bearing (DV081)
660119	Weight 2 (DV022)	6601216	Potentiometer (DV083)
6601120	Chain tension adjuster (DV023)	6601148	Aluminium knob (DV084)
6601195	Linear slide bearing (DV026)	6601217	Cam switch, heater (DV085)
6601196	Linear slide bearing (DV027)	6601218	Cam switch, drive (DV086)
6601197	Linear slide bearing (DV028)	6601220	Main switch (DV088)
6601121	Guide roller (DV029)	6601149	Display (DV089)
6601198	Nirosta thrust piece with ball (DV030)	6601221	Washer disk (DV090)
6601273	Stop bolt with counter nut (DV238)	6601222	Bushing rocker (DV091)
6601199	Ball knob (DV032)	6601223	Bushing round belt roller (DV092)
6601123	T-handle (DV033)	6601224	Proximity sensor (DV093)
6601155	Adjustable clamping lever (DV103)	6601231	Front plate (DV159)

DV107	Circlip, SS 13x19x1,5	6601233	Frame joint (DV161)
6601158	Cable connection with bend protection (DV108)	6601234	Gasket front plate (DV162)
6601159	Power supply cord 230V (DV111)	6601236	Protection hold handle (DV168)
6601160	Power supply cord 400V (DV112)	6601237	Transport roller (DV175)
6601226	Set screw M10x80 (DV115)	6601238	Cover transport roller (DV178)
6601227	Hexagon nut M10 (DV116)	6601247	Ground piece (DV183)
6601228	Seeger ring SB26 (DV117)	6601240	Ground strap (DV184)
DV118	Spannstift 5x20 DIN8752	DV188	Set screw M5x30
DV119	Spannstift 5x30 DIN8752	DV189	Hexagon nut M5
DV120	Washer B 6,4	DV190	Hexagon nut M20x1,5
6601253	Washer B 13 (DV121)	DV198	Planetary gear
6601254	Countersunk screw M6x16 (DV123)	6601259	Front plate 2 (DV209)
6601162	Cheese head screw M6x20 (DV124)	6601261	Locking disc (DV211.1)
6601163	Cheese head screw M6x40 (DV125)	6601265	Pressure spring (DV219)
DV126	Cheese head screw M8x35	6601266	Wing screw (DV220)
DV127	Cheese head screw M8x30	DV221	Tube guide handle
6601164	Cheese head screw M10x20 (DV128)	6601274	Shaft for 6601273 (DV232)
6601165	Cheese head screw M12x35 (DV129)	6601276	Ground plate 2 (DV234)
6601166	Cheese head screw M12x70 (DV130)	6601277	Mainboard (DV239)
DV131	Cheese head screw M4x8	6601308	Stopper Housing (DV246)
6601229	Filister head screw M6x12 (DV132)	6601309	Distance bush 5,3x10x4 (DV247)
DV134	Hexagon nut M8x20	6601263	Steering bar, base plate with 6601261 (DV268)
6601167	Flat hexagon nut M10 (DV135)	6601152	Grip of steering bar (DV098) incl. DV168 (DV270)
6601168	Countersunk screw M4x10 (DV136)	6601304	Controller (DV274)
6601169	Disk 5,3 (DV137)	DV293	Steering bar
6601170	Disk 5,3 (DV138)	DV296	Distance ring LarOn H
6601172	Key woodruff 4x4x10 (DV139)	DV297	Sprocket wheel Z13
6601269	Key woodruff 6x6x16 (DV140)		
6601172	Taper ring (DV141)		
6601173	Disk 8,4 (DV142)		
6601174	Cheese head screw M8x16 (DV143)		
DV144	Cheese head screw M6x16		
DV145	Cheese head screw M5x12		
6601175	Cheese head screw M5x20 (DV146)		
6601176	Cheese head screw M5x35 (DV147)		
DV148	Cheese head screw M4x20		
DV149	Set screw M10x40		
6601114	Chain LarOn (DV153)		
6601286	Washer 10.5 (DV155)		
6601255	Washer 6.4 (DV156)		
6601146	Housing LarOn (DV158)		

**ERON LARON H, BL 230V/400V**



### Spare parts list ErOn LarOn H, BL 230V/400V

Pos.	Art.-no.	Pcs	Description
1	6603151	2	Nut M16
2	6600648	2	Hose coupling straight
3	6600601	1	Air filter
4	6600639	1	Handle for flex hose
5	6600652	1	Flex hose 430mm
6	6600644	1	Terminal block for flex hose
7	6101243	2	Fillister head screw M4x8
8	5101274	1	Mica tube ø 47.6 x 134mm
9	5101270	1	Gasket 70x48x4
10	6112693	1	Thermocouple
11	6600616	2	Countersunk screw 30x10
12	6100435	2	Torsional protection washer M4
13	6100436	2	Pan head screw M4x6
14	6600603	3	Countersunk screw, 30x8
15	6662668	1	BL-Motor complete with flange and connection piece ErOn-LarOn 230V
16	6600621	1	PT fillister head screw KL30x8
17	5107612	1	Heating element type 44/39A1, 230V/2200+2200W
17	5107613	1	Heating element type 44/39A1, 400V/2750+2750W
18	6600615	1	Phototransistor with green isolation hose
19	6600638	1	Connecting head complete (with 4x660618, 3x6600619, 3x6600620, 3x6601065)
20	6600848	1	Lock washer
21	6100287	1	Hexagon nut M5
22	6600637	1	Turbine upper part, balanced
23	6600614	1	Stripper
24	6101251	1	Steel hub
25	6600636	1	Turbine lower part, balanced
26	6600613	1	Turbine housing lower part
27	6100284	3	Countersunk screw M4x12
28	6602688	1	Circuit board HLG V3.01, ErOn LarOn H
	6601311	1	Overlap welding nozzle 40mm

