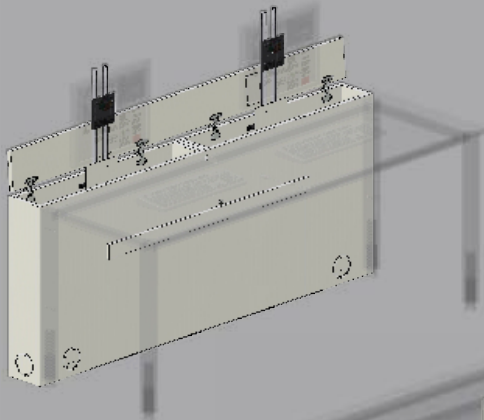
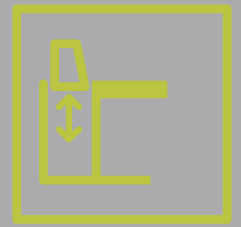
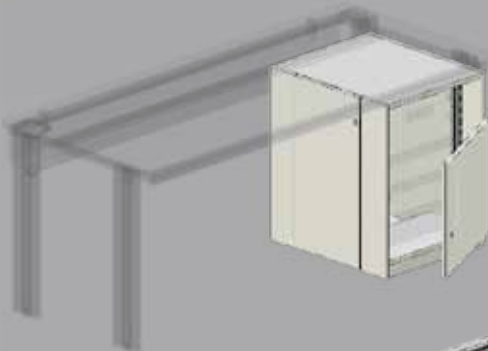


Lowering technology



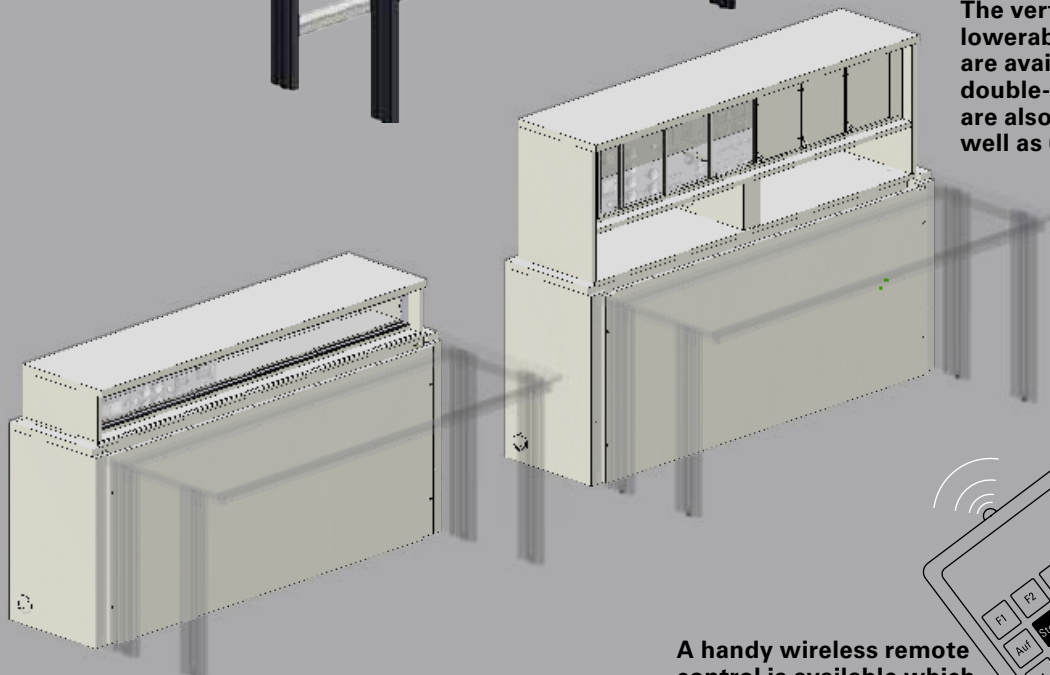
Elabo lowering technology satisfies a very wide range of requirements. For IT applications there is a special version with lowerable TFT monitors.



In-room power distributors house the central fuse protection for entire classrooms and also accommodate the control for the lowering mechanism.

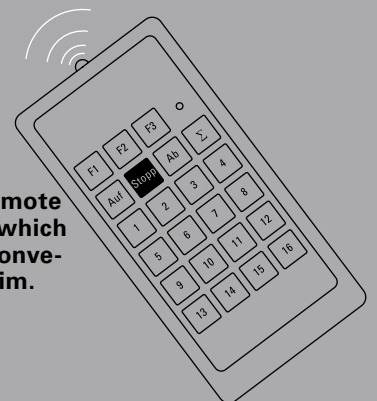


Tables equipped with electric motor-driven fold-away mechanisms (3 HU system) are very compactly dimensioned.



The vertically raisable and lowerable superstructures are available in single- or double-stage versions and are also fitted with 3 HU as well as 6 HU grids.

A handy wireless remote control is available which the instructor can conveniently carry with him.





Lowering technology

**Clear overview. Safety.
Maximum use of space**

With Elabo's lowering technology superstructures can be brought into view or made to disappear again. A theory table can be quickly converted into an experiment table for practical instruction. And directly following the practical training for electrical trades, completely different training topics can be dealt with in the same room. This considerably increases the versatility and usability of the classrooms.



Equipment immediately available

The superstructures move up and down in less than 20 seconds. At the start of the practical instruction session all the instruments are very quickly available without a lot of time having to be spent collecting them together, connecting them up and adjusting them. Shut-down is just as compact. This guarantees the maximum net amount of study time.



Superstructure variants

The basic variant of the lowerable superstructures is the superstructure (System 6 HU and 3 HU) carrying a single-row of equipment and devices. A two-level variant is also available which also contains a shelf compartment in addition to the area containing the electronic devices. The shelf area can be used as a place for additional measuring devices, or it can also be used as a storage area.

3 HU fold-away technology

As an alternative to the vertically raisable and lowerable superstructure, Elabo also supplies a variant that can be folded up and down. In this case, an electric motor drives a superstructure that is attached to hinges and pivots the structure upwards out of the table. In this version as well, the fold-away technology ensures ergonomically optimal operation of the installed electrical devices.

Special version for IT

For IT instruction Elabo has developed a lowerable superstructure which – instead of the inserts grid or shelves – incorporates

mountings for TFT monitors. They meet the VESA standard. The body of the lowering assembly is an independent element that be attached to already existing tables.

Satisfying individual customer wishes

There is hardly any limit to the spectrum of special versions that can be offered on request. In many cases designs are needed with special dimensions. But there are also concepts that can only be manufactured in response to individual orders. For example, lowerable superstructures with rear and side walls made of plexiglas are requested in those cases where, despite having large superstructures, the classroom should be transparent and the view of the student's desk should not be completely blocked.



Lowerable superstructures are supplied with a central control system housed in a cabinet with the classroom power supply system. A compact wireless remote control which the instructor carries with him is optionally available.

Superstructures that can be raised and lowered in one or two stages are available from Elabo. They can be raised so precisely that the upper level is fully accessible while the second level – containing for example the electrical devices – remains hidden.

Elabo lowering technology comes in two forms that help tailor the equipping of the classroom to exactly meet individual requirements. In the first variant the complete superstructure moves vertically up and down. In the second variant, the superstructure pivots up and down around an axis of rotation. This fold-away method is ideal for raising/lowering very compact superstructures.



Elabo can provide individually tailored designs at any time, such as special dimensions or also special concepts, for example a lowerable superstructure made of plexiglas. The latter is a frequently requested item because of its transparency.



The IT version is one of the special designs of lowerable superstructures available from Elabo: TFT monitors disappear in space-saving fashion into the body of the lowering assembly. In addition there is room for a keyboard and mouse.



Lowering technology

Well thought-out solutions and very reliable technology

Lowering technology offers users an enormous amount of flexibility. However, it does require that all the components are exactly matched to each other. Elabo is a pioneer in this field. The mechanical guidance and the drive technology mesh so perfectly with each other that practically no wear is caused. It has been shown that the lowerable superstructures are still working without problems even after 15 years and more of operation.

Compatible with the 19" system

Lowerable superstructures that meet the international 19" standard can be obtained from Elabo. Using the assembly carriers provided, devices from the 3 HU and the 6 HU system can also be integrated into the 19" technology. Various other manufacturers also offer devices for the 19" concept and they can likewise be integrated into the lowerable superstructures from Elabo



The lowerable superstructures, together with their technology, are housed in their own separate assembly. In order to ensure that the body of the lowering assembly and the table together have the usual standard proportions on which spatial planning is based, Elabo offers add-on tables in special dimensions.

The lowering technology is based on a very high safety standard. The automatic sensor-controlled shut-off mechanism ensures that no injuries are caused by moving parts.



Connection to the table system

The body of the lowering assembly is connected directly to the system table (InForm or EcoTec) and is screwed firmly to it at defined interfaces. Both elements are joined to one another without any steps or gaps and together they form a very stable, generously dimensioned working area.

Drive technology

Depending on the load factor, one or two electric motors, which are linked via a connecting rod, provide the drive for the lowering system. The drive is controlled by an electronic system developed by Elabo.

Prevention of injury

For the protection of the operator, Elabo equips all its vertical lowering systems with a shut-off strip with positively guided safety contacts. Once the strip is triggered, the superstructure stops moving downwards within fractions of a second and moves upwards again. This reliably prevents objects (or in the worst case, a hand) from becoming caught. The process is electronically controlled.

Classroom power supply

The classroom power supply cabinet is part of the lowering technology. The lowering mechanism on each individual table, or on all tables simultaneously, can be controlled via an operating panel fitted with up/stop/down buttons.

A key-operated switch in the classroom power supply cabinet turns on the power supply for the entire room. Here all the tables are centrally fuse-protected (one fuse per table, single or three-phase, depending on the power level). This is also where the EMERGENCY OFF switch is located. When the EMERGENCY OFF switch is operated a space contactor automatically shuts off the power to the entire room.

Colours and materials

The superstructures and the body of the containers are made of fine particle boards, coated on both sides with melamine resin. The standard paint finish in which they are supplied is light grey RAL 7035. This is a colour that looks professional and meets practical requirements.



The classroom power supply cabinet also contains the control system for the lowering technology.



Lowering technology

Expandable Modules This may also interest you...

Elabo lowering technology considerably increases the usability of your classrooms. You can create your own totally application-optimized solution by making use of further modular components.



Inserts and electronic devices from Elabo, such as measuring devices and power supply devices, are ideally suited for teaching purposes, retain a high degree of accuracy and have a long service life. They are specifically matched to the lowerable and also the fixed superstructures.
> [More on page 75](#)



Virtual Equipment from Elabo provides the network technology and switches that are integrated into the lowerable superstructures. Using Module 4Room of the Elabo software EHP EduLab you can not only control individual workplaces, as well as all workplaces together, but you can also individually define and programme different groups.
> [More on page 109](#)



Storage containers ensure neatness and good order in the classroom. Floor units, in particular the special PC floor units from Elabo, are very often requested for use in conjunction with the lowerable systems. They are lockable and equipped with an efficient ventilation system.
> [More on page 155](#)



Superstructures in a wide range of variants are often required especially for the instructor tables. Elabo offers them in the 3 HU and 6 HU systems, which can be combined with each other
> [More on page 45](#)




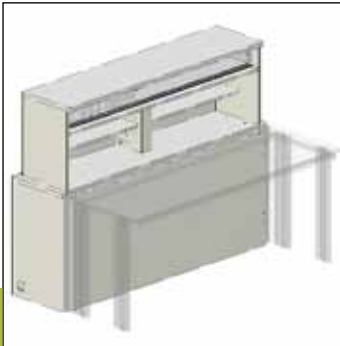
The wide range of **modular table systems** from Elabo perfectly rounds off the equipment needed in the classrooms.
> [More on page 27](#)



Chairs of high ergonomic quality promote concentration and help ensure that students remain attentive for long periods of time.
> [More on page 181](#)

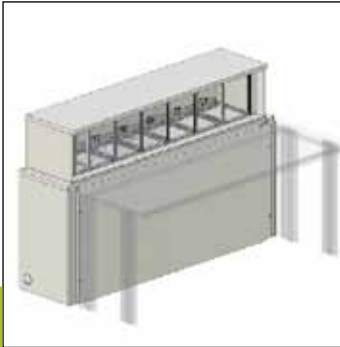
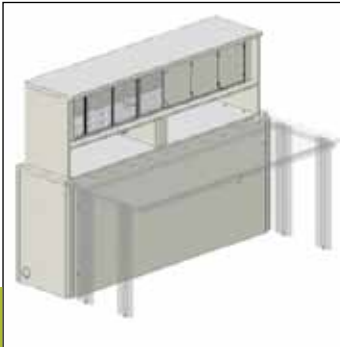




3 HU Lowering technology System

		Technical specifications	W x D x H	Article Number
Lowerable table superstructures 1-tier		Lowering mechanism, with superstructure that is vertically extended by electric motor drive, and with a safety shut-off strip. For accepting 3 HU Euro inserts. Prepared for addition of an EcoTec ^{SP} or InForm system table. Height of superstructure body in raised state: 1000 mm		
		For accepting 360 HP	2000 432 780	A4-1A
		For accepting 318 HP	1800 432 780	A4-1B
		For accepting 282 HP	1600 432 780	A4-1C
		For accepting 258 HP	1500 432 780	A4-1D
		For accepting 198 HP	1200 432 780	A4-1E
Lowerable table superstructures 2-tier		Lowering mechanism, with superstructure that is vertically extended by electric motor drive, and with a safety shut-off strip. 1st tier: For accepting 3 HU Euro inserts. 2nd tier: Shelf element with central wall and shelf panels. Prepared for addition of an EcoTec ^{SP} or InForm system table. Height of superstructure body in raised state: 1st tier: 1000 mm 2nd tier: 1340 mm		
		For accepting 360 HP	2000 432 780	A4-2A
		For accepting 318 HP	1800 432 780	A4-2B
		For accepting 282 HP	1600 432 780	A4-2C
		For accepting 258 HP	1500 432 780	A4-2D
		For accepting 198 HP	1200 432 780	A4-2E

Lowering technology System 6 HU

Add-on tables

		Technical specifications	W x D x H	Article Number
Lowerable table superstructures 1-tier		Lowering mechanism, with superstructure that is vertically extended by electric motor drive, and with a safety shut-off strip. For accepting 6 HU Euro inserts. Prepared for addition of an EcoTec ^{SP} or InForm system table. Height of superstructure body in raised state: 1135 mm		
		For accepting 15 WU	2000 432 780	A5-1A
		For accepting 13 WU	1800 432 780	A5-1B
		For accepting 12 WU	1600 432 780	A5-1C
		For accepting 11 WU	1500 432 780	A5-1D
		For accepting 8 WU	1200 432 780	A5-1E
Lowerable table superstructures 2-tier		Lowering mechanism, with superstructure that is vertically extended by electric motor drive, and with a safety shut-off strip. 1st tier: For accepting System 6 HU inserts 2nd tier: Shelf element with central wall and shelf panels. Prepared for addition of an EcoTec ^{SP} or InForm system table. Height of superstructure body in raised state: 1st tier: 1135 mm 2nd tier: 1340 mm		
		For accepting 15 WU	2000 432 780	A5-2A
		For accepting 13 WU	1800 432 780	A5-2B
		For accepting 12 WU	1600 432 780	A5-2C
		For accepting 11 WU	1500 432 780	A5-2D
		For accepting 8 WU	1200 432 780	A5-2E
Add-on tables with lowering technology for 3 HU and 6 HU System		EcoTec ^{SP} add-on table prepared for connecting to lowering mechanism types of the A4... and A5... series. Table frame with welded steel tube apron frame and screw-attached steel tube table legs 50 x 50 mm. Table top 30 mm thick, with replaceable front edge.	2000 668 780	A2-1A
			1800 668 780	A2-1B
			1600 668 780	A2-1C
			1500 668 780	A2-1D
			1200 668 780	A2-1E
		InForm add-on table prepared for connecting to lowering mechanism types of the A4... and A5... series. Table frame with welded steel tube apron frame and screw-attached aluminium table legs 50 x 50 mm. Table top 30 mm thick, with replaceable front edge.	2000 668 780	A2-2A
			1800 668 780	A2-2B
			1600 668 780	A2-2C
			1500 668 780	A2-2D
			1200 668 780	A2-2D





3 HU fold-away system technology

		Technical specifications	W x D x H	Article Number
InForm tables with fold-away mechanism 3 HU System		InForm system table including electric motor-driven fold-out superstructure. For accepting 3 HU Euro inserts. Height of body of superstructure in the folded-out state: 970 mm.		
		For accepting 342 HP	2000 850 780	A7-1A
		For accepting 300 HP	1800 850 780	A7-1B
		For accepting 264 HP	1600 850 780	A7-1C
		For accepting 240 HP	1500 850 780	A7-1D
		For accepting 180 HP	1200 850 780	A7-1E
Trapezoidal table with fold-away mechanism 3 HU System		EcoTec trapezoidal table including electric motor-driven fold-out extruded aluminium channel for accepting 3 HE insert panels. Equipment width: 142 HP Including industrial cable drag chains for improved cable feeding. Height of superstructure in folded-out state: 970 mm.	1400/700 600 780	A7-1M
Trapezoidal table		EcoTec trapezoidal table . Welded steel tube apron frame made of 40 x 25 mm, 40 x 40 mm rectangular steel tubing. Height-adjustable table legs made of 50 x 50 mm square steel tubing. Height pre-set to 780 mm. Table top 30 mm thick.	1400/700 600 780	A7-1P


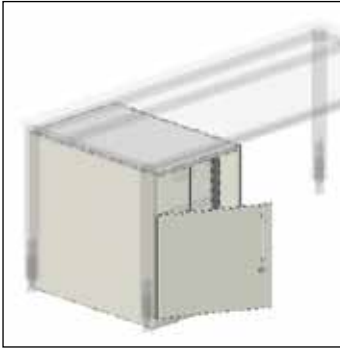

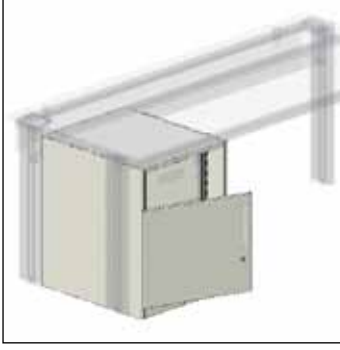
TFT lowering technology

Add-on tables





	Technical specifications	W x D x H	Article Number
Lowering unit for IT training 	<p>Lowering mechanism with electric motor-driven vertically raisable and lowerable TFT monitor brackets and storage areas for mouse and keyboard.</p> <p>Floor-mounted wooden body 19 mm thick with automatically actuated covering flap. Controlled via cable remote control, attached to the unit. Monitor mounted with VESA adaptation 75 x 75 mm or 100 x 100 mm for TFT sizes up to 19 inches, with a maximum depth of 80 mm. Body of unit has integrated cable admission inlet for routing of cables.</p> <p>Student versions:</p>		
	Lowering system body for 2 TFT monitors	2000 170 750	A8-1A
	Lowering system body for 2 TFT monitors	1800 170 750	A8-1B
	Lowering system body for 1 TFT monitor	900 170 750	A8-1F
	Teacher versions:		
	Lowering system body for 1 TFT monitor Monitor positioning optional left, centre, right	1800 170 750	A8-1BZ
	Optional lock for electrical locking of the TFT cover flap.		A9-1A
Add-on tables for TFT unit 	<p>EcoTec^{SP} add-on table prepared for connecting to lowering mechanism types with TFT monitor brackets.</p> <p>Table frame with welded steel tube apron frame and screw-attached steel tube table legs 50 x 50 mm.</p> <p>Table top 30 mm thick with replaceable front edge.</p>		
	Add-on table	2000 630 750	A1-2A
	Add-on table	1800 630 750	A1-2B
	Add-on table	900 630 750	A1-2F



Classroom power supply

		Technical specifications	W x D x H	Article Number
Floor unit Classroom power supply EcoTec^{SP}		Floor unit prepared for accepting the 19" / 14 HU grid system. With front leaf doors shortened at the top, right-hung, with lock. The floor unit is divided in depth by a central panel. The rear compartment is used as connecting space for the cables and wires which are wired to terminal blocks. Access via leaf door in left side wall, lockable.	525 750 710	A7-8C
Floor unit Classroom power supply EcoTec^{SP}		Floor unit prepared for accepting the 19" / 14 HU grid system. With front leaf doors shortened at the top, left-hung, with lock. The floor unit is divided in depth by a central panel. The rear compartment is used as connecting space for the cables and wires which are wired to terminal blocks. Access via leaf door in right side wall, lockable.	525 750 710	A7-8D
Floor unit Classroom power supply InForm		Floor unit prepared for accepting the 19" / 13 HU grid system. With front leaf doors shortened at the top, right-hung, with lock. The floor unit is divided in depth by a central panel. The rear compartment is used as connecting space for the cables and wires which are wired onto terminal blocks. Access via leaf door in left side wall, lockable.	525 620 680	A7-8F
			525 720 680	A7-8G
			525 820 680	A7-8H
Floor unit Classroom power supply InForm		Floor unit prepared for accepting the 19" / 13 HU grid system. With front leaf doors shortened at the top, left-hung, with lock. The floor unit is divided in depth by a central panel. The rear compartment is used as connecting space for the cables and wires which are wired to terminal blocks. Access via leaf door in right side wall, lockable.	525 620 680	A7-8J
			525 720 680	A7-8K
			525 820 680	A7-8L

Insert panels 19"

		Technical specifications	W x H	Article Number
Main power supply unit		<p>Elabo 19" / 4 HU insert panel, main power supply unit usable for 1/N/PE ~ 50 Hz 230 V or 3/N/PE ~ 50 Hz 230/400 V 45...63 A. For switching on and protecting the classroom power supply. Wiring via block terminals.</p> <p>Equipment:</p> <ul style="list-style-type: none"> 1 FI residual current circuit breaker 4p63A selective, Rated leakage current <= 300 mA, 1 motor protection switch 45...63 A with undervoltage release, 1 key switch I/O, 1 automatic circuit breaker 1p6AB, 1 emergency-OFF switch (acting on the motor protection switch) <p>3-phase indicator lights.</p>	483 177	68-1K.3
Main power supply unit		<p>Elabo 19" / 4 HU insert panel, main power supply unit usable for 1/N/PE ~ 50 Hz 230 V or 3/N/PE ~ 50 Hz 230/400 V 45...63 A. For switching on and protecting the classroom power supply. Wiring via block terminals.</p> <p>Equipment:</p> <ul style="list-style-type: none"> 1 FI residual current circuit breaker 4p63A selective, Type B, AC/DC sensitive for smooth DC fault currents <= 300 mA, 1 motor protection switch 45...63 A with undervoltage release, 1 key switch I/O, 1 automatic circuit breaker 1p6AB, 1 emergency-off switch (acting on the motor protection switch) <p>3-phase indicator lights.</p>	483 177	68-1K.3Z008
Circuit protection unit Alternating current		<p>19" / 4 HU insert panel Circuit protection unit for 1-pole power supply to student's table. With cut-out and lettering to accept a maximum of 21 x 1-pole automatic circuit breakers. Empty spaces are provided with covers. The panel is pre-wired to terminal blocks.</p> <p>z = Please state the number of automatic circuit breakers required.</p>	483 177	68-1L.3Z1..
Circuit protection unit Three-phase current		<p>19" / 8 HU insert panel Circuit protection unit for 3-pole power supply to student's table. With cut-out and lettering to accept a maximum of 21 x 3-pole automatic circuit breakers. Empty spaces are provided with covers. The panel is pre-wired to terminal blocks.</p> <p>z = Please state the number of automatic circuit breakers required.</p>	483 354.8	68-1M.3Z3..