

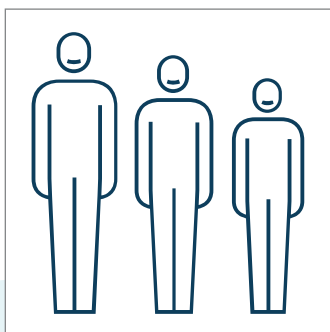
For highly motivated employees, higher productivity and better quality

Ergonomic workstation systems make work easier and keep workers healthier.

The benefits of ergonomically designed workstations: Increased motivation and satisfaction, higher performance, efficiency and work quality, as well as fewer absences due to illness. The bottom line: Ergonomics provides you with valuable benefits in the form of higher productivity, increased efficiency, and a decisive edge over the competition – thus ensuring lasting success for your company.



8 ERGONOMIC GROUND RULES FOR WORK SYSTEMS



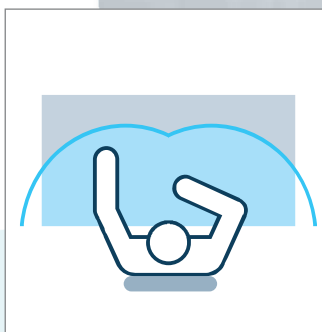
Body height and working height

The optimum working height is based on the worker's body height and the type of activity to be performed. The average optimum working height for average requirements is 1125 mm for sit-down/stand-up workstations.



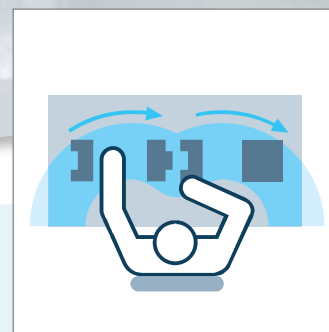
Work area

The work area should always be between 800 mm and 1500 mm high. Working positions above heart height should be avoided, as should any work below 800 mm, as bending places an undue strain on the worker's body. Ideally, workers should perform dynamic activities with frequent shifts of exertion, such as switching between standing and sitting.



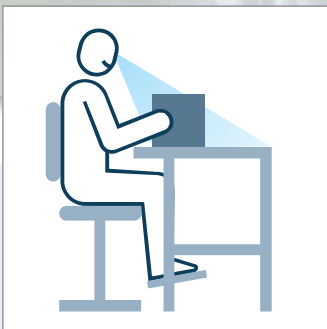
Grab area

All containers, equipment, and operating elements must be easily accessible and located in the anatomical/physiological range of movement for the employee. Torso rotations and shoulder movements, particularly when under exertion should be avoided whenever possible.



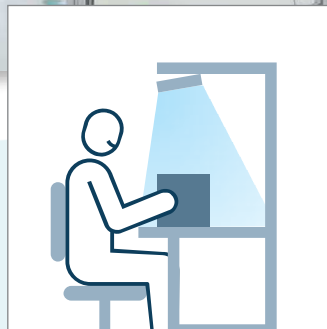
Parts supply

All grab distances should be as short as possible. Grab containers and parts containers placed in direct reach of the employee are therefore ideal.



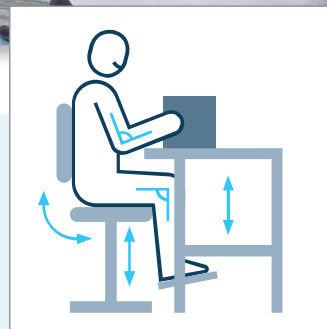
Vision areas

Unnecessary head and eye movements should be avoided. Maintaining objects at a uniform distance to the worker's eyes eliminates the need for refocusing. Avoid joining points that are not visible to the worker.



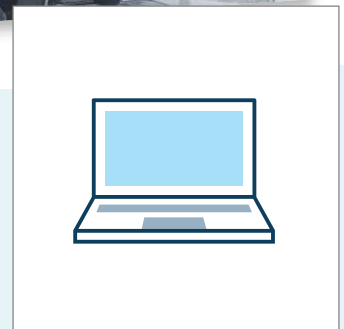
Lighting

Ideal lighting conditions prevent early onset fatigue, improve concentration and reduce the risk of errors. High contrasts, glare, and reflections should be avoided.



Adjustment of work equipment

Correct adjustment of the equipment serves to minimize required movements, thus reducing physical exertion and employee absences.



Planning aids

The ergonomic workplace design starts with planning. Available planning aids include the Ergonomics Checklist (3 842 523 943), the Planning Templates (3 842 542 286 /...287) as well as the MTpro software.

MTpro

Software for designing and planning workstations. For detailed information, see pages 1-9/10 or www.boschrexroth.com

Protection of ESD-sensitive components

Components sensitive to electrostatic discharge are known as ESDSs (electronic static discharge-sensitive devices). Damage to these components generates considerable cost. Damage leads to an irreversible change in the device and a reduction in the ESDS' service life. Dangerous component voltages have an effect on ESDS sensitivity.

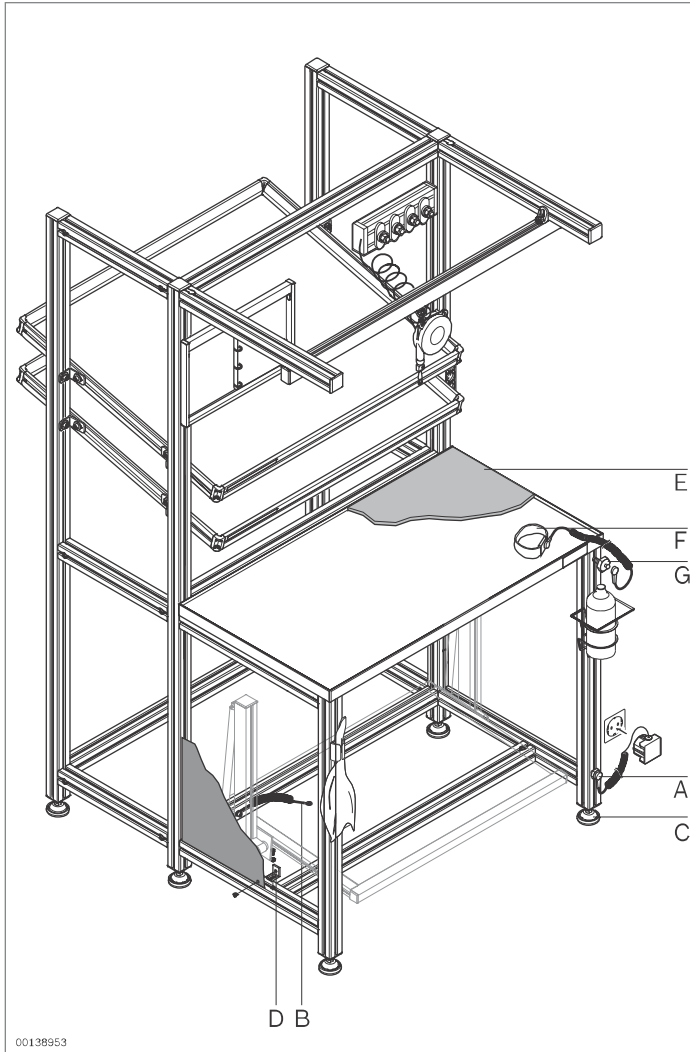
The most effective way to reduce ESD is to simply avoid electric charges or to conduct carried charges safely. Rexroth's ESD program, with ergonomically designed components, will assist you in designing a production system that avoids electrostatic discharge. With suitable materials and connection technology, the components in the ESD program are either electrostatically conductive or deflective and create a fully protected system.

To ensure and maintain the ESD-conductive properties, we recommend checking conduction resistance (R) at regular intervals after assembly.

Rexroth components fulfill the requirements for the protection of ESDS (DIN EN 61340-5-1). The individual national personal safety regulations must be observed during assembly and connection.

- **Defined grounding to an ESD-safe structure serves to make the entire system both safe and economical.**











Components for ESD applications



- A Set of grounding components
- B Grounding cable
- C Damping ring
- D Potentialfix
- E Conductive mat insert
- F Wrist band

	 ESD	No.
A Set of grounding components		3 842 522 087
B Grounding cable		3 842 519 465
C Damping ring, insulating	20	3 842 521 817
D Potentialfix		3 842 536 320
E ESD mat insert		3 842 522 012
F Wrist band		3 842 516 908
G Connection piece	10	3 842 516 905



Ergonomic workstations for greater productivity

Workstation design must focus equally on the worker and on the product being manufactured – this is the only way to maximize productivity and profitability.

Incorrect posture at the workplace can result in a waste of up to 40 % of a person's potential performance. The price paid for deficiencies in workstation design is measured in the high physical input needed to compensate for them. And such input is power and energy that would better be dedicated to the actual job at hand.

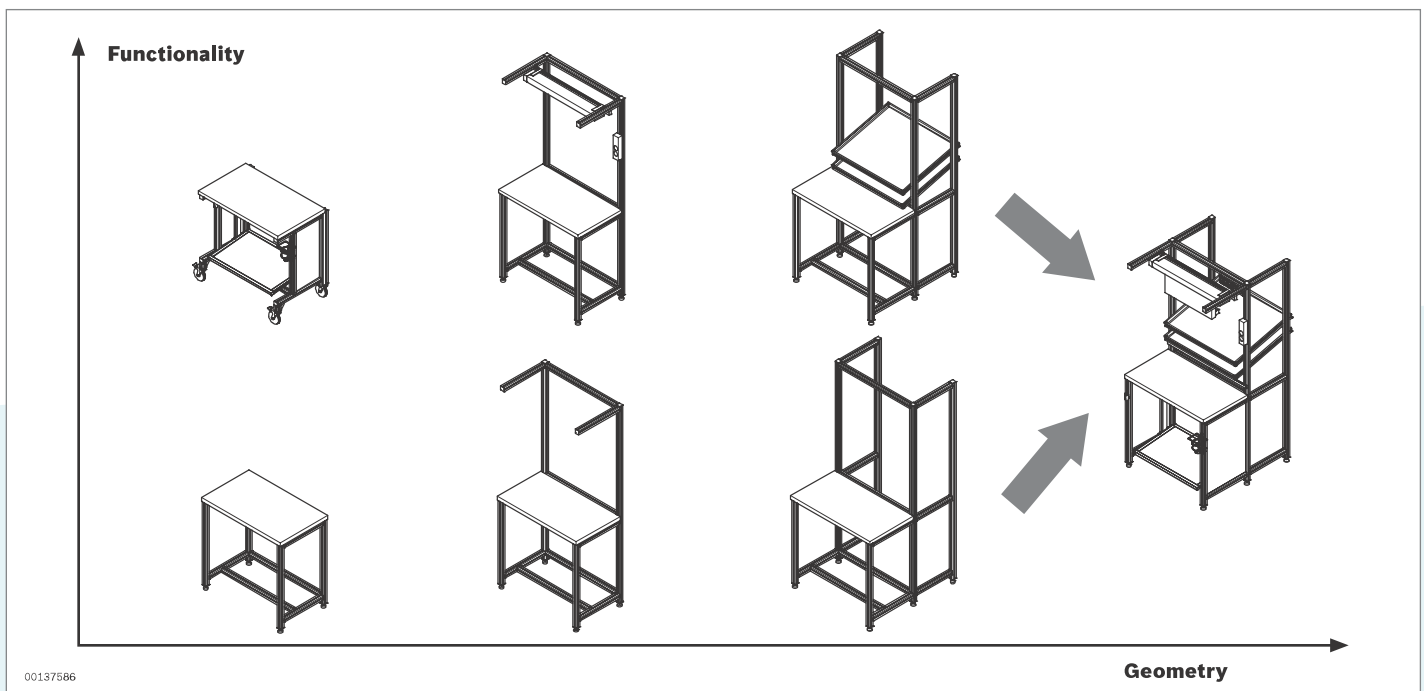
Workstations

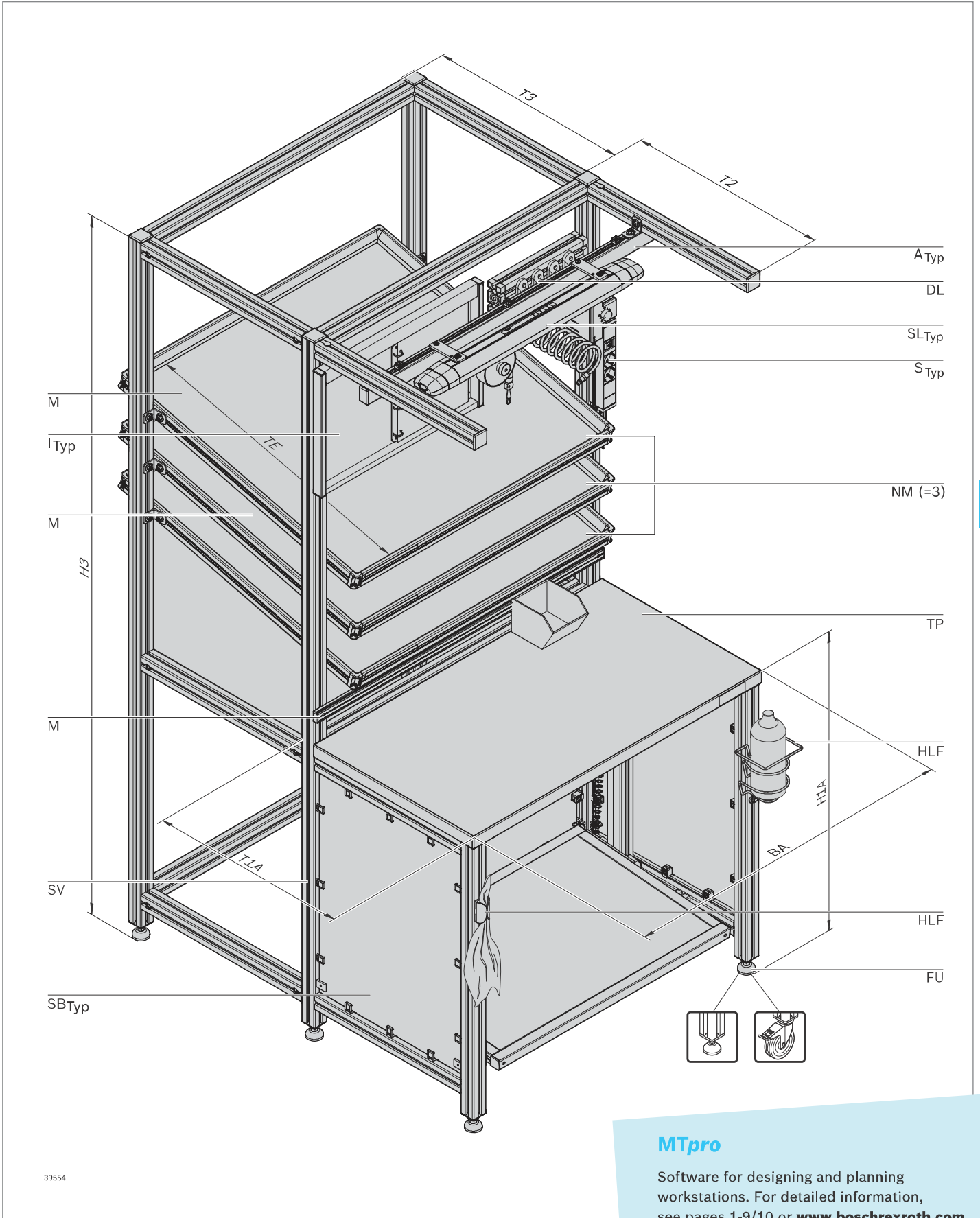
Workstation design must take account of the product itself, the process required for that product, and the actual human being doing the work. The design must give equal priority to the minimization of process waste and to providing employees with an ergonomic work environment.

This is why geometry and functionality are important in the layout of the workstation. The product being fabricated and the person doing the work are the benchmarks in defining the workstation height, width and depth as well as for positioning lighting and material supply equipment. Support accessories such as information boards are then added to ensure that the right information is available at the right place.

Ergonomics

A basic facet of workstation design involves the encouragement of alternating, dynamic activity. Static activity inhibits blood circulation and oxygen supply to the muscles. Alternating physical exertion reduces stress on the employee and increases performance. Alternating exertion is seen, for example, where combined stand-up/moving or sit-down/stand-up workstations are integrated into the workflow.





MTpro

Software for designing and planning workstations. For detailed information, see pages 1-9/10 or www.boschrexroth.com



Workstation



- ▶ Large number of adjustment options for high versatility
- ▶ Freely selectable geometry and functionality
- ▶ Available as ESD-conductive version
- ▶ Fully assembled or as a kit for self-assembly
- ▶ Allows for the addition of any desired modules, including cross ties and conveyor tracks as well as individual components

See technical data
page 13-3

Workstation		3 842 998 110
A	Version	Disassembled, assembled
ESD	Conductivity	Yes, no
PK	Construction	Desk type, box type construction
P	Profile type	40L, 45L, 60L
FU	Foot type	Leveling foot, castor wheel
BA	Workstation width	410 ... 2000 mm
H1A	Work surface height	410 ... 1500 mm
H2	Total workstation height	410 ... 2500 mm
T1A	Workstation depth	405 ... 1000 mm
T2	Bracket depth	Up to 800 mm
TP	Table top type	4 different table tops
SB_{typ}	Side panel type	3 different side panels
T3	Accessory upright depth	Up to 800 mm
NM	No. material shelves	0 ... 4
M	Material shelf material	3 different material shelves
TE	Material shelf depth	410 ... 1220 mm
SV	Reinforced strut extension	With, without
E	Suspension profile	With, without
A_{typ}	Type of hanger	With, without hanger Selectable spring pulls
L	Country version	D, F, GB, CH, USA/CAN, CZ
RCD	Residual-current device	Yes/no
SL_{typ}	Type of lamp	4 different lamps
S_{typ}	Type of socket	4 different sockets
DL	Compressed air strip	With, without
I_{typ}	Type of information board	7 different information boards
F_{typ}	Type of footrest	Footrest selectable
HLF	Cloth and bottle holder	With, without