



R82 

R82 Meerkat

Learning through movement

A simple stander

The Meerkat is a simple standing device where the modular accessories make it easy to meet an individual's changing needs and the requirements of multiple users.

Features

The Meerkat simple stander consists of a baseplate and a centre column, where the accessories are positioned. It is designed as a simple modular standing frame with a free choice of positioning in anterior or posterior position. In the

simplest set-up, it is used with sandals, knee and pelvic supports for children with good segmental control of the trunk.

Pelvic support

The pelvic support provides excellent and snug support built around a ratchet system, which offers quick and secure adjustment in small increments. This is very helpful in transfer situations to quickly secure the pelvis. The ratchet system creates the perfect way to keep the chest symmetrical, without extra therapist's hands.

Knee supports

The knee supports provide a comfortable support both anteriorly and posteriorly. They are built around a ratchet system, which offers quick and secure adjustment in small increments. The knee supports have angle adjustability and can easily be positioned forward, backward and sideways while the child is positioned in the stander.

Adjustments

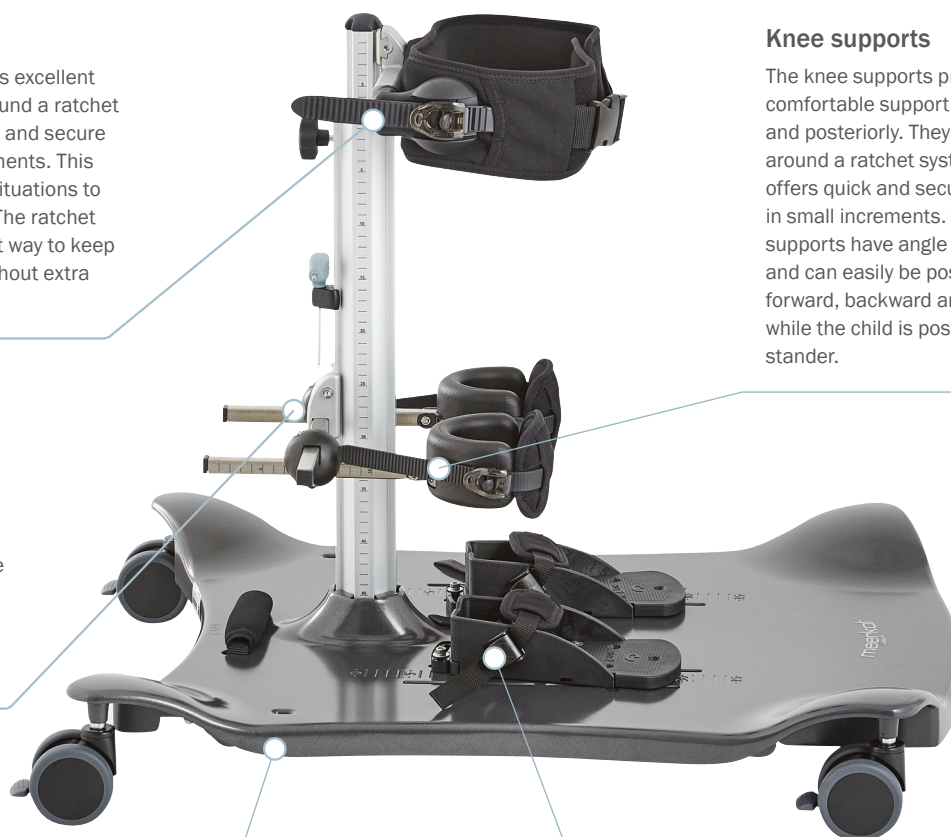
Modular components can be clicked quickly and easily on and off the centre column to meet the child's changing needs or the varying requirements of multiple users.

Baseplate

The baseplate is the foundation for the centre column, which provides easy mounting of all the supports through a simple clamp-on system.

Sandal

The position and rotation of the sandals can easily be adjusted to ensure the right positioning. The sandals ensure a fit for any size of feet, shoes and orthoses due to the width adjustment.



Accessories provide support and movement

With the use of accessories, it is possible to provide support to the chest, add a tray for functional support or a rocker base to challenge the child's trunk control through movement.



Anterior with full accessory set-up



Posterior with simple accessory set-up and rocker base

Various possibilities with accessories

Chest support

The chest support provides excellent and snug support built around a ratchet system, which offers quick and secure adjustment in small increments, in small increments. This is very helpful in transfer situations to quickly secure the chest. The ratchet system creates the perfect way to keep the chest symmetrical, without extra therapist's hands.

The chest support has been designed so that it is possible to reduce the support provided to the child in response to the gradual improvement of trunk control.



Go to video explaining anterior and posterior

Rocker

Mounting the rocker under the baseplate makes it possible to challenge the control of the trunk in the segments not supported by the stander. The rocker provides new and unique possibilities for the child to create and react to movement, which allows the child to improve the control of the trunk and reduces sedentary time.

Tray

The tray provides a variety of possibilities for playing, interacting and daily activities. It can be used for functional activities as well as providing support to the upper body.

Why is standing important?

Around the age of nine to twelve months, typically developing children challenge themselves to adopt the standing position as a natural development from the lying and seated positions as an integral part of gross motor development. Adopting the standing position allows the child to get new perspectives on their surroundings

and apply alternative loads on their bones, joints and muscles, providing the possibilities to develop new skills.

Children with delayed development and different types of disability need support to adopt the standing position and achieve these possibilities.



What is known about standing and the use of standing devices?

- A cross-sectional study of 562 children with cerebral palsy has documented that 65% stand independently. 31% used support or assistive devices and 4% could not stand (Rodby-Bousquet et al 2010). This shows the need for supported standing to provide equal opportunities for all children to achieve the standing position and to develop.
- A systematic review of dosing of pediatric supported standing programs has made evidence-based clinical recommendations on the use of standing programs for 30-90 minutes per day, five days a week, to affect bone mineral density, spasticity and range of motion of the hip, knee and ankle joints (Paleg et al 2013).

Using the Meerkat to create a learning environment



In typically developing children, trunk control is developed from the top down. When holding a newborn child, the head must always be supported. During the following weeks and months, the child gradually develops head control and starts to control the movements and stability in the trunk. By the age of six to eight months, most children can sit independently. During the same period, the caregivers naturally move their support from the head and down towards the lower back and bottom. When the child is able to sit independently on the floor, they are often only supported at the lower back and bottom when held on their parent's arm. This development is encouraged in the Meerkat by using the chest support and rocker. The multiple adjustment possibilities of the chest support make it possible to provide the child with the exact support needed to challenge active trunk control.

Learning through movement

When the Meerkat is fitted with a rocker, it is possible to challenge the child's reactive trunk control. The level of support is easily adjusted by lowering the chest support on the centre column. This makes it possible to create a learning environment where the child gradually gains control over the trunk, segment by segment. Over time, this can lead to improvement in gross motor function and mobility.

What is known about trunk control and training of trunk control?

- A retrospective cross-sectional study of 92 children showed that trunk control is positively related to gross motor function and mobility. The authors suggest an increased focus on trunk control in interventions aiming at improving gross motor function (Curtis et al 2015).
- A case study of six children with cerebral palsy reported improvement in independent sitting balance following targeted training. The training aimed for improvement of trunk control when performed with external support in sitting or standing (Butler 1998).
- A randomised controlled trial has documented that there were no significant differences between the improvements in the two groups from baseline to primary endpoint at six months when comparing segmental training with a control group. The segmental training was done using external support in sitting or standing (avg. 84 min. per week) and the control group received their conventional physiotherapy (avg. 77 min. per week). The effects were documented with measures of gross motor function, mobility and trunk control (Curtis et al 2017). The results suggest that segmental training can be used as an equivalent replacement for conventional physiotherapy for a period of six months.

Experience with the Meerkat from clinical practice

Using the Meerkat, highly specialised physiotherapist Frances George has developed the Dynamic Standing Programme and tested it on three children in a five-week case study.

During the study period, the children used the Meerkat three to four times a week for sessions of 5 to 10 minutes. While in the Meerkat, the children were encouraged to move outside their base of support using activities of interest and engagement for each child. After the study period, the children experienced attainment of predefined therapy goals and improvements in motor skills.



You can learn more about the dynamic standing programme on our website...

Poppi

Poppi is a six-year-old girl with cerebral palsy. One of Poppi's short time goals before the case study was "to be able to stand at a regular table while engaged in activity for 5 minutes". After the study period, she could stand at a regular table using one hand support and engage in activity for 5 minutes and stand independently, with no hand support, for 5 seconds.

In the picture, Frances motivates Poppi to reach for the soap bubbles, to move outside her base of support and thereby challenge her trunk control.



Go to video about
Poppi's development



Oliver

Oliver is a seven-year-old boy with cerebral palsy.

One of Oliver's short time goals before the case study was "to be able to initiate steps forward using a walker". After the study period, he could consistently initiate steps forward in a walker and take continuous steps in a forward direction over 10+ metres.

In the pictures Oliver is in his R82 Mustang (right) and using the Meerkat (below) in anterior position with a tray positioned at the top of the centre column. The tray makes it possible for Oliver to engage in various activities, such as reaching to the tablet on the tray.

The picture illustrates how Oliver uses the Meerkat as a simple stander, in addition to the Dynamic Standing Programme.



How does the Meerkat fit into a daily routine?

As a simple stander, the Meerkat can be used as a traditional standing device. Depending on the primary and secondary goals for the use of the stander, a routine can be planned according to the evidence-based recommendations proposed by Paleg and colleagues.

Standing programme five days per week positively affects:

- Bone mineral density (60 to 90 minutes per day)
- Range of motion of hip, knee, and ankle (45 to 60 minutes per day)
- Spasticity (30 to 45 minutes per day).

The stander can be used for one or more sessions per day, depending on the preferences of the child and family, as well as local practical and formal guidelines.

Transfer

As an alternative to support from an adult, the child can be supported by a lift/hoist using the Molift RgoSling Ambulating Vest. When the child is positioned on the baseplate, the pelvic and chest belts can quickly be fixed around the child and the ratchet system can be used to adjust them.



Go to video transferring
into the Meerkat



Read more about the Molift
RgoSling Ambulation Vest...



Poppi walks from her Wombat Living to the Meerkat

World Health Organization recommendations for children and youngsters aged 5-17 years:

- Should do at least 60 minutes of moderate to vigorous-intensity physical activity daily.
- Physical activity of amounts greater than 60 minutes daily will provide additional health benefits.
- Should include activities that strengthen muscle and bone, at least 3 times per week.

Besides the health benefits, being physically active has the potential to prevent development of secondary musculoskeletal impairments and maximise physical functioning, foster the cognitive, social and emotional development of a child and develop and maintain neural structures and pathways.

Being physically active enough to meet the recommendations can be difficult for most children with moderate to severe motor disabilities.

Standing in the Meerkat with challenging support or the rocker will encourage the child to move. For a child with limited possibilities to move, the use of the stander may be a huge improvement in the time spent being physically active and thereby reducing the risk associated with physical inactivity, such as cardiovascular diseases and diabetes.



The rocker provides new and unique possibilities for the child to create and react to movement, allowing them to improve trunk control and reduce sedentary time.

Is the Meerkat for me?

The various possibilities to position support at the centre column makes the Meerkat suitable for any child with delayed development and different types of disability who needs support to adopt the standing position. For children with cerebral palsy, the Meerkat is suitable for children at GMFCS levels II-IV.

Opportunities

The Meerkat is ideal for a child who stands assisted by a person or device. The child might experience difficulties with static, dynamic or reactive control over one or more segments of the trunk. The child will often be dependent on assistive devices in sitting and walking as well. The child might use a seating system (i.e. x:panda or Wombat Living) and a Mustang or Crocodile for independent walking.

Thanks to the ease of use, the Meerkat can be used at home, institutions or schools. The minimalistic design of the Meerkat makes it easy to take to different places, and may help to gain families' acceptance.

When should you be careful?

The Meerkat has been designed to support the child in standing and conforms to the requirements of the Medical Devices Directive (93/42/EEC) and EN12182. The rocker makes the product dynamic and challenges the child's reactive trunk control. When the Meerkat is used to challenge trunk control, the adult supervisor must be aware of unintended events. This could be in therapy sessions, where the child is encouraged to perform movements with the upper, unsupported, parts of the body. If the applied challenge is too demanding for the child to maintain upright trunk control, and/or the child moves their centre of gravity outside of the supporting surface of the baseplate, it may cause the product to become unstable.



Considerations when choosing a Meerkat

The Meerkat simple stander comes with a baseplate and a centre column.
Most children will benefit from using sandals, knee, pelvic and chest supports.

The following considerations regarding the accessories should be made:

- The displacement kit (see picture on page 13) is useful if the child stands with flexion in the knees and hip. It can be fitted onto the centre column to increase the range of adjustment.
- The rocker (see picture below) can be used to challenge trunk control.
- The tray (see picture on page 3 and 13) can be used for functional activities as well as providing support for the upper body. Be aware that the tray can only be used when the Meerkat is used in the anterior position.
- As a minimum, the product should be used with a support placed at the top of the pelvis or higher.



The R82 Meerkat in detail

The Meerkat is a simple modular standing frame with a free choice of positioning in anterior or posterior. The child's freedom of movement is encouraged with the minimal support, pure product design and innovative rocker.



Excellent and secure support

The chest and pelvic supports provide excellent and snug support built around a ratchet system, offering quick and secure adjustment in small increments. The rotational element creates the perfect way to keep the chest symmetrical, without extra therapist hands.

Easy adjustments

Modular components can be clicked on and off quickly and easily to meet an individual's changing needs or the requirements of multiple users.

Measurements

Meerkat		1	2	3
	Width	445 mm (17½")	670 mm (26½")	670 mm (26½")
	Length	595 mm (23½")	800 mm (31½")	800 mm (31½")
	Overall height	375 - 750 mm (14¾ - 29½")	500 - 1000 mm (19¾ - 39½")	650 - 1300 mm (25½ - 51¼")
	Mass device	9 kg (19.8 lb)	15,25 kg (33.6 lb)	15,75 kg (34.7 lb)
	Max user mass	20 kg (44 lb)	65 kg (143.3 lb)	90 kg (198.4 lb)
	Static stability	10° sideways	10° forward	10° rearward

Standard: Baseplates, column and tool



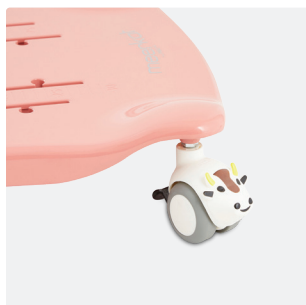
Baseplate, column and tool



Column mounted on the baseplate



Size 1 - pastel blue



Size 1 - strawberry ice



Size 2+3 - anthracite

Accessories



Chest support



Pelvic support



Knee supports



Sandals



Rocker



Tray



Displacement kit bracket



Daily adjustment kit

Meerkat accessory videos

Chest support



Chest support
Adjustment explained

Pelvic support



Pelvic support adjustment explained

Knee supports



Find out more about the knee supports and daily
adjustment kit

Sandals



How to adjust the sandals

Rocker



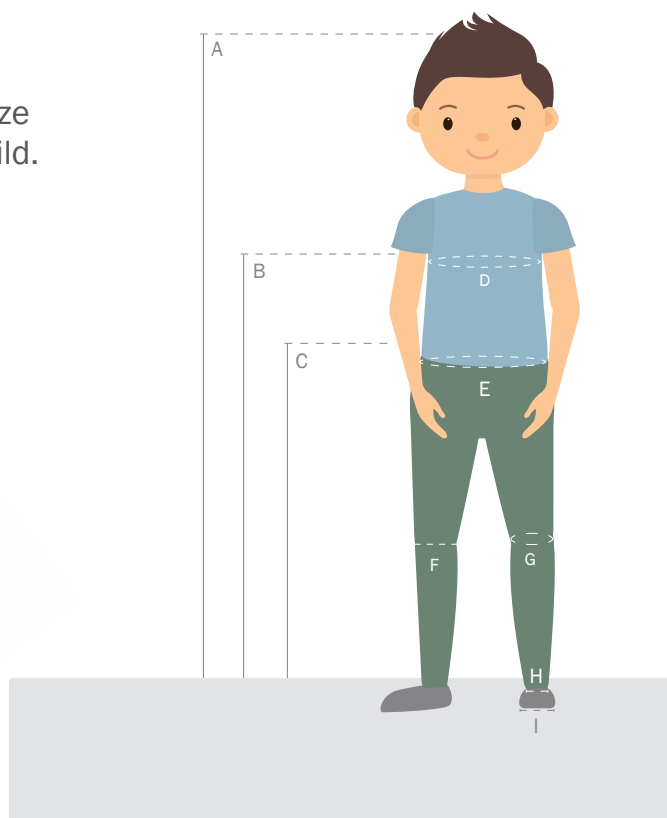
How to attach and
remove the rocker

Measurement guide

A simple guide to help you choose the correct size of the R82 Meerkat and accessories for your child.



Download this measurement guide from our website...



Measurement guide

Standard product		Meerkat size 1		Meerkat size 2		Meerkat size 3			
Approximate age		1-4 years		4-10 years		6-18 years			
	Max user mass	20 kg (44 lb)		65 kg (143.3 lb)		90 kg (198.4 lb)			
A	Approximate total height	700 - 1050 mm (27½ - 41¼")		950 - 1350 mm (37½ - 53¾")		1170 - 1800 mm (46 - 70¾")			
B	Max armpit height	400 - 750 mm (15¾ - 29½")		720 - 1000 mm (28¼ - 39¼")		840 - 1300 mm (33 - 51¼")			
C	Approximate top of pelvis	350 - 550 mm (13¾ - 21¾")		500 - 800 mm (19¾ - 31½")		650 - 1050 mm (25½ - 41¼")			
Accessories		Small		Medium		Large		X-Large	
D	Chest circumference	450 - 600 mm (17¾ - 23½")		600 - 700 mm (23½ - 27½")		700 - 900 mm (27½ - 35½")		900 - 1100 mm (35½ - 43¾")	
E	Hip circumference	450 - 600 mm (17¾ - 23½")		600 - 700 mm (23½ - 27½")		700 - 900 mm (27½ - 35½")		900 - 1100 mm (35½ - 43¾")	
F	Knee circumference	189 - 251 mm (7½-10")		251 - 290 mm (10-11½")		290 - 390 mm (11½-15¼")		-	
F	Knee width	60 mm (2¼")		80 mm (3¼")		107 mm (4")		-	
G	Heel width	60 - 75 mm (2¼ - 3")		65 - 80 mm (2½ - 3¼")		85 - 95 mm (3¼ - 3¾")		-	
H	Forefoot width	95 - 110 mm (3¾ - 4¼")		100 - 145 mm (4 - 5¾")		120 - 165 mm (4¾ - 6½")		-	



Founded in 1973, Etac is a world-leading developer and provider of ergonomic assistive devices and patient handling equipment. Our ambition is to provide solutions that optimise quality of life for the individual, family members and caregivers.

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