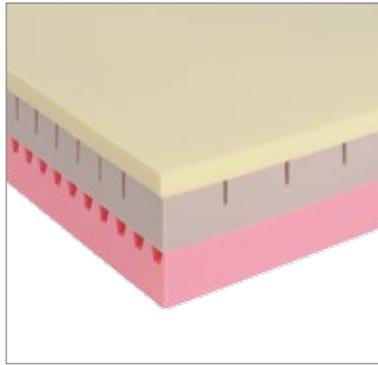




# Appropriate aids for bariatric care

**aks**  
aktuelle krankpflege systeme



## aks range for bariatric care

The percentage of the heavy weight population has stagnated for a period of more than ten years. In contrast, the number of adipose persons increased. This development means consequent adaptation to the heavy weight demand for the medical appliances market. Appropriate aids are needed.aks recommends a number of products in the bariatric range for the care and mobilisation; the large sizes and “strong” solutions can be found here.

# Useful information

## Definition and classification of overweight and adiposity

Adiposity (Latin *adeps* = fat) "is defined as an increase of the body fat beyond the normal amount. The calculation basis for the weight classification is the Body Mass Index (BMI). The BMI is the quotient of the weight and the square of the body height ( $\text{kg}/\text{m}^2$ ). Overweight is defined as  $\text{BMI} \geq 25 \text{ kg}/\text{m}^2$ , adiposity as  $\text{BMI} \geq 30 \text{ kg}/\text{m}^2$  (WHO, 2000 EK IV)."<sup>\*</sup>

Weight classification for adults based on the BMI		
Category	BMI ( $\text{kg}/\text{m}^2$ )	
Severely underweight	< 16	Underweight
Moderately underweight	16-17	
Slightly underweight	17-18.5	
Normal weight	18.5-25	Normal weight
Pre-adiposity	25-30	Overweight
Adiposity Grade I	30-35	Adiposity
Adiposity Grade II	35-40	
Adiposity Grade III	$\geq 40$	

(according to WHO, 2008)

Not only the weight of the body fat, but fat distribution also plays an important role. The waist circumference measurement applies in this regard. With a waist circumference  $\geq 88 \text{ cm}$  for women and  $\geq 102 \text{ cm}$  for men, abdominal adiposity is present (WHO, 2000 EK IV; EASO, 2002 EK IV). If a  $\text{BMI} \geq 25 \text{ kg}/\text{m}^2$  has been determined, the waist circumference should also be measured.

The abdominal fat and the fat on and in the organs (visceral) are most problematic. As the BMI does not take account of the different fat distribution, the overweight is also assessed using the ratio of waist (abdomen) circumference to hip circumference (HBU, WHR). Adiposity is present if this ratio is greater than 0.85 for women and greater than one for men.

(see also Deutsche Gesellschaft für Sportmedizin und Prävention e.V.: S1 Guideline for preventive medical checkup in sport, page 26, 2007)

## Causes of overweight and adiposity\*

Biological, psychosocial and environmental risk factors can cause overweight:

- Familial disposition, genetic causes
- Lifestyle (e.g. lack of exercise, malnutrition)
- Constant availability of food
- Sleep deprivation
- Stress
- Depressive disorders
- Low social status
- Eating disorders (e.g. binge-eating, night-eating)
- Endocrine illnesses (e.g. hypothyroidism, Cushing syndrome)
- Medicines (e.g. anti-depressants, neuroleptics, mood stabilisers, anticonvulsants,
- Anti-diabetics, glucocorticoids, some contraceptives, beta blockers
- Other causes (e.g. immobilisation, pregnancy, quitting smoking)

<sup>\*</sup> from: Interdisziplinäre Leitlinie der Qualität S3 zur "Prävention und Therapie der Adipositas", © 2014 DAG e.V.

## Consequences of illness

"Overweight and adiposity are contributory causes (risk factor) for many complaints and can promote the development of chronic illnesses such as:

- High blood pressure (hypertension),
- Coronary heart disease, heart failure,
- Type 2 diabetes,
- Lipid metabolism disorders,
- Stroke,
- Sleep apnoea syndrome,
- Increase of the uric acid level (hyperuricemia) and gout,
- Gall bladder diseases,
- Cancers,
- Orthopaedic complications,
- Psychosocial complications.

Considerable costs for the health and social system are caused by the secondary diseases. The potentials for prevention and savings are correspondingly high. There are many indications that overweight acquired in childhood can result in weight problems as an adult. There is already a correlation at a young age between adiposity and increased cardiovascular risk factors."

[http://www.rki.de/DE/Content/Gesundheitsmonitoring/Gesundheitsberichterstattung/GesundAZ/Content/A/Adipositas/Inhalt/adipositas\\_Inhalt.html](http://www.rki.de/DE/Content/Gesundheitsmonitoring/Gesundheitsberichterstattung/GesundAZ/Content/A/Adipositas/Inhalt/adipositas_Inhalt.html)



## **goliath®**

### **For easy solution of difficult tasks**

aks designed the stable goliath® patient hoist for body weight up to 250 kg.

#### **The advantages of the goliath®:**

- Robust and safe construction with insertable stand mast and high-quality double castors
- Incl. comfort spreader bar with two opposing hooks for broader configured seating for particularly corpulent persons
- Electric spreading
- Max. load capacity 250 kg
- Mechanical emergency lowering, emergency stop button in the event of electrical faults, visual and acoustic warning against deep battery discharge at activation of the hand control
- High-quality drive components from LINAK®, with removable battery pack, incl. charger

#### **Accessories**

- Special "high load capacity" slings in three sizes
- aks efw 300 hoist scales
- Wall charging station

#### **Order numbers**

goliath® – 86031

Comfort spreader bar – 89094

Charger – 89245

Spare battery box – 89248

Battery pack – 17601

Wall charging station without battery pack – 89239

Wall charging station with battery pack – 89256

Spreader bar padding – 89219

#### **Technical Data**

See p. 111



## **goliath®**

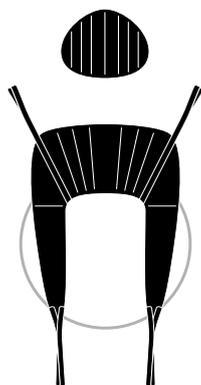
### **comfort spreader bar**

This spreader bar is designed for accommodating goliath® slings, sizes A to C.

Maximum load: 250 kg

#### **Order number**

goliath® comfort spreader bar incl. padding – 89094



## goliath® sling

### The hoist sling for heavyweight persons

The goliath® slings belong to the flexible body support systems whose fabric materials ideally adapt to the body of the patient. The extremely tear-resistant polyester slings provide reinforcement. Shoulder loops can be adjusted in 5 ways and leg loops in 4 ways. The back area and the leg supports provide an additional special feature. They are padded with a so-called pressure-elastic 3D textile. Two fabric layers are kept at a predefined spacing by a layer of padding. A microclimate forms there which has thermoregulating and moisture-regulating effects. This high-quality sling is always used with the goliath® bariatric hoist for the basic care of obese patients up to max. 250 kg body weight.

#### Technical Data

Standard: DIN EN ISO 10535:2007-04

Maximum load: 250 kg

Material composition:

Loop material: 100% polyester sling;

Outer fabric: 100% polyester;

Padding: 3D material 100% polyester;

Velcro fastening: 100% nylon;

Dimensions: see page 40 ff.

#### Order numbers

Size A – 89076, size B – 89077, size C – 89078,  
head support with Velcro fastening (optional) – 79712



## aks efw 300

### The practical weighing device for the everyday nursing routine for heavy cases

aks efw 300 digital scales set incl. standard spreader bar for patients up to 250 kg in combination with goliath®. See p. 19 for product description

#### Order numbers

aks efw 300 – 89158



## aks samson

### High-cell anti-decubitus alternating pressure system for heavy patients up to 300 kg

aks samson provides correct care of adipose persons at risk of decubitus. The special design and the arrangement of the 20 double cells with a cell height of 25 cm ensure significant pressure relief and thus increased well-being for the heavyweight person in decubitus therapy. Care and static seat function complete the list of product benefits.

#### The advantages of the aks samson:

- Changeover button from static to alternating pressure operation
- 8-stage pressure setting according to the patient weight
- Cycle time can be set to 10, 15, 20 or 25 minutes
- Visual and audible alarms in the event of pressure loss, power failure and system errors
- Reset button of the audible alarm for low pressure and system errors
- Time-limited care function with automatic changeover to the previously set operating mode and pressure
- Button for activation/deactivation of the seat function
- Automatically activating button lockout
- Simple filter replacement

- 20 double cells made of nylon with TPU lamination, three static head cells, 17 cells with alternating pressure in the upper area, complete lower area static
- All cells can be replaced individually
- Cell height approx. 25 cm
- Mattress cover made of polyester fabric with PU coating, flame-retardant, tested according to BS7175 sec 3 crib 5, water-impermeable, fastened to the mattress with all-round zip
- CPR valve for fast mattress ventilation
- Strips on the mattress underside for fastening to the lying area
- Secure snap-in connection of the hoses on the pump unit
- All widths 90, 100, 120, 140 cm also in 200 and 220 cm lengths

Patient weight 30 to 300 kg

Decubitus prophylaxis and therapy support up to and including Grade IV (according to EPUAP)

#### Order numbers

See table on p. 110



## Standard mattress

### Foam mattress for L to XXL care beds

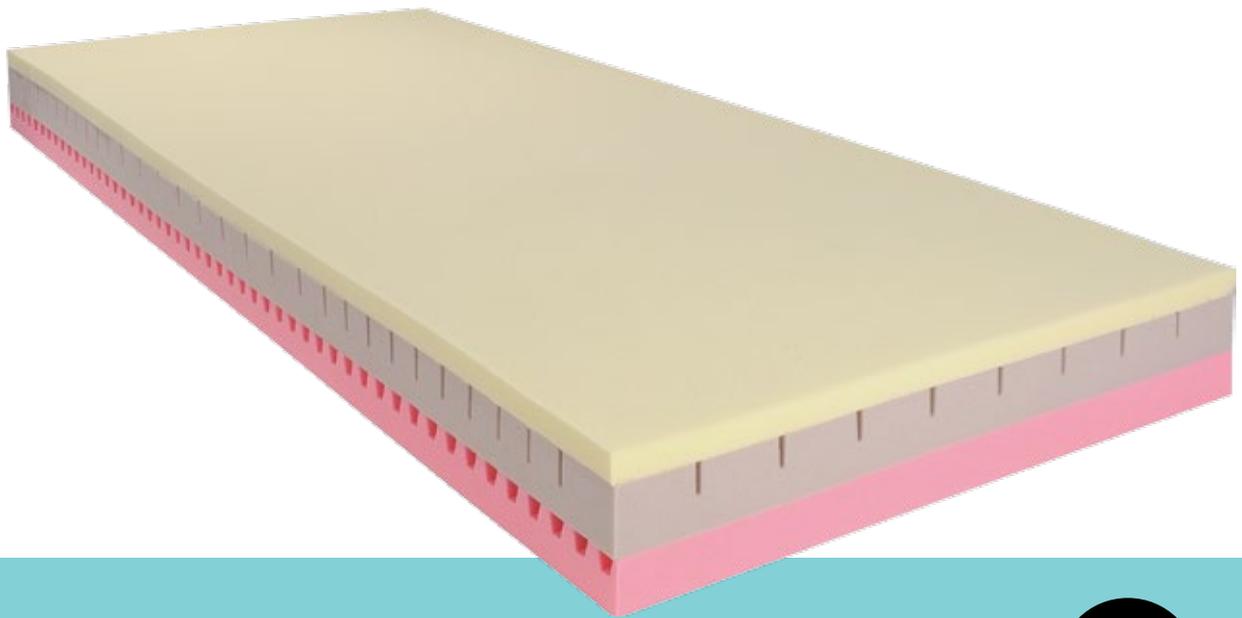
This standard mattresses is explicitly not suitable for decubitus prophylaxis and therapy. They are solely intended for normal use and round off the aks product range for bariatric care.

#### **The advantages of the standard mattress:**

- For everyday use
- Many different dimensions
- The mattress can be used without side bar height extender in the corresponding aks care beds (L-XXL)
- For persons with a body weight up to 130, 200 and max. 300 kg

#### **Order numbers**

See table on p. 110



UP TO  
GRADE II  
EPUAP

## aks HD 85

### Anti-decubitus and soft positioning mattresses made of foam for large & heavy patients

As a consistent supplement to the aks care beds for heavy and very heavy patients, these mattresses fulfil the particular requirements which arise from this application area. The foams used have been selected to be perfect for secure positioning.

#### The advantages of the aks HD 85:

- Selection and design have been adapted to the requirements of varyingly heavy patients
- Mattresses can be used without side bar height extender in the corresponding aks care beds (L, XL, XXL)
- With inkoair® mattress cover
- Three-layer structure for optimum pressure relief of the patient
- Top layer: high tech visco foam high density, low compression hardness
- Middle layer made of high-quality cold foam
- Bottom layer as base made of PU foam
- Many standard and special dimensions available

#### Patient weight

aks HD 85 L 40-150 kg

aks HD 85 XL 40-200 kg

aks HD 85 XXL 40-300 kg

Decubitus prophylaxis and therapy support up to and including Grade II (according to EPUAP)

#### Order numbers

See p. 110

## Care beds

# aks SB L, SB XL, SB XXL

## The correct bed for every stature



aks SB L



aks SB XL



aks SB XXL

aks developed the bed series SB L to XXL for heavy and large patients. The SB L type is intended for persons up to 150 kg body weight who cannot be supplied with standard beds due to their anatomy.

The SB XL can be used for patients up to a body weight of 200 kg and has higher mirror panels and three side bars. SB XXL rounds off the bariatric range. With the particularly stable double scissor, the heavy duty bed easily accomplishes handling a patient weight up to 300 kg.

### Advantages of the care beds from SB L to SB XXL:

- Increased lying comfort due to four-section lying areas, electrically adjustable height and head part
- Maximum functionality and safety: Foot part with knee bend is electrically adjustable from the bed by hand control without nursing assistance
- Protection against falling out: wood side bars integrated on both sides, SB XL and XXL with three bars and particularly high head and foot parts
- Stable construction with powerful single scissor (aks SB L and XL) and 125 mm castor diameter
- High stability for the problem of the care of heavy patients due to in-house developed double scissor with 8 castors, 100 mm diameter for aks SB XXL
- Many different versions in size and max. patient weight
- Mains power cut-off: This safety system electrically disconnects all poles of the bed from the mains power supply when the hand control is not in use
- Hand control with large buttons, lock function and check of the first failure safety is possible
- Including uplifter, from 120 cm lying area width: Square-tube version, and grab handle
- Special colour RAL 7035 – light grey

### Order numbers

See table on p. 111

*With knee bend  
for elevation of  
the ankle*



## Lifting care bed frames

### aks B4 L, B4 XL, B4 XXL

#### The functional strength for the available bed at home

In the usual environment – at home, in one's own bed – the benefits of a care bed can also be used for heavy-weight persons without great expense. The lifting care bed frame is installed in the existing bed and is immediately functional, with all the advantages of a care bed.



aks B4 L



aks B4 XL



aks B4 XXL

#### The advantages of the lifting care bed frame:

- Increased lying comfort due to four-section lying areas, electrically adjustable height and head part
- Maximum functionality: foot part with knee bend of the lifting care bed frame is electrically adjustable by hand control without nursing assistance – patient-protected!
- Stable construction with powerful single scissor (aks B4 L and B4 XL) and metal lying area
- High stability for the problem of care of heavy patients due to robust metal lying area and our in-house developed double scissor (aks B4 XXL)
- Simply install in the existing bed at home or in the nursing home
- Mains power cut-off: This safety system electrically disconnects all poles of the lifting care bed frame from the mains power supply when the hand control is not in use.
- Hand control with large buttons, lock function and check of the first failure safety is possible
- Special colour RAL 7035 – light grey

#### Options and accessories

- Strengthened uplifter made of square tube from 120 cm lying area width, with grab handle
- Side grille and increased height side grille with special holder

#### Order numbers

See table on p. 111

Side grille – 39249

Increased height side grille – 39279

Uplifter with grab handle for lying area width up to 100 cm – 77020

from 120 cm – 39113

With knee bend



# Technical Data Bariatric products

Product	Size in cm			Min. Patient weight	Max. patient weight	Cover according to EPUAP	Decubitus grade	Order number
	H	B	L					
<b>Alternating pressure</b>								
<b>aks samson</b>	25	90	200	30 kg	300 kg	Polyester cover, PU coating	Grade IV	27600
	25	100	200	30 kg	300 kg	Polyester cover, PU coating	Grade IV	27605
	25	120	200	30 kg	300 kg	Polyester cover, PU coating	Grade IV	27610
	25	140	200	30 kg	300 kg	Polyester cover, PU coating	Grade IV	27620
	25	90	220	30 kg	300 kg	Polyester cover, PU coating	Grade IV	27601
	25	100	220	30 kg	300 kg	Polyester cover, PU coating	Grade IV	27606
	25	120	220	30 kg	300 kg	Polyester cover, PU coating	Grade IV	27611
	25	140	220	30 kg	300 kg	Polyester cover, PU coating	Grade IV	27621
<b>Foam</b>								
<b>Standard mattress</b>	12	100	200		130 kg	Jersey cover, light blue		39319
<b>for aks SB L</b>	12	100	220		130 kg	Jersey cover, light blue		39335
<b>aks B4 L</b>	12	120	200		130 kg	Jersey cover, light blue		39321
	12	120	220		130 kg	Jersey cover, light blue		39337
	12	140	200		130 kg	Jersey cover, light blue		39323
	12	140	220		130 kg	Jersey cover, light blue		39339
<b>Standard mattress</b>	15	100	200		200 kg	Jersey cover, light blue		39349
<b>for aks SB XL,</b>	15	100	220		200 kg	Jersey cover, light blue		39353
<b>aks B4 XL</b>	15	120	200		200 kg	Jersey cover, light blue		39350
	15	120	220		200 kg	Jersey cover, light blue		39358
	15	140	200		200 kg	Jersey cover, light blue		39351
	15	140	220		200 kg	Jersey cover, light blue		39355
<b>Standard mattress</b>	15	100	200		300 kg	Jersey cover, light blue		39361
<b>for aks SB XXL,</b>	15	100	220		300 kg	Jersey cover, light blue		39365
<b>aks B4 XXL</b>	15	120	200		300 kg	Jersey cover, light blue		39362
	15	120	220		300 kg	Jersey cover, light blue		39366
	15	140	200		300 kg	Jersey cover, light blue		39363
	15	140	220		300 kg	Jersey cover, light blue		39367
<b>aks HD85 L</b>	14	80	190	40 kg	150 kg	inkoair® mattress cover	Grade II	39169
	14	80	200	40 kg	150 kg	inkoair® mattress cover	Grade II	39159
	14	80	220	40 kg	150 kg	inkoair® mattress cover	Grade II	49043
	14	90	190	40 kg	150 kg	inkoair® mattress cover	Grade II	39140
	14	90	200	40 kg	150 kg	inkoair® mattress cover	Grade II	39141
	14	90	220	40 kg	150 kg	inkoair® mattress cover	Grade II	39157
	14	100	180	40 kg	150 kg	inkoair® mattress cover	Grade II	39173
	14	100	190	40 kg	150 kg	inkoair® mattress cover	Grade II	39170
	14	100	200	40 kg	150 kg	inkoair® mattress cover	Grade II	39142
	14	100	220	40 kg	150 kg	inkoair® mattress cover	Grade II	39143
	14	120	200	40 kg	150 kg	inkoair® mattress cover	Grade II	39144
	14	120	220	40 kg	150 kg	inkoair® mattress cover	Grade II	39145
	14	140	190	40 kg	150 kg	inkoair® mattress cover	Grade II	39177
	14	140	200	40 kg	150 kg	inkoair® mattress cover	Grade II	39146
<b>aks HD85 XL</b>	18	80	200	40 kg	200 kg	inkoair® mattress cover	Grade II	39172
	18	90	200	40 kg	200 kg	inkoair® mattress cover	Grade II	39156
	18	90	190	40 kg	200 kg	inkoair® mattress cover	Grade II	39620
	18	90	220	40 kg	200 kg	inkoair® mattress cover	Grade II	39164
	18	100	200	40 kg	200 kg	inkoair® mattress cover	Grade II	39147
	18	100	220	40 kg	200 kg	inkoair® mattress cover	Grade II	39148
	18	120	200	40 kg	200 kg	inkoair® mattress cover	Grade II	39149
	18	120	220	40 kg	200 kg	inkoair® mattress cover	Grade II	39150
	18	120	240	40 kg	200 kg	inkoair® mattress cover	Grade II	39151
	18	140	200	40 kg	200 kg	inkoair® mattress cover	Grade II	39162
	18	140	220	40 kg	200 kg	inkoair® mattress cover	Grade II	39478
<b>aks HD85 XXL</b>	22	90	200	40 kg	300 kg	inkoair® mattress cover	Grade II	39158
	22	100	200	40 kg	300 kg	inkoair® mattress cover	Grade II	39168
	22	120	200	40 kg	300 kg	inkoair® mattress cover	Grade II	39152
	22	120	220	40 kg	300 kg	inkoair® mattress cover	Grade II	39153
	22	140	200	40 kg	300 kg	inkoair® mattress cover	Grade II	39167
	22	140	220	40 kg	300 kg	inkoair® mattress cover	Grade II	39154
	22	140	240	40 kg	300 kg	inkoair® mattress cover	Grade II	39155

## Patient hoists

<b>goliath®</b>	
Total weight (without spreader bar and sling)	48 kg
Maximum load	250 kg
Lift speed at full load (time for one lift process)	78 s
Power, lift and lowering processes at full battery capacity	25
Input voltage	24V DC
Protection class	II
Type of protection	IP X4
Basic dimensions in accordance with DIN EN 10535	
Maximum range for 600 mm reference height	660 mm
Maximum range from the chassis	670 mm
Range from the chassis when spreading the leg supports to 700 mm	105 mm
Castor diameter, rear	100 mm
Castor diameter, front	100 mm
Overall height	1310 mm
Turning diameter	1525 mm
Chassis length	1285 mm
Max. attachment height	1970 mm
Min. attachment height	585 mm
Lifting range	1385 mm
Min. outer width	745 mm
Max. inner width	1065 mm
Inner width at maximum range of the attachment point	980 mm
Min. inner width	595 mm
Height of the chassis	130 mm
Clearance of the chassis	50 mm
Grab handle width	452 mm
Minimum distance from the wall to the attachment point at its greatest height (leg supports spread)	565 mm
Minimum distance from the wall to the attachment point at its lowest height (leg supports spread)	470 mm
Minimum distance from the wall to the attachment point at its greatest range (leg supports spread)	265 mm

## Care beds and lifting care bed frames

### aks SB L to XXL and aks B4 L to XXL

	SB L	B4 L	SB XL	B4 XL	SB XXL	B4 XXL
Max. patient weight	150 kg	150 kg	200 kg	200 kg	300 kg	300 kg
Dimensions/Order No.						
80 x 190 cm		33766				
80 x 200 cm		33767				
90 x 190 cm	32622					
100 x 200 cm	32623	33761	32721	33725		
100 x 220 cm	32624	33762	32722	33726		
120 x 200 cm	32625	33763	32723	33727	32821	33745
120 x 220 cm	32626	33764	32724	33728	32822	33746
120 x 240 cm			32725	33729		
140 x 200 cm	32629	33765				
140 x 220 cm					32823	33747
140 x 240 cm					32824	33748
Height adjustment	SB from 40 to approx. 90 cm (without mattress)		User part		Type B	
	B4 from approx. 30 to 80 cm (without mattress)		Type of protection		IP X4	
Input voltage	230 V ~, 50/60 Hz		Standards used:			
Power consumption	150 W, max. 2A		DIN EN 60601-2-52:2010			
Protection class	II		Warranty 2 years			