

The SCHNEEBERGER product documentation

CATALOGUES

MONORAIL and AMS
LINEAR BEARINGS and Recirculating units
SLIDES
MINIRAIL
AUTOMATION
POSITIONING SYSTEMS



BROCHURES

MINIMODULE
CONTROLLER NANO-C
MINERAL CASTING RHENOCAST
MONORAIL AMS MEASURING SYSTEMS
SPECIAL COMPONENTS
IMAGE BROCHURE



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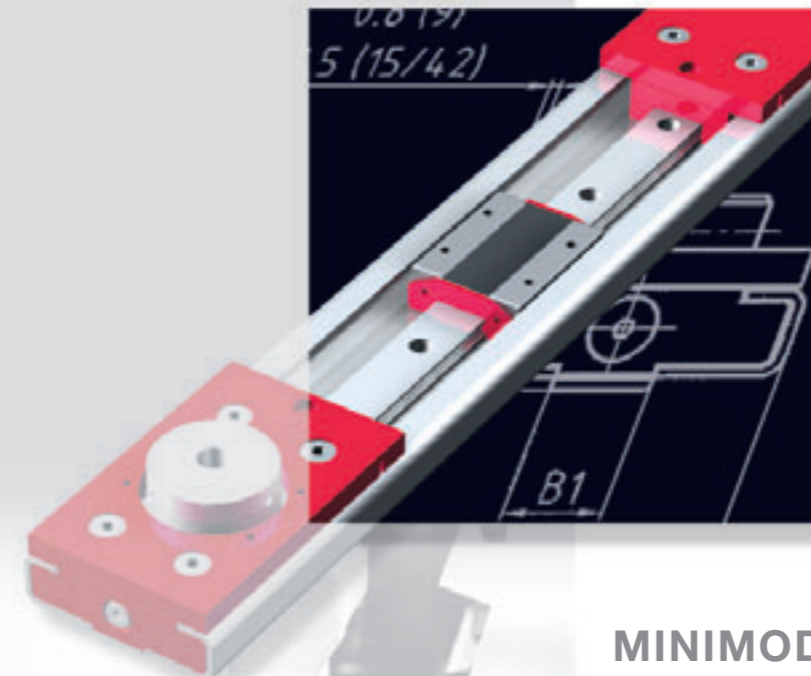
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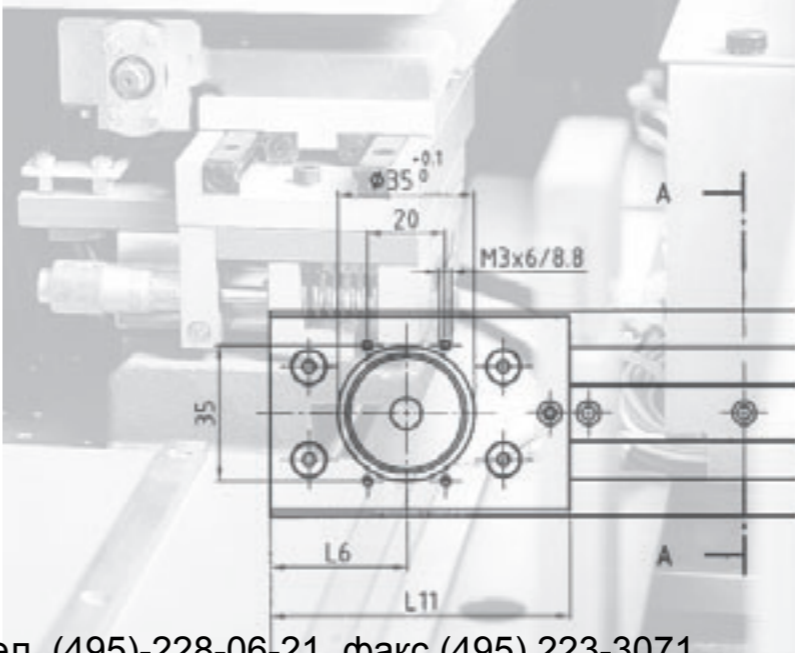
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SCHNEEBERGER
LINEAR TECHNOLOGY



MINIMODULE
the highly precise, compact
positioning solution
with integrated actuation

20.2132-02.605/6/3.8/SRO/EG/Printed in Switzerland. Subject to technical changes



> **All the features of MINIRAIL... but with integrated actuation**



Based on SCHNEEBERGER MINIRAIL

Small profile with the **lowest overall height available on the market**

Simple integration.

MINIMODULE is based on our Miniature Guideway - MINIRAIL - and is therefore constructed around the design of the Guideways, additional fixing holes or time consuming adjustments are not necessary for the integration of the actuation.



> **MINIMODULE: Smart motion solutions**

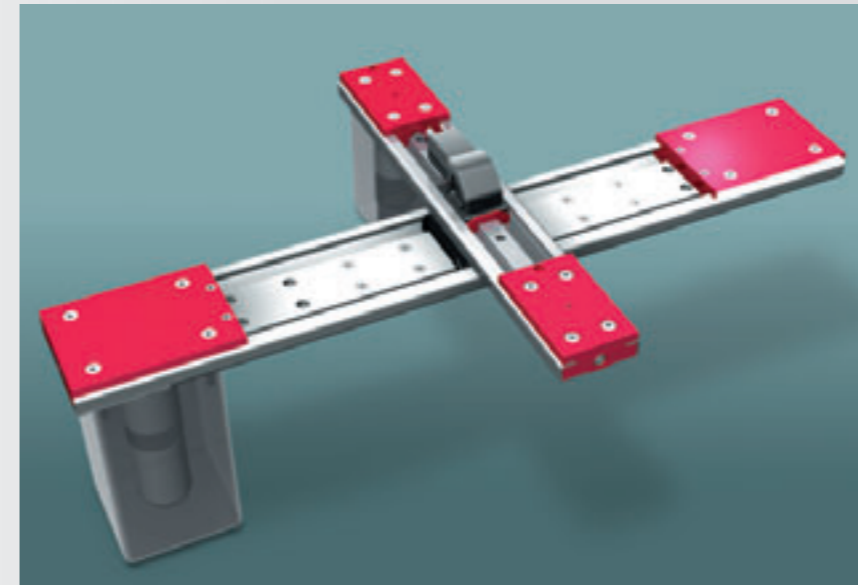
MINIMODULE is ideal for applications where installation space is limited and a high precision, modular and economic construction is required.

The advantages of MINIMODULE come into their own in Handling and Automation applications.

Automation solution.

More and more automation solutions require compact precise linear modules that can be installed quickly. Our approach to this is to supply the actuator with a motor mounting flange, enabling you to integrate your own motor / drive system. An additional coupling is normally not necessary due to the damping feature of the tooth belt drive.

The repeatability of the MINIMODULE depends on the drive solution, +/- 0.03mm can be achieved trouble-free. The unit is capable of speeds of up to 5m/s with accelerations of up to 5g.



> **MINIMODULE: Plug & play precision**

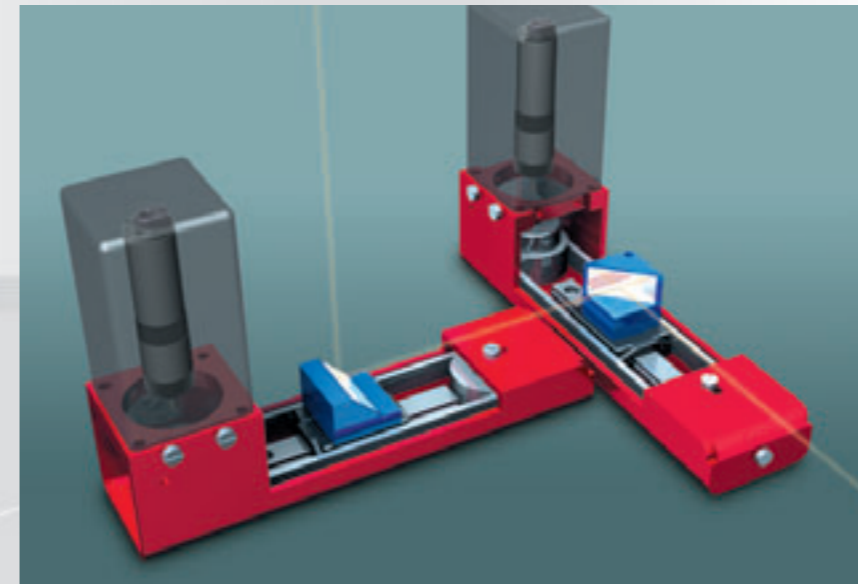
With an integrated tooth belt drive, MINIMODULE is a highly precise and compact solution for positioning and motion challenges.

Based on our MINIRAIL Guideways, sizes 9, 15 and 42, the MINIMODULE excels with its unique, compact design of minimal integrated parts.

With MINIMODULE, you receive the same advantages of the SCHNEEBERGER MINIRAIL in the form of a module: high stiffness, corrosion resistant materials as standard and the lowest overall height on the market. MINIMODULE also offers a superior cost-performance ratio.

> **Advantages at a glance:**

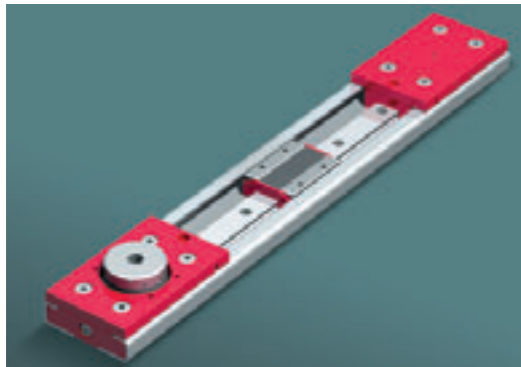
- » The proven technology and precision of SCHNEEBERGER MINIRAIL Guideways
- » Reliable tooth belt drive
- » Highly compact design with open construction
- » Small profile with the lowest overall height in the market (10 – 16mm)
- » High stiffness from the MINIRAIL Guideways
- » Corrosion resistant components
- » Minimal assembly cost as an intermediate adapter is not required between the machine structure and the MINIRAIL Guideways; leading to greater accuracy of the overall machine
- » Clean room compatible up to class 10'000
- » Constructed for direct motor assembly



Ideal for Medical Industry applications.

MINIMODULE is a reasonably priced and highly reliable positioning solution, which can be utilized in diagnostic equipment. Due to the fact that the modules are made of corrosion resistant materials, the MINIMODULE meets the regulations for equipment used for the production of medical instruments. Thanks to the modular construction, it is possible to produce low cost, efficient X-Y-positioning and accurate motion solutions.

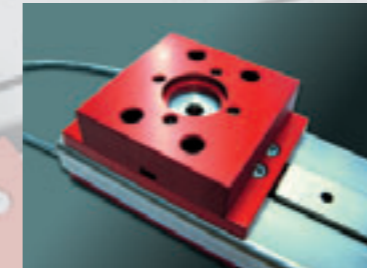
MINIMODULE – the basic version – all in



The MINIMODULE's striking features are:

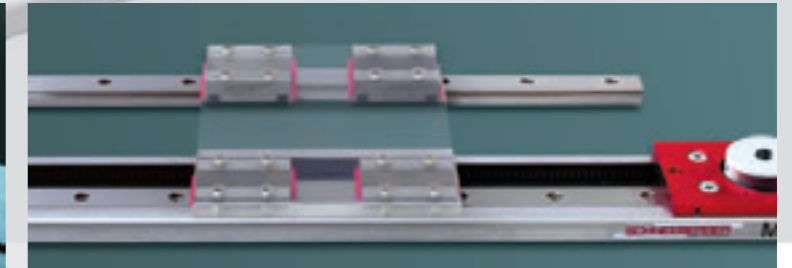
- » open design
- » constructed for direct motor assembly

... even more Added Value



We can provide the appropriate flange for any motor type.

- » Application and customer specific flanges are available.



MINIMODULE with extra carriages – the most well-rounded motion solution.

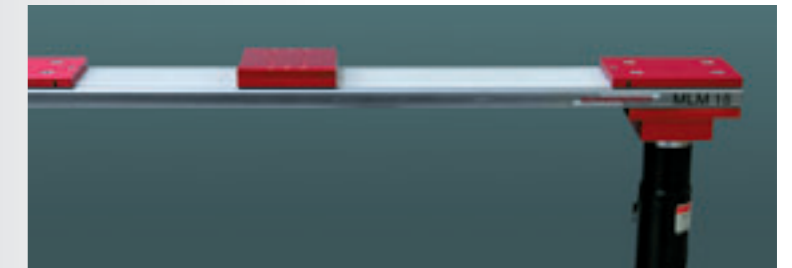
- » MINIMODULE can also be provided with additional carriages. (Basic version has one carriage connected directly to the tooth belt). Motion of carriages in opposite directions (e.g. for a clamping mechanism), can be achieved by fixing the two carriages to opposite sides of the tooth belt. The connection to a parallel MINIRAIL guide provides yet another variation possibility.

MINIMODULE-Options - Added value

Thanks to various options, MINIMODULE can be adapted to meet your requirements. We would be pleased to discuss specific solutions with you.

Built in end switches simplify the integration.

- » Inductive end switches are integrated into the end plates to prevent excessive travel.
- » The switch sensor is fixed to the tooth belt making easy adjustment of the limit position possible.



Flexibility in mounting of the drive motor.

- » The drive motor can also be assembled on the under side if requested. Depending on the function, this can make the integration of the system much simpler.

Applications and specific solutions



An optimized cover strip for protection of the guide system.

- » A polyester cover strip provides excellent protection of the MINIRAIL guide against contamination.

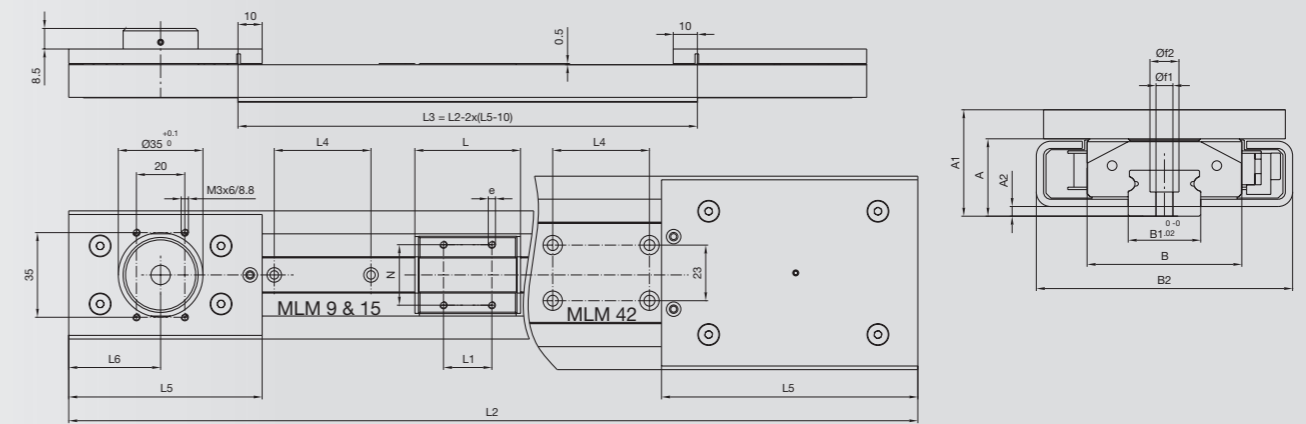
The use of the cover strip reduces the stroke by 9 – 18mm and the mounting surface of the carriage is raised by 10 – 12mm.



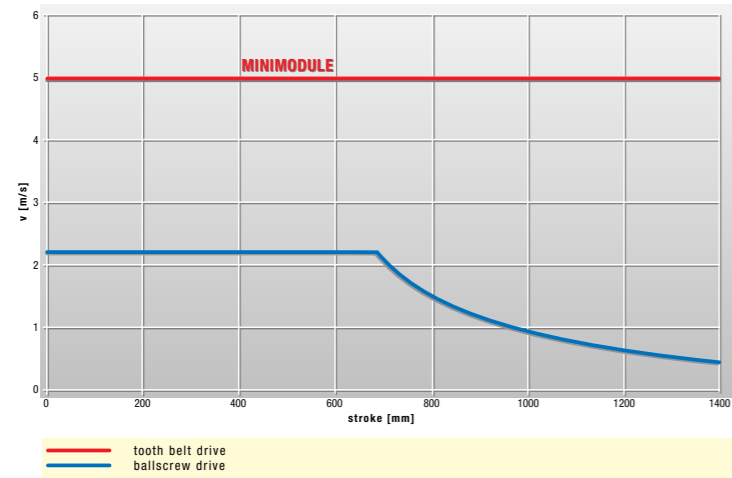
We strive to fulfil your requirements.

- » The compact design of the MINIMODULE coupled with SCHNEEBERGER's comprehensive engineering know how, puts us in a strong position to realize specific solutions to the most demanding applications.

Dimensions and technical Data



Constant speed - even for long strokes

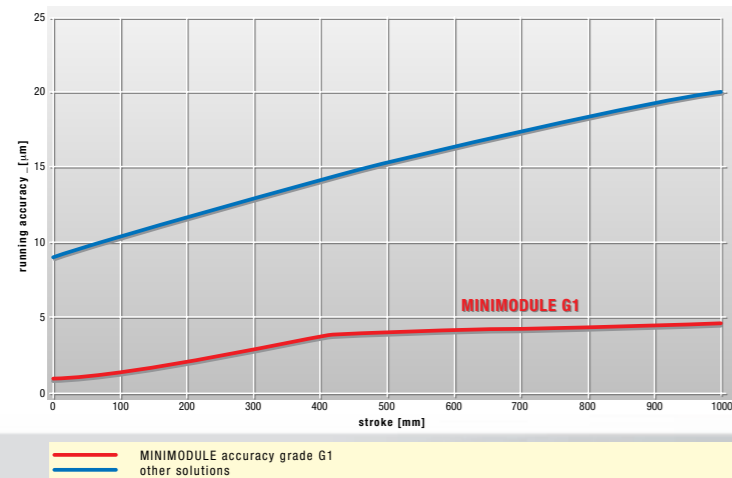


«No limits» for long strokes.

The critical speed of a ball screw drive restricts the speed of a linear axis. The values lie around 2.5x lower than those of a tooth belt drive.

With the SCHNEEBERGER technique, the speeds up to 5m/s can be realised over the whole stroke range.

Much more accurate than conventional solutions



THE SCHNEEBERGER standard.

Because the MINIMODULE is based on the high precision MINIRAIL, exceptional running tolerances better than 5µm per 1m are achieved.

Type	Height		Width			Lengths						Stroke		Others							
	A	A1	A2	B	B1	B2	L	L1	L2	L2	L2	L4	L5	L6	H	H	X	N	e	f1	f2
	mm	mm	mm	mm	mm	mm			from mm	in steps of mm	to max. mm	mm	mm	mm	from mm	to mm	H=L2-X mm	mm		mm	mm
9	10	16	0.8	20	9	42	32	10	275	20	1055	20	70	33	103	883	172	15	M3	3,5	6
15	16	22	2	32	15	53	44	20	330	40	1090	40	80	38	126	886	204	25	M3	3,5	6
42	16	22	2	60	42	80	56	20	422	40	1142	40	106	51.5	154	874	268	45	M4	4,5	8

Order Information

MLM 9 – 275.103 Minimodul Size 9 – Length L2 = 275 mm. Stroke L2-X = 103 mm

Type	Driving force	Stroke p. revolution	Loading capacities (according catalogue MINIRAIL)		Moments			
			Co N	C N	MoQ Nm	MoL Nm	MQ Nm	ML Nm
	max.N	mm						
9	50	81	2770	1690	12.9	10.2	7.9	6.2
15	100	120	5620	3680	42.7	28.1	27.9	18.4
42	100	204	8110	4750	171.2	56.8	100.3	33.3

Free downloads, easy and efficient

To make your design process easier, 2D- and 3D CAD drawings in all formats are available on the parts server from Cadenas. The required download location on the SCHNEEBERGER homepage is under the category PRODUCTS MINIMODULE.

www.schneeberger.com