



CHARIOTS ERGONOMIQUES

 Screwdriving technology

 Workspace Organisation

 Safety & Ergonomics



Your Assembly Workspace Partner

Let's talk about:

Freedom of mobility with trolleys



Work is not always confined to a single workstation and tools must be moved around accordingly. Lightweight trolleys are ideal for this situation, significantly increasing productivity up to 30%.

The trolleys provide extra work or storage space and can be used, for example, to transport various items, to store measuring units and keep a buffer stock on a production line.

Each task is different and requires dedicated tools. Due to their modularity and versatile accessory components, trolleys are easy to design and adapt to suit a multitude of users and applications.



Ergonomics for manual handling of loads

Manual handling of loads (also known as MMH – manual materials handling) means moving or handling things by lifting, lowering, pushing, pulling, carrying, holding, or restraining. Manual handling of loads is generally considered to be an occupational risk factor for low back and shoulder complaints and it is in fact the most common cause of occupational fatigue, low back pain and lower back injuries. Therefore, it should not come as a surprise that paying attention to ergonomics for manual handling of loads is extremely important for the safety and health of the workers as well as for the efficiency and productivity of the processes.

Pushing and pulling from an ergonomics viewpoint

Pushing and pulling are the two physical tasks most commonly related to working on and operating trolleys. The most common risk factors, related to pushing and pulling tasks, which could hinder the ergonomics, are forceful pushing/pulling, trolley design that does not promote neutral body postures, wrong direction of exerted forces (e.g. pulling when you should be pushing), one handed pushing or pulling, too heavy loads and wrong handle height.

A task suitable trolley that adapts to the size of the user is the answer to reducing the risk of work related musculoskeletal disorders (WMSD), especially for lower back, knee and shoulder injuries. When selecting a trolley for the task, you should always consider the human body power zones, where people have the greatest strength and most comfort working. See the image on the right as a reference. Trolley design should ensure that pushing and pulling can be done from the optimal height, between the knuckle and shoulder height of the worker, with the arms as close to the body as possible. Working in your power zone reduces the start force needed for pushing and pulling, reduces the effort and force needed to perform work tasks, and reduces the stress on your back and shoulders.

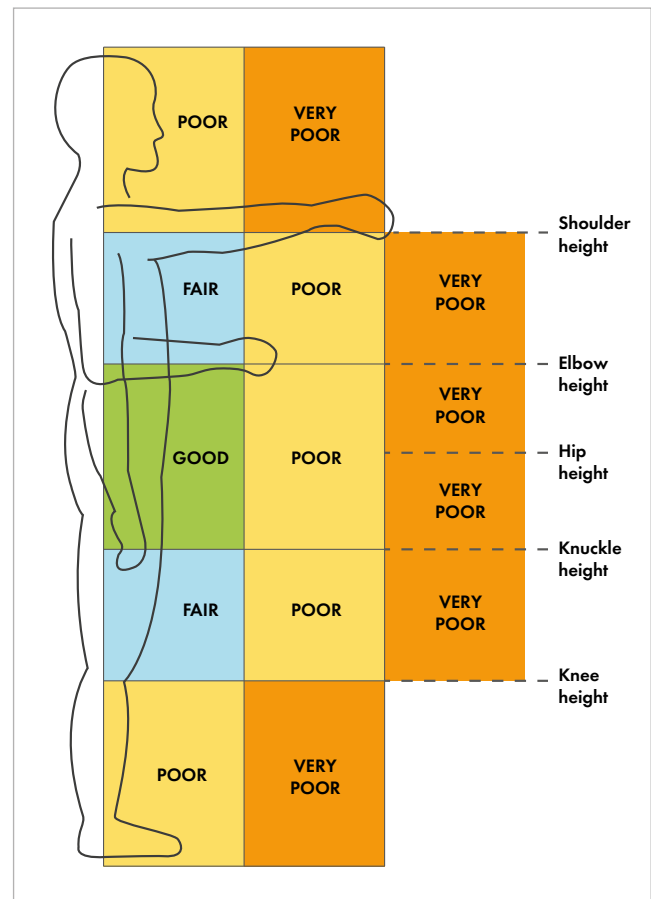
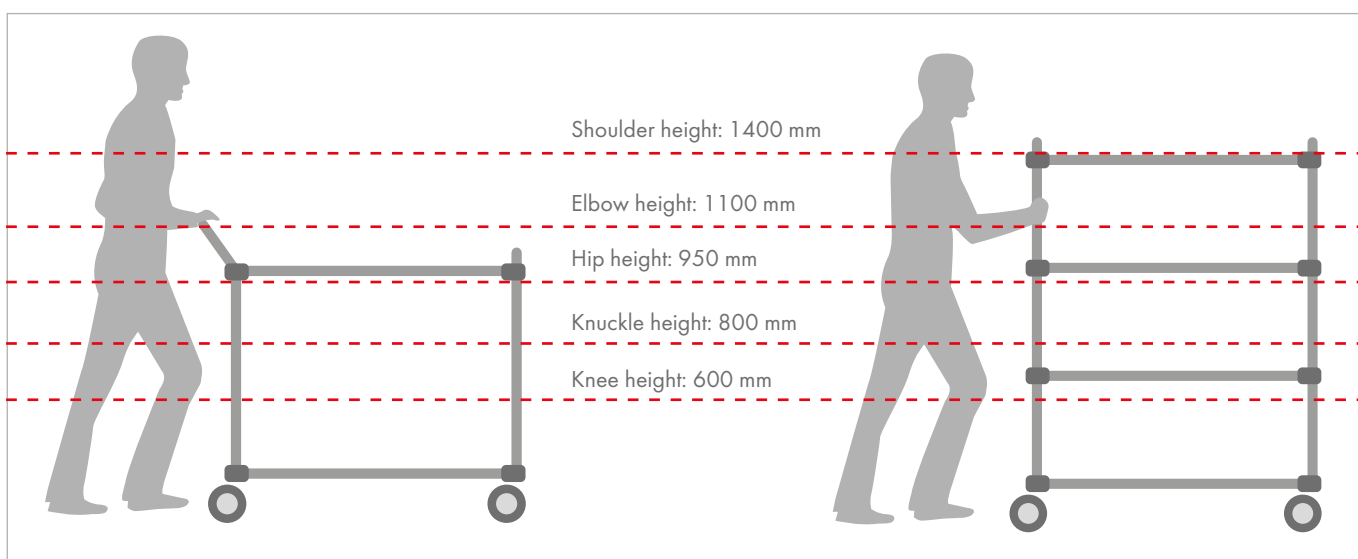


Illustration on the power zones where people have the greatest strength and most comfort, in regards of lifting and placing loads, pushing and pulling (i.e. above the knees, below the shoulders, and close to the body).

Consider the handle position and design

Vertical handles are considered the most optimal, as every sized worker is able to grasp the handles in their unique power zone. Handles can be horizontal as well, as long as they are the correct height for the user. Preferred handle height is between the shoulder and knuckle height of the worker, optimising the force applied for pushing and pulling.

The optimal shape for handles is cylindrical and smooth, which allows the best power grip with straight wrists. The handle diameter should be big enough to enable power grip instead of pinch grip. Power grip provides up to 75% more strength compared to pinch grip. Power grip involves grasping the handle by wrapping all the fingers around it, instead of grasping with thumb and tips of the other fingers.



Elbow height is the optimal position in regard to push forces. Displayed heights are indicative for average sized male.

CHANGE IN THE NATURE OF MANUAL LOAD HANDLING TASKS

In the past decades, industrial workspaces have been mostly redesigned so that carrying objects has been replaced by transporting objects by pushing or pulling them in trolleys, carts, hand pallet trucks and such. For example, in the automotive supply sector about 10% of all working processes involve pushing and pulling on a regular and repetitive basis.

In addition, the rapid growth of the e-commerce sector has increased the number of distribution centres worldwide. The primary job at these distribution centres is order picking and delivery, where manual handling aids such as carts, trolleys, hand pallet trucks and such are used to perform the tasks. The use of these aids has again eliminated carrying objects, changing the nature of manual load handling tasks predominantly to pushing and pulling.

In general, it has been estimated that nearly half of common manual load handling tasks in workplaces consist of pushing and pulling exertions performed on level surfaces and variable inclined ramps.

Castors play an important role

A quality castor is of the appropriate size in relation to the working environment and purpose of the trolley. The bigger the castor, the easier it is to move the trolley. For example, big castors make it easier to push the trolley over thresholds and other similar obstacles. The tread in quality castors withstands wear and tear. The wheel/tread material is not the only factor influencing the usability and easy movability of the trolley, as the flooring material also affects how well the castor rolls and moves.

Swivel castors are also handy on a trolley, making it easy to manoeuvre even in small spaces. We recommend using



four swivel castors in tight spaces, making it easier to turn and control loads. Strong castor brakes lock the trolley in position, making sure that it stays where it is supposed to be.

Castors have a big effect in minimizing the start forces needed to get the trolley moving as well as in reducing the rolling resistance and therefore play an important role in ensuring proper ergonomics. The amount of force required to move loads with trolleys depends on a number of factors:

- weight and shape of the load
- type and condition of floor surface (e.g. smoothness and density)
- route taken (e.g. slopes and obstacles)
- type of castor, especially the materials used
- size of castor
- maintenance of castors – cleaning, lubricating and/or replacing castors on a regular basis has a vital effect in maintaining the ride comfort and minimizing the push effort.

Task experience is the key to reducing strain

Task experience and correct working technique in pushing and pulling play an important role in reducing some measures of biomechanical strain and therefore yield potential for reducing the risk of injury. For example, pulling a lighter weight trolley at hip height, with arms outstretched, would result in very high compressive force at the lower back, as opposed to pushing a much heavier trolley between shoulder and elbow height, arms closer to body, which results in much less of a compressive force at the lower back. As a reference, see the illustration on the power zones where people have the greatest strength and most comfort.

If your goal is to ensure efficient processes and ergonomic working conditions, start by selecting the correct type of trolley for the task and then orientating all workers with the physical aspects and best working techniques for the specific task at hand. No matter how fancy the features of your trolley, if your workers use bad techniques while performing their tasks with the trolley, you are sure to increase the risk of injuries and create inefficiency in processes. If necessary, modify work practices so that workers can perform their tasks and work within their power zone.



Although there is no exact weight limit that is safe, a weight of 20–25 kg is heavy to lift for most people and it thus increases the risk of back injury.

What to consider when selecting a trolley?

Selecting the right trolley is not complicated, but there are certain considerations to take into account to ensure you get the best possible trolley for your needs.

- 1. Why do you need the trolley?** What is its purpose? Are flexibility and easy reconfiguration important features of the trolley? If you have a fixed task and fixed need for the trolley, a specific trolley for that need will most likely be the best solution for you. But if you need a trolley that can be easily adapted to changing needs and production processes, choose a trolley that has a modular structure, a wide range of accessories, and good ergonomics, which will help you flexibly adapt the trolley to a multitude of tasks.
- 2. What are the objects being handled on the trolley?** Are you moving lightweight boxes of the same size and weight or bulky equipment that can differ in size and weight? The weight and shape of the objects handled determine the load capacity and shelf and work surface size of your trolley. If the size of handled objects varies, select a height adjustable work surface and/or shelves to ensure proper ergonomics no matter what size of objects you handle. Tilted shelves improve access and handling of objects, as it enables you to work from your power zone.
- 3. How are the objects handled?** Are they sorted or unsorted? Can you stack them or are they loose? Especially for unsorted and loose objects, it is better to equip the trolley shelves with edges and/or rubber mats, to ensure the goods do not fall over when moving. Remember though that shelves with edges make it more difficult to handle, lift and lay down heavy objects. Another possibility is to use a caged trolley, where the side walls of the trolley are at least partially closed in order to help keep objects in place. Mesh panels are a good option for this: they allow visual inspection and keep the construction light.
- 4. What kind of working environment is it?** Do you have to enter doors with the trolley? How wide are the walkway spaces? If you have to move through doors in different workspaces and/or long distances within the space, check the walkway and door widths to ensure sufficient space.
- 5. What type of castors should I have?** A quality castor is of the appropriate size in relation to the working environment and purpose of the trolley. Castors have a big effect in minimizing the start forces needed to get the trolley moving as well as in reducing the rolling resistance and therefore play an important role in ensuring proper ergonomics.
- 6. How about handles?** Trolleys that are moved around a lot and transported for longer distances should be equipped with at least one handle, to make handling, pushing and pulling easy, effortless and ergonomic. Vertical handles are considered the most optimal, as every sized worker is able to grasp the handles in their unique power zone. Preferred handle height is between the shoulder and knuckle height of the worker, optimizing the force applied for pushing and pulling. The optimal shape for handles is cylindrical and smooth, which allows the best power grip with straight wrists.
- 7. How often is the trolley used?** If you have a trolley in active everyday use, invest in a high quality, reliable and durable trolley with high quality castors. This might be a more expensive initial investment, but in the long run a high quality trolley will pay for itself with its long lifetime and flexibility in use.
- 8. Consult the people using the trolley in their work.** They have the best hands-on experience and can give valuable input on the required features, such as size and load capacity, as well as on the accessories needed to perform the work ergonomically and efficiently. Knowing your loads helps you to buy equipment of appropriate capacity.
- 9. How ergonomic is the trolley?** As a quick ergonomics check, make sure the handles, work surfaces, and accessories are easily height adjustable to adjust to the worker and task at hand to ensure proper ergonomics. If your goal is to ensure efficient processes and ergonomic working conditions, start by selecting the correct type of trolley for the task and then orientating all workers with the physical aspects and best working techniques for the specific task at hand. No matter how fancy the features of your trolley, if your workers use bad techniques while performing their tasks with the trolley, you are sure to increase the risk of injuries and create inefficiency in processes.



150 kg

Universal trolley WTR,
page 106

Most often combined with WB workstations to provide extra storage space. A good adjustable PC station, measuring station or mobile storage, best suitable for moving equipment around the workstation.



300 kg

Multi and Basic trolley,
pages 107 and 109

These trolleys can be equipped with shelves, tops and other module-sized accessories to fit any application, such as transportation or tool storage. The trolleys support heavy loads, but they are easy to move as well.



150 / 300 kg

Adjustable trolley TRTA,
page 110

For general use wherever a good transportation and storage solution is needed. Two or four shelves available; height of the shelves can be adjusted. Mesh panels can be installed at the ends or on the sides. Also a SMD reel holder version available.



12 / 25 kg

Mobile workstations,
page 112

An ergonomic and versatile tool with key qualities such as light weight, small size and excellent mobility. Used wherever a laptop is needed on the go.



90 kg

Storage trolley,
page 113

Simple solution for mobile storage. The shelves are fitted with rubber mats and the middle shelf is adjustable.



150 kg

Concept trolley,
page 113

Most often combined with Concept and WB workstations to provide extra work and storage space. Lower shelf is integrated. Can be equipped with an additional shelf or drawer unit 30 series.



150 kg

SAP trolley, page 113

Most often combined with TP workstations to provide extra workspace. Can be equipped with a lower shelf, an extra shelf and a handle, available separately.



150 kg

Packing trolleys, page 114

Handy trolleys designed with packing in mind provide space to keep boxes and other materials within arm's reach, but they also can be moved aside as needed.



600 kg

Heavy-duty trolley, page 116

Heavy-duty trolleys, as their name indicates, are ideal for moving heavy loads. Their special castors support extremely heavy weights.



300 kg

Fitter's trolley, page 117

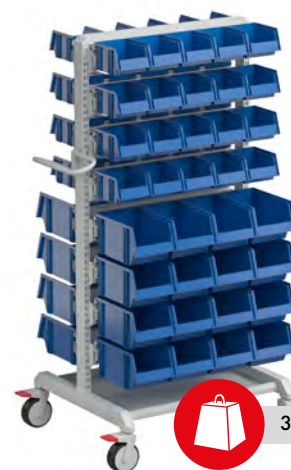
A fitter's trolley lets you take your supplies and tools wherever you go, while keeping them organised. The rubber mat helps keep tools in place while you are working.



300 kg

Service trolley, page 118

The service trolley frame is equipped with a safety locking feature that allows only one drawer to be opened at a time.



300 kg

Bin and cabinet trolleys, page 120

The bin and cabinet trolleys can be equipped with Treston stacking bins and bin cabinets based on own needs. Trolleys enable supplies and parts to be moved smoothly to wherever they are needed.

Universal trolley WTR

A good quality, versatile trolley, PC-station, measuring station or mobile storage trolley. Modern industrial design.

The standard trolley has 3 shelves (TS 605), size 650 x 530 mm. Height adjustment of shelves is by allen-key. The vertical profiles are of aluminium. Frames are of epoxy powder coated steel: light grey RAL 7035. The worktops are of 25 mm laminated particle board. Four swivel castors (Ø 125 mm) two of which have brakes, overall height of castor 141 mm.



Universal trolley WTR

Name	Size W x D x H mm	Max load kg	Code	Code ESD
1. Universal trolley	660 x 650 x 1415	150	WTR140	WTR140 ESD
2. Extra shelf	530 x 650	50	TS605	TS605 ESD
3. Adjustable shelf*	530 x 650	50	TAS605	TAS605 ESD
4. Bin profile	Length 525		BP50	BP50 ESD
5. Power rail	Length 468 mm		TPR4-001	
6. Keyboard tray NT	525 x 399 x 133 (outer) 500 x 250 x 110 (inner)		-	NT 500 ESD

*Continuous adjustment for depth, height and angle.





Multi trolley

Multi trolleys provide an ergonomic mobile workstation. Multi trolleys are available in three different widths: M500, M750 and M900. This means that all our module-sized accessories can be used with the trolleys.

The sturdy shelves can be height-adjusted and tilted. They are also equipped with borders and rubber mats, which keep the load in place.

Multi trolleys support heavy loads, but they are easy to move as well, making it simple to transport heavy equipment, such as measuring units. They are equipped with four swivel castors (Ø 100 mm), two of which have brakes.

Multi trolleys

Name	Module	Outer dims W x D x H mm	Code	Code ESD
Multi trolley 1	M500	530 x 715 x 1130	C 721 41 001P	C 721 49 001P
Multi trolley 1	M750	780 x 715 x 1130	C 721 41 002P	C 721 49 002P
Multi trolley 1	M900	935 x 715 x 1130	C 721 41 003P	C 721 49 003P
Multi trolley 2	M500	530 x 715 x 1630	C 722 41 001P	C 722 49 001P
Multi trolley 2	M750	780 x 715 x 1630	C 722 41 002P	C 722 49 002P
Multi trolley 2	M900	935 x 715 x 1630	C 722 41 003P	C 722 49 003P

Multi trolley 1 includes: a handle, one bottom shelf and one adjustable shelf, depth: 505 mm.

Multi trolley 2 includes: a handle, one bottom shelf and three adjustable shelves, depth 650 mm.



Multi trolley 2



Multi trolley 1



Multi trolley frame

Name	Module	Size W x D x H mm	Max load kg	Code	Code ESD
Multi trolley 1 frame	M500	530 x 715 x 1130	300	860 812-41	860 812-49
Multi trolley 2 frame	M500	530 x 715 x 1630	300	860 818-41	860 818-49
Multi trolley 1 frame	M750	780 x 715 x 1130	300	860 154-41	860 154-49
Multi trolley 2 frame	M750	780 x 715 x 1630	300	860 156-41	860 156-49
Multi trolley 1 frame	M900	935 x 715 x 1130	300	860 155-41	860 155-49
Multi trolley 2 frame	M900	935 x 715 x 1630	300	860 157-41	860 157-49

Multi trolley frame dimensions

Multi trolley	Total height, mm	Depth, mm	Module width	Total width, mm
Frame 1	1130	715	M500/M750/M900	530/780/935
Frame 2	1630	715	M500/M750/M900	530/780/935

Bottom shelf

Name	Module	Size W x D mm	Max load kg	Code	Code ESD
Bottom shelf*	M500	470 x 505	100	860 846-41	860 846-49
Bottom shelf	M500	470 x 650	100	860 847-41	860 847-49
Bottom shelf*	M750	720 x 505	100	860 057-41	860 057-49
Bottom shelf	M750	720 x 650	100	860 067-41	860 067-49
Bottom shelf*	M900	870 x 505	100	860 059-41	860 059-49
Bottom shelf	M900	870 x 650	100	860 069-41	860 069-49

*Compatible only with Multi trolley 1.

Adjustable shelves are equipped with an ESD mat (49) or rubber mat (41).

Adjustable shelf for trolleys

Name	Module	Size W x D mm	Max load kg	Code ESD
Adjustable shelf	M500	470 x 505	100	921 49 001
Adjustable shelf	M500	470 x 650	100	921 49 002
Adjustable shelf	M750	720 x 505	100	921 49 005
Adjustable shelf	M750	720 x 650	100	921 49 006
Adjustable shelf	M900	870 x 505	100	921 49 009
Adjustable shelf	M900	870 x 650	100	921 49 010

Adjustable shelves are equipped with an ESD mat (49) or rubber mat (41).

Adjustable shelf, stepless depth adjustment

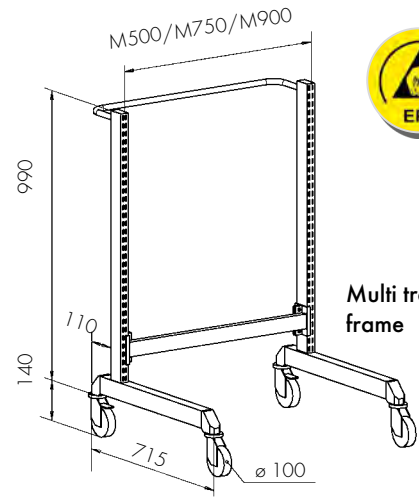
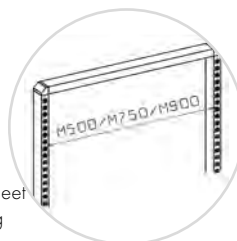
Name	Module	Size W x D mm	Max load kg	Code ESD
Adjustable shelf, stepless depth adjustment	M500	470 x 505	50	921 49 003
Adjustable shelf, stepless depth adjustment	M500	470 x 650	50	921 49 004
Adjustable shelf, stepless depth adjustment	M750	720 x 505	50	921 49 007
Adjustable shelf, stepless depth adjustment	M750	720 x 650	50	921 49 008
Adjustable shelf, stepless depth adjustment	M900	870 x 505	50	921 49 011
Adjustable shelf, stepless depth adjustment	M900	870 x 650	50	921 49 012

Adjustable shelves are equipped with an ESD mat (49) or rubber mat (41).

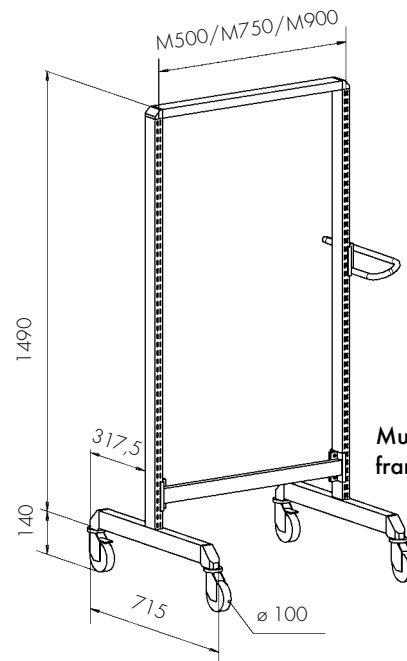
Modular size

The modular (M) size refers to the distance between two upright tubes from the middle of the tube. The modular size is used to find the appropriate accessories.

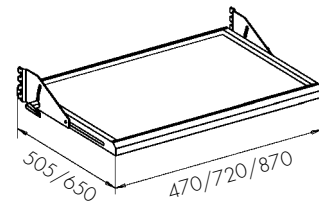
Multi trolley can easily be customised with a wide range of accessories, to meet individual needs (page 108). For example, you can easily turn it into packing trolley.



Multi trolley 1 frame



Multi trolley 2 frame





Basic trolley

Equip your trolleys with shelves, tops and other accessories to fit any application, such as transportation or tool storage.

All trolleys are equipped with four swivel castors (Ø 125 mm), two of which have brakes. The basic trolley can be combined with all the M750 accessories.

Basic trolleys

Name	Size W x D x H mm	Max load kg	Code	Code ESD
Basic trolley 1*	780 x 715 x 1630	300	BT-170B	BT-170B ESD
Basic trolley 2	800 x 715 x 1625	300	C 740 07 102	
Basic trolley 3	800 x 715 x 1625	300	C 740 41 003	C 740 49 003
Basic trolley 4	800 x 715 x 1625	300	C 740 07 004	
Basic trolley 5	800 x 715 x 1625	300	C 740 41 105	C 740 49 105
Basic trolley frame**	800 x 715 x 1625	300	859 859-41	859 859-49

* Up to 112 stacking bins can be attached to one trolley, must be ordered separately.

** Basic trolley frame includes bottom shelf and ESD or rubber mat.

Basic trolley accessories

Name	Size W x D x H mm	Max load kg	Code	Code ESD
Bottom shelf with rubber/ESD mat	720 x 560 x 32	150	852 719-41	852 719-49
Bottom shelf with HDPE plastic covering	720 x 560 x 32	150	852 683-41	
Shelf with rubber/ESD mat*	720 x 560 x 32	150	852 720-41	852 720-49
Shelf with HDPE plastic covering*	720 x 560 x 32	150	852 684-41	
Steel shelf*	720 x 560 x 32	150		852 685-49
Steel shelf	720 x 560 x 32	150		852 665-49
Extendable shelf*	720 x 580 x 33	50		852 687-49
Wash basket L-300	380 x 302 x 110	20	839 116-51	
Waste basket			839 159-00	
Waste basket holder				835 773-49
Paper roll holder	Roll dimensions max: width 240 mm, Ø 230 mm)			860 310-49
Flow-through shelf*	718 x 835 x 61	150		890 710-49

Trolleys can be combined with all the M750 accessories. For perforated panels, see page 167, for R-hooks, see page 174.

*including brackets



Basic trolley 1



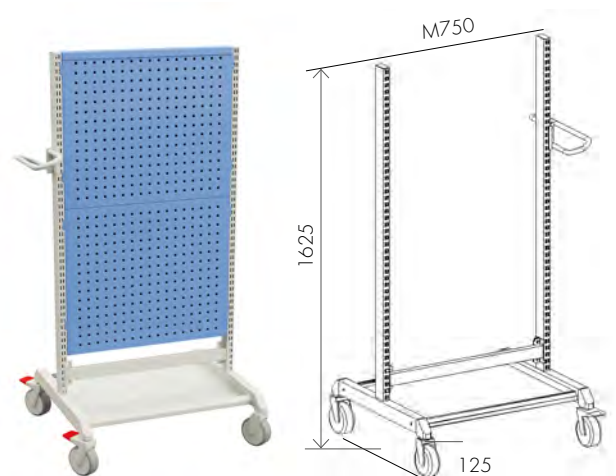
Basic trolley 2



Basic trolley 3



Basic trolley 4



Basic trolley 5

Basic trolley frame

Adjustable trolley TRTA

For general use in workshops, offices, production areas and hospitals. Shelves are powder coated steel, RAL 7035 ESD, height 28 mm. All shelves are individually adjustable. The structure is light but sturdy. The end-frames of the trolley are made of round, powder coated steel tube (25 mm). Four swivel castors (Ø 125 mm), two of which have brakes.

Adjustable trolley TRTA

Name	Size W x D x H mm	Shelf size W x D mm	Max load kg	Code	Code ESD
2-shelf trolley*	890 x 530 x 1020	800 x 430	150	TRTA4082	TRTA4082 ESD
2-shelf trolley*	1090 x 530 x 1020	1000 x 430	150	TRTA4102	TRTA4102 ESD
2-shelf trolley*	890 x 630 x 1020	800 x 530	150	TRTA5082	TRTA5082 ESD
2-shelf trolley*	1090 x 630 x 1020	1000 x 530	150	TRTA5102	TRTA5102 ESD
4-shelf trolley**	1090 x 530 x 1515	1000 x 430	300	TRTA4104	TRTA4104 ESD
4-shelf trolley**	1090 x 630 x 1515	1000 x 530	300	TRTA5104	TRTA5104 ESD

* Shelf adjustments between 200-770 mm

** Shelf adjustments between 200-1340 mm

Extra shelves TRHA

Name	Shelf size W x D mm	Max load kg	Code	Code ESD
Extra shelf	800 x 430	50	TRHA408	TRHA408 ESD
Extra shelf	1000 x 430	50	TRHA410	TRHA410 ESD
Extra shelf	800 x 530	50	TRHA508	TRHA508 ESD
Extra shelf	1000 x 530	50	TRHA510	TRHA510 ESD

End mesh panels NET2

Name	Size W x D mm	Set	Code ESD
End mesh panel	604 x 364	Incl. 2 panels	NET2

The mesh panels can be installed at the ends of the trolley or on the sides. An angle bracket is set on the edge of the upper and lower shelf and the mesh is screwed into place. The 4-shelf trolley can hold 2 mesh panels on top of each other.

Document holder DSA4

Name	Size	Code ESD
Document holder	A4	DSA4 ESD

Semiconductive epoxy powder coated steel. Includes two magnets.

Low M-divider hoops LDH

Name	Size	Code
Divider hoops	460 x 315	LDH

Steplessly adjustable. 4 pcs per set. M-shape (the lowest point 105 mm from shelf). Suitable only 430 mm deep shelves.



Low M-divider hoops LDH

Document holder

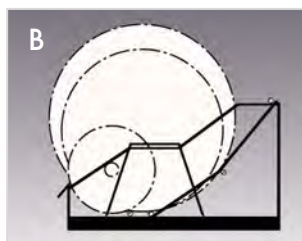
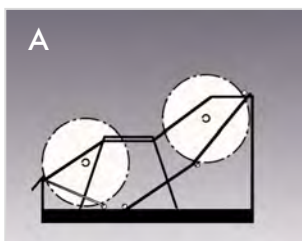
Reel holder trolley RRT

The adjustable reel holder trolley is compatible with SMD reels, and suitable for transport and stocking of them. All parts are powder coated steel, RAL 7035 ESD. The trolley has four perforated steel shelves, 1090 x 460 x 28 mm. All shelves are individually adjustable between 200-1605 mm.

The zinc plated reel racks that fit into the shelves are to be ordered separately. The structure is light but sturdy. The endframes of the trolley are made of round, powder coated steel tube (25 mm). Four turning castors with brakes (Ø 125 mm). The load capacity of one shelf is 50 kg, and the load capacity of the trolley is 200 kg.

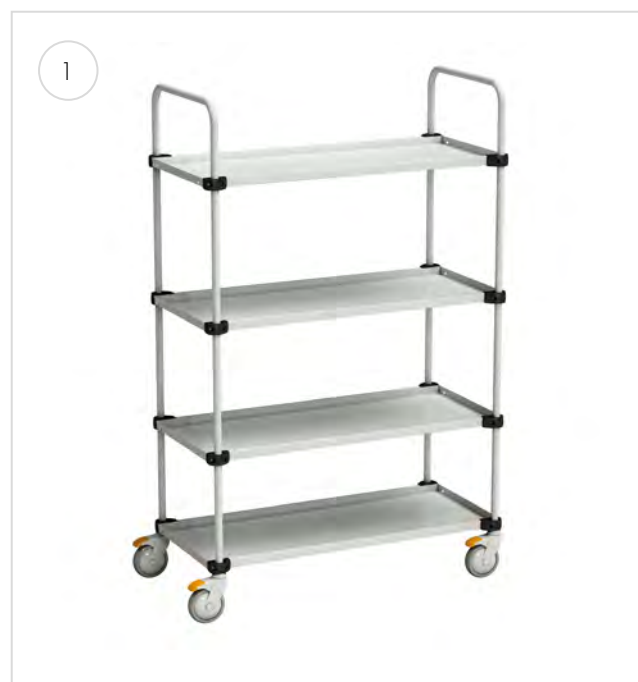
Reel holder trolley RRT

Name	Size W x D x H mm	Max load kg	Code ESD
1. Reel holder trolley	1100 x 530 x 1780	200	RRT ESD
2. Reel rack	960 x 426 x 254	50	RR ESD-Z
3. Document holder	A4		DSA4 ESD



In picture A: Side view of spools and reel racks. The capacity of one rack is 30 fixed compartments for 7" spools of 60 mm width.

In picture B: Side view of spools and reel racks. The capacity of one rack is 15 fixed compartments for 13" and 15" spools of 60 mm width.



Mobile workstations

MLC mobile workstation is a light, ergonomic and easy-to-move workstation. The mobile workstation moves and turns effortlessly even in tight spaces. A laptop computer can be placed on the worktop or underneath it, in which case only the screen is visible. A wide range of accessories is available, with all the necessary supplies included.

- An ergonomic workstation that is light to move around - aluminium frame, steel legs
- Standard features include a laminated worktop and a lockable computer compartment with holes for wires
- Four swivel castors (Ø125 mm), two with brakes



MLC mobile workstation

MLCT mobile height adjustable work surface is a compact sized additional work surface with easy gas spring height adjustment. It is ideal for tight spaces and tasks where easy manoeuvrability is a must. Optimal for handling light loads and small sized objects. Ideal also for laptop use. Suitable for technical and EPA environments where easy ergonomics and mobility are required.

- Easy to move around due to the light construction - aluminium frame, symmetric steel legs
- Accessories available: Accessory box underneath the table top, accessories basket to the frame and a folder holder
- Four swivel castors (Ø100 mm), two with brakes



MLCT mobile height adjustable work surface

Mobile workstations

Name	Size W x D mm	Height mm*	Top size mm	Max load kg	Code	Code ESD
Mobile workstation	590 x 540	800-1200	520 x 370 x 25	12	MLC 405PG	MLC 405PG ESD
Mobile height adjustable work surface	600 x 500	760-1185	580 x 490 x 25	25	MLCT 605PG	MLCT 605PG ESD

*Height is adjusted by gas spring.

Mobile workstation accessories

Name	Description	Suitability	Code
1. Keyboard and mouse tray	210 x 620 mm. Equipped with a wrist support.	MLC	KH620N
2. Binder mount	Fits a single 75 mm wide binder.	MLC, MLCT	FH1
3. Binder mount	Fits three 75 mm wide binders.	MLC, MLCT	FH3
4. Accessories basket	Blue bin, int. dim. 230 x 155 x 140 mm	MLC, MLCT	AB1930
5. LCD bracket	Load capacity 15 kg, mounting holes 75 x 75 / 100 x 100 apart	MLC	MH
6. LCD support arm	For the attachment of MH and MY supports. Max 22" screen.	MLC	MS
7. Tablet bracket	For 7-10" tablets. Requires either an MH, MA or MA2 swivel arm.	MLC	MY
8. Accessory box	With grey shelf bin 4020-3.	MLCT	AB4020-3
8. Accessory box ESD	With ESD shelf bin 4020-4ESD.	MLCT	AB4020-4ESD



1



2



3



4



5



6



7



8

Trolleys for additional workspace

Storage trolley is an easy solution for mobile storage, the storage trolley has an adjustable middle shelf, and the shelves are fitted with ESD or standard rubber mats.

SAP trolley provides extra workspace for the TP workbench. Lower self, extra shelf and handle are available separately. Height adjustment with allen key between 650-900 mm.

Concept trolley provides extra workspace for Concept and WB workbenches. Lower shelf is integrated. Can be equipped with an additional shelf or drawer unit 30 series. Height adjustment with allen key between 650-900 mm.



Storage trolley



Trolleys for additional workspace

Name	Size W x D x H mm	Max load kg	Code	Code ESD
Storage trolley	650 x 450 x 775	3 x 30	852 773-41	852 773-49
SAP trolley	700 x 500	150	SAP507	SAP507 ESD
SAP trolley	1000 x 700	150	SAP710	SAP710 ESD
Lower shelf for SAP trolley	700 x 500	40	AT507	AT507 ESD
Lower shelf for SAP trolley	1000 x 700	40	AT710	AT710 ESD
Extra shelf for SAP trolley	700 x 500	40	LT507	LT507 ESD
Extra shelf for SAP trolley	1000 x 700	40	LT710	LT710 ESD
Handle for SAP trolley	depth 500		PUSH50	PUSH50
Handle for SAP trolley	depth 700		PUSH70	PUSH70
Concept trolley	500 x 700 x 650-900	150	CONT705-41	CONT705-49
Extra shelf for Concept trolley	400 x 500	25	CONTS504-49	CONTS504-49
Drawer unit 30/15	300 x 454 x 150	10	859 330-49	859 330-49
Drawer unit 30/22	300 x 454 x 220	10 / drawer	890 340-49	890 340-49
Drawer unit fastening set			890 653-49	890 653-49

All the light-duty trolleys are equipped with four swivel castors (ø 100 mm), two of which have brakes.



SAP trolley with AT lower shelf, LT extra shelf and PUSH handle



Concept trolley, extra shelf and drawer unit 30/15

Packing trolleys

Low carton trolley LCT610

Trolley for large cartons. Three dividers can be assembled crosswise or lengthwise. The fourth divider is a push handle.

Frame and shelf are of epoxy powder-coated steel in grey RAL 7035. Four swivel castors (Ø 100 mm), two of which have brakes. Shelf height above the ground 160 mm.



Size W x D x H mm	Shelf size W x D mm	Max load kg	Code
1080 x 630 x 1020	1000 x 630	150	LCT610

High carton trolley HCT410

Trolley for packing cartons. Shelves are equipped with steplessly adjustable steel M-divider hoops. Larger hoop height 540 mm, lowest point 330 mm above the shelf, smaller hoop height 315 mm, lowest point 105 mm above the shelf.

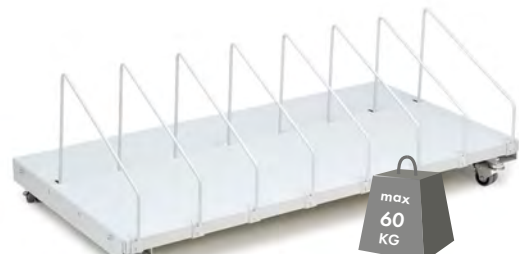
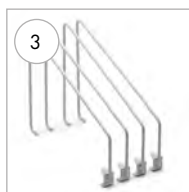
Frame and individually height adjustable shelves are of epoxy powder-coated steel in grey RAL 7035. Four swivel castors (Ø 100 mm), two of which have brakes.



Size W x D x H mm	Shelf size W x D mm	Max load kg	Code
1090 x 530 x 1515	1000 x 430	150	HCT410

Carton trolley

Name	Description	Size W x D x H mm	Code
1. Castor Set	Castor set for carton trolley. The castor set gives you a trolley from the SPM-shelf.	600 x 125	SPMCS-41
2. Shelf for packing material	600 mm deep shelf for many purposes. The shelf can also be equipped with PDH600 divider hoops. Max load 60 kg.	467 x 600 x 32	SPM500-49
		717 x 600 x 32	SPM750-49
		870 x 600 x 32	SPM900-49
		1167 x 600 x 32	SPM1200-49
		1317 x 600 x 32	SPM1350-49
		1467 x 600 x 32	SPM1500-49
3. Divider hoops set (4 pcs), SPM-shelf	Divider hoop set for the SPM-shelves. Height 280 mm. The fixed divider is tightened with the screw at the front edge of the shelf.	1773 x 600 x 32	SPM1800-49
		8 x 400 x 280	PDH600-49



Multitrolley frame with accessories

Name	Description	Module	Size W x D x H mm	Code
1. Multi trolley frame	Max load 300 kg.	M750	780 x 715 x 1630	860 156-41
		M900	935 x 715 x 1630	860 157-41
2. Shelf for packing material	600 mm deep shelf for many purposes. The shelf can also be equipped with PDH600 divider hoops. Max load 60 kg.		717 x 600 x 32	SPM750-49
			870 x 600 x 32	SPM900-49
3. Brackets for upright tube SPM	Mounting parts for top shelf to the upright tube. With the mounting kit, you attach the SPM shelf to the upright tube.			SPMBS-49
4. Divider hoops set SPM-shelf	Divider hoop set (4 pcs) for the SPM-shelves. Height 280 mm. The fixed divider is tightened with the screw at the front edge of the shelf.		8 x 400 x 280	PDH600-49
5. Aluminium bin rail	For auxiliary steel shelf, stacking and picking bins. Very sturdy. Max load 15 kg.	M750	736 x 55 x 75	BP750C
		M900	889 x 55 x 75	BP900C
6. Tablet bracket MY	Tablet bracket for 7-10" tablets.			MY
LCD bracket MH	The quick-release mechanism is equipped with the standard used flat-screen mount 75 x 75 and 100 x 100 for the mounting of all normal flat screens.			MH
Adapter set	Adapter set for fixing LCD bracket MH to the upright tubes.		200 x 110 x 60	AS2
7. Auxiliary steel shelf	Shelf for A4 paper and tape dispensers (max 2 pcs per shelf). Mounted on bin profile. Max load 3 kg.		217 x 298 x 20	ASSA4
8. Roll holder set	Roll holder set for packing material rolls. Max load 40 kg.	M750		890 547-49P
		M900		890 548-49P
9. Fixed tape dispenser	Feeds tape from a roll; for a tape roll with a 76-mm socket. Includes screws to fix the dispenser to ASSA4. Max roll Ø 120 mm and width 50 mm.			FTD50
10. Basic label dispenser	Feeds labels from a roll, space for several rolls. Fits on ASSA4 or can be placed in a shelf or tray. Can be fixed with screws. Max roll Ø 220 mm and width 210 mm.			BLD20
11. Document holder A4	Steel document holder fixed on upright tube. Easily adjustable with the double arm. Max load 5 kg.			928 49 008P
12. Equipment tray	With double arm and handle. For small tools and packing accessories such as BLD20. Max load 15 kg.		500 x 250 x 125	928 49 002P

Please visit our webpage for full range of module M750 and M900 accessories.

Recycling material trolley PRMT

The recycling trolleys are ideal for placing underneath or beside the packing bench. The bins are adjustable in angle for ease of use! The trolley comes with four swivel castors, two with brakes. Available in single and double version.

Size W x D x H mm	Code
350 x 625 x 765	PRMT 1
680 x 625 x 765	PRMT 2



Multitrolley frame with accessories

Heavy-duty trolley

Heavy-duty trolleys, as their name indicates, are ideal for moving heavy loads. Their special castors support extremely heavy weights. The total capacity of the basic model is up to 600 kg!

The heavy-duty trolleys are equipped with two fixed castors (Ø 100 mm) and two swivel castors with brakes.



Heavy-duty trolley 1, code C 750 41 001



Heavy-duty trolley 2, code C 750 41 002

Heavy-duty trolleys

Name	Size W x D x H mm	Max load kg	Code
Heavy-duty trolley 1	935 x 785 x 880	600	C 750 41 001
Heavy-duty trolley 2	935 x 785 x 880	600	C 750 41 002

Heavy-duty trolley accessories

Name	Size W x D x H mm	Max load kg	Code
Shelf	812 x 770 x 30	400	852 671-49

Heavy-duty trolley 3, code C 750 07 103

Qty	Name	Size mm	Code
1	Bottom shelf	933 x 780	852 666-49
1	Perforated uprights, pair	661	852 668-49
1	Perforated uprights, pair	1359	852 667-49
1	Cross support, pair		852 669-49
1	Handle		852 670-49
1	Pvc-top, steel edges	1000 x 750	836 723-79
1	Corner hooks		848 336-49
1	Horizontal tube M900	873	840 104-49
2	Fixed castors	Ø100	1988
2	Swivel castors	Ø100	1987
1	Perforated panel	870 x 389	861 516-49
1	Suspension rail M900	895	859 152-49
6	Plastic box 1525-5		1525-5
1	Fixing set		870 811-00
1	Drawer unit 55/37	550 x 715 x 370	611 07 001



Heavy-duty trolley 3, code C 750 07 103

Size 1000 x 810 x 1640 mm
 Top 1000 x 750 mm
 Worktop height 900 mm

Fitter's trolley

A fitter's trolley lets you take your supplies & tools wherever you go, while keeping them organised. The rubber mat helps keep tools in place while you are working. Version with drawer unit comes equipped with a safety lock that prevents other drawers from opening while one drawer is open. This helps to keep the trolley in balance - even with heavy loads.

The fitter's trolleys are equipped with four swivel castors (Ø 100 mm), two of which have brakes. Fitter's trolley can be combined with all M750 accessories.

Fitter's trolleys

Name	Module	Size W x D x H mm	Max load kg	Code
Fitter's trolley 1	M750	800 x 715 x 855	300	C 730 41 001
Fitter's trolley 2	M750	800 x 715 x 855	300	C 730 41 002
Fitter's trolley 3	M750	800 x 715 x 855	300	C 730 41 003
Fitter's trolley, frame	M750	800 x 715 x 855	300	C 730 41 000
Fitter's trolley 4		795 x 715 x 915	300	C 730 07 004

Fitter's trolley accessories

Name	Size W x D x H mm	Max load kg	Code
Bottom shelf with rubber mat	720 x 560 x 32	150	852 719-41
Bottom shelf with HDPE plastic covering	720 x 560 x 32	150	852 683-41
Shelf with rubber mat	720 x 560 x 32	150	852 720-41
Shelf with HDPE plastic covering	720 x 560 x 32	150	852 684-41
Extendable shelf + brackets	720 x 580 x 33	50	852 687-49

Fitter's trolleys can be combined with M750 accessories.

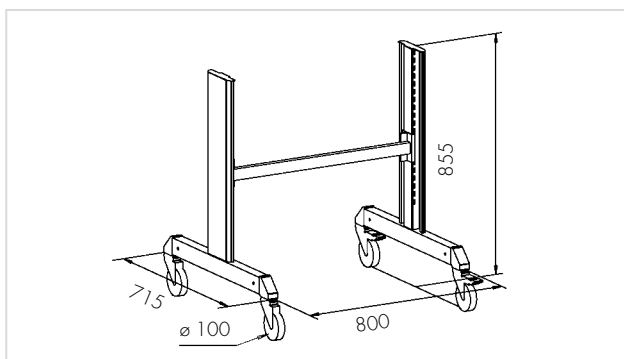
Cone rack M750 for tool holders HSK, Capto, ISO

Name	Size W x D x H mm	Max load kg	Code
Cone rack M750	742 x 206 x 95	50	890 729-49

See tool holders on page 166.



Cone rack M750



Fitter's trolley frame



Fitter's trolley 1



Fitter's trolley 2



Fitter's trolley 3

Fitter's trolley 3 includes 6 cone racks. Tool holders, page 166, ordered separately.



Fitter's trolley 4

Service trolley

The service trolley frame is equipped with a safety locking feature that allows only one drawer to be opened at a time. The cover comes as standard with a separate rubber mat that prevents items from slipping.

Both sides of the trolley have standard, perforated panels that you can accessorise with brackets and mountings, to suit any application. Service trolleys are also equipped with two fixed castors (Ø 150 mm) and two swivel castors including brakes (Ø 100 mm).



Service trolley
Size 710 x 480 x 875 mm
Max load 300 kg

+ Customise your service trolley with a selection of hooks from page 174.

Service trolleys

Model	Service trolley 1	Service trolley 2	Service trolley 3	Service trolley 4	Service trolley 5	Service trolley 6	Service trolley 7	Service trolley 8
Code	710 07 001	710 07 002	710 07 003	710 07 004	710 07 005	710 07 006	710 07 007	710 07 008
Height (mm) of the drawer	3 x 75 	2 x 75 	1 x 75 	5 x 75 	2 x 75 	1 x 100 	1 x 100 	1 x 100
	1 x 125 	2 x 100 	4 x 100 	1 x 100 	2 x 100 	2 x 250 	2 x 125 	4 x 125
	1 x 250 	2 x 125 	1 x 125 	1 x 125 	1 x 250 		1 x 250 	

Internal drawer dimensions: 600 x 345 x 63/88/113/238 mm. Drawers open 90% and loading capacity is 50 kg/drawer.



Accessorised service trolley

By attaching the upright tube pair 30 x 30 mm (code 854 038-49), you can use all the M500 accessories.

Accessories for service trolley (in the picture)

Qty	Name	Size mm	Code
1	Perforated upright pair	30 x 30 x 1219	854 038-49
1	Perforated tool cabinet	470 x 200 x 600	854 039-07
1	Suspension rail	M500	860 953-49
5	Plastic container		30-1L-6
1	Vice support		854 037-45
1	Pick-up box holder	165 x 48 x 456	854 042-49
4	Pick-up box	149 x 85 x 48	851 843-00
1	Utility box	155 x 90 x 410	854 041-49
1	Paper roll dispenser		854 043-49
1	Waste bucket holder		854 044-49
1	Waste bucket		839 159-00
1	Folder compartment	466 x 90 x 240	854 040-49



Drawer interiors for service trolley



Tool troughs 45 and 70 mm

Drawer 71/75 854 066-00



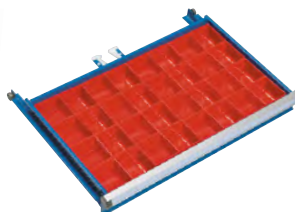
Middle dividers and plates 2

3 x middle divider, 6 x middle plate 150 and 2 x middle plate 300*

Drawer 71/75 854 069-49

Drawer 71/100 854 070-49

Drawer 71/125 854 070-49



Pick up boxes

Drawer 71/75 854 064-00



Rubber mat for the drawer bottom

Rubber mat 71 854 078-00

* One example of interior solutions shown in picture.

Stacking bin trolley

A storage system for stores, production facilities and warehouses. It is easily moved to wherever it is needed. You can configure the trolley to match your needs.

- Double-sided trolley for stacking bins
- Powder-coated (light grey, RAL 7035), steel-frame trolley with a fixed bottom shelf
- Up to 112 stacking bins can be attached to one trolley, must be ordered separately
- Four different sizes of stacking bins to choose from
- Height adjustable ergonomic push handle
- Sixteen step-by-step height adjustable bin rails, eight bin rails per side, length of bin rails 742 mm
- Height of the bin rails can be adjusted easily without tools
- Four swivel castors (ø 100 mm), two with brakes
- Module M750, all the upright tube accessories are available



Trolley BT-170B

Size W x D x H mm	Max load kg	Code	Code ESD
780 x 715 x 1630	300*	BT-170B	BT-170B ESD

*Load capacity for bin rail 50 kg

Suitable stacking bins

Code	Quantity/rail	Max. quantity/trolley
1015	7 pcs	112 pcs
1520	5 pcs	80 pcs
1525	5 pcs	80 pcs
1930	4 pcs	64 pcs

Details of stacking bins can be found on page 189.

1 x trolley BT-170B
40 x blue stacking bin 1520-6
32 x blue stacking bin 1930-6



Add accessories as needed!

Accessories starting from page 51. All module M750 accessories suit stacking bin trolley.



Bottle holder Ø 100



Equipment tray



Tool panel

Cabinet trolley for small-parts storage cabinets

This assembly holds 8 cabinets, which must be ordered separately. This double sided trolley has 4 swivel castors (Ø100 mm), two of which have brakes. One steel bottom shelf comes as standard. Height-adjustable ergonomic push handle makes the trolley easy to move.

Powder-coated (light grey, RAL 7035) steel frame with a fixed bottom shelf. Height of the fixing rails can be adjusted easily without tools. Module M750, all the upright tube accessories are available for cabinet trolley.

Trolley BT-550B

Size W x D x H mm	Max load kg	Code	Code ESD
780 x 715 x 1600	300	BT-550B	BT-550B ESD

Maximum eight small-parts cabinets, 4 on each side, to be ordered separately.

Suitable small-parts storage cabinets

Code	Includes small drawers	Small drawer dimensions W x D x H
550-3	L-00 (60 pcs)	55 x 175 x 37
551-3	L-01 (48 pcs)	69 x 175 x 37
551-4ESD	L-61-4ESD (48 pcs)	69 x 170 x 40
552-3	L-02 (24 pcs)	138 x 175 x 37
554-3	L-04 (24 pcs)	92 x 175 x 59
554-4ESD	L-64-4ESD (24 pcs)	92 x 170 x 62
556-3	L-06 (8 pcs)	277 x 175 x 59
557-3	L-07 (12 pcs)	138 x 175 x 81
550C-3	L-01 (24 pcs)	69 x 175 x 37
	L-04 (6 pcs)	92 x 175 x 59
	L-06 (2 pcs)	277 x 175 x 59

Details of series 550 can be found on page 182.



1 x trolley BT-550B
8 x small-parts storage cabinets 550-3

+

Add accessories as needed!

Here are some examples of accessories suitable for trolley BT-550B. See page 51 for full range of module M750 accessories.



Tablet bracket



Document holder A4