

Needle Grippers

Gripping Solutions
for Non-Rigid Materials

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EMI offers in-stock >ASS< needle grippers that best suit your requirements or we can work with >ASS< to develop a tailor-made and process-reliable gripper.

As a German manufacturer with almost 40 years of experience, >ASS< produces products climate-neutrally and supplies high-quality products and solutions for handling your products. Their modular framing components fully stocked by EMI in the US enables gripping solutions to be adapted to all product areas and production processes.

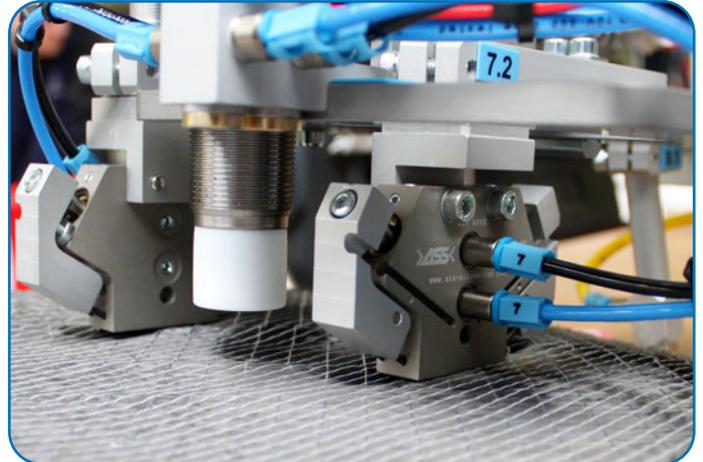
EMI is your distributor of >ASS< products for solving your applications with our engineering assistance program. You can reach us at 216-535-4848 or by e-mail at Sales@EMICorp.com

Increasingly lighter construction methods in many industries require the use of components made of fiber composite materials. Every gram of material saved counts. A wide variety of limp materials often have to be moved reliably, from natural fibers to carbon fiber fabrics to voluminous foams or the thinnest of fine materials.

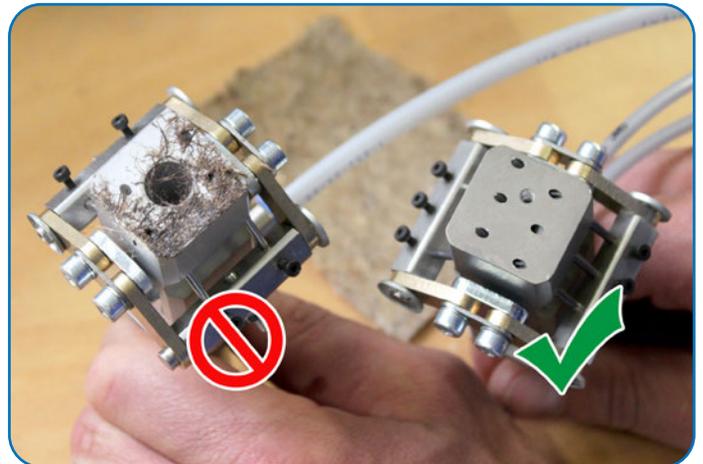
With >ASS< needle grippers, your solutions that have been tried and tested in practice - with excellent results!

Small and precise piercing depths for safe gripping and lifting of stacks, inserting parts to be back-injected into the injection molding machine, picking up high-temperature masses and composite sheets, through to handling foam and felt mats with extra-long needles.

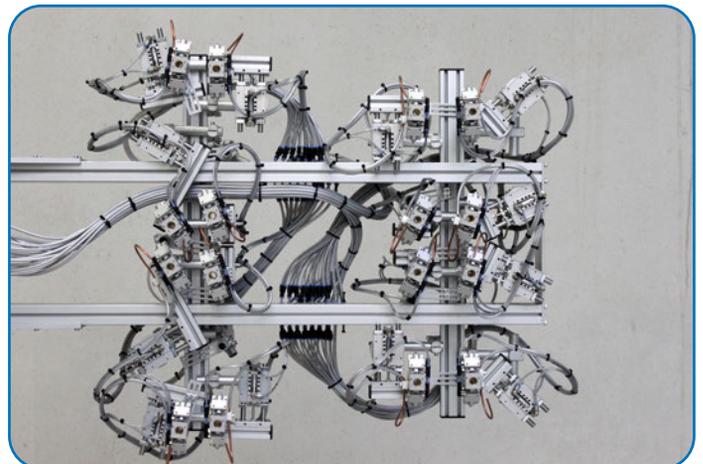
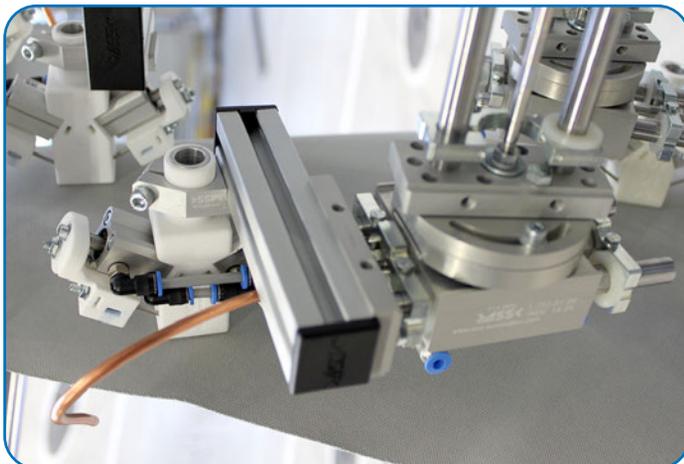




Needle grippers are a great option for highly porous workpieces that are difficult to grip using vacuum cups or standard grippers.



Needle grippers can reliably pick and place fabrics like carbon fiber reinforced textile. EMI can provide an in-stock economic solution for your application. The photo to the right shows how no natural fibers remain on the non-stick coated needle gripper.



Broad Range

A needle gripper solution is available for every handling task. Flexible materials and components made of fiber composite or foam materials and textiles of all kinds can be handled reliably. >ASS< offers needle grippers with penetration depths from zero to over 80 millimeters and needle grippers with four to 36 needles.



Heat Resistant

Needle grippers and insulators that come into contact with components with heat-resistant properties enable process-reliable handling of temperature-controlled materials. Even in heating fields, composite sheets or tough compound masses can be moved safely. Components such as heat-resistant vacuum cups are also available.



Non-Sticking

Special coatings enable handling of sticky and adherent materials. For example, sheet-mould-compound (SMC) and other sticky fiber matrix semi-finished products can be handled without residue. Needle grippers with PTFE-coated contact surfaces and/or needles are used to suit your solution to enable residue-free gripping.

Solution-Oriented

We will work with you to find solutions for your handling tasks - regardless of whether it is a prototype or series production. >ASS< can adapt the needle gripper to suit your projects.

Scalable

Our large selection of standard needle grippers, with their different properties and sizes, enables a wide range of applications. Parameters such as the piercing angle or the number of needles can be adjusted.



Needle Grippers

Gripping Solutions for Non-Rigid Materials

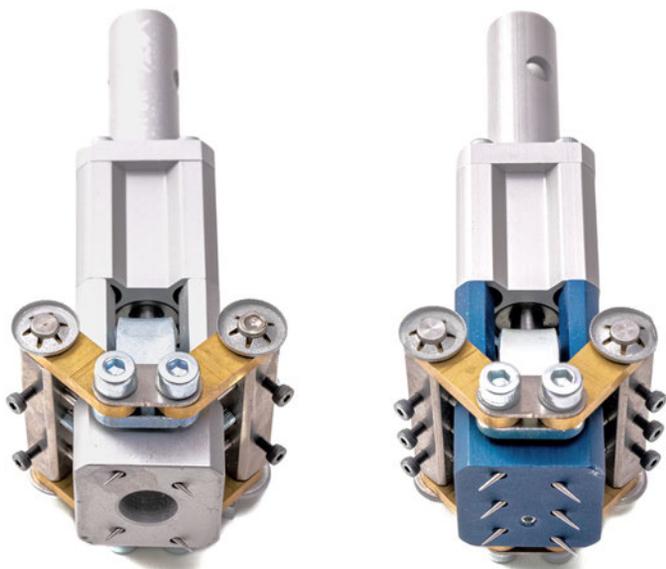


Assembling Connections

The >ASS< modular framing system contains numerous cross-system connections to enable you to integrate the needle grippers economically and easily.

Testing & Field Trials

Material tests are particularly important for limp or adhesive materials. We will be happy to advise you and carry out tests at our facility in Wickliffe Ohio. The difference is particularly clear in the example on page 1 showing renewable natural fibers with a compound admixture that adheres when heated: no natural fibers remain on the non-stick coated needle gripper cling.



Quality & Sustainability

>ASS< components are high-quality, durable and always an economical solution. They develop, design and produce our components at the certified climate-neutral location in Overath Germany.



Ability to Deliver

Our high level of vertical integration enables us to react quickly to your requests.

Needle Gripper Comparison Chart

EMI stocks a range of >ASS< needle grippers as shown in the chart below. Additional versions with individual piercing angles or depths can be developed thanks to EMI's relationship with >ASS<. Each needle gripper has its individual advantages and our engineering department will work with you to determine the needle gripper that best suits your application.

Quick #	Part #	Number of needles	Penetration depth [mm]	Penetration angle [°]	Needle Ø [mm]	Contact area	Span, max. ca. [mm]	limp/flexible	tempered	sticky	voluminous	others
3535	NGR-X-16-10	4	0-5	30	2	Aluminium	65	x				
3485	NGR12	4	0-4	45	2	Aluminium	58	x				*1
3542	NGR-12-D	4	0-2.5	30	2	Aluminium	116	x				*2
3540	NGR-12-DL	4	0-2.5	30	2	Polyamid	121	x				*2, 7
3484	NGR-12-6	6	0-4	45	2	Aluminium	55	x				
3768	NGR-12-6-DS-A	6	0-5	30	2	Aluminium	100	x	x			*6, 8
3767	NGR-16-18-EZ	18	0-1.8	30	0.7	Steel	36	x				*4, 8
contact us	NGR-12-8-D	8	0-2.5	30	2	Aluminium	116	x				*2
contact us	NGR-20-6-25-D	6	0-25	45	1.5	PTFE	233	x	x	x	x	*5, 8
contact us	NGR-12-10-D	10	0-2.8	20	2	PTFE	130	x	x	x		*3

*1 - alignment hole feature available for locating with magazine rod, centering mandrel, or similar

*2 - thru alignment hole feature available for locating with magazine rod, centering pin, or similar

*3 - contact surface specially designed for easily wiping off buildup

*4 - includes additional cover for very thin fabrics

*5 - suitable for handling sponge-like materials and SMC (sheet molding compound) materials in compression molding applications

*6 - stackable modular design, PTFE-coated needles

*7 - weight-optimized lightweight construction

*8 - sensor slots available to add gripper position confirmation capability



Extensive EOAT Inventory!

Easy Online Ordering!

- Create Supply Lists
- Order from History
- Export Purchase Orders
- Track Orders

Product Pages Include:

- CAD file downloads
- 360° 3D Views
- Dimensional drawings
- Related items



Compact Need Gripper – NGR-16-18EZ

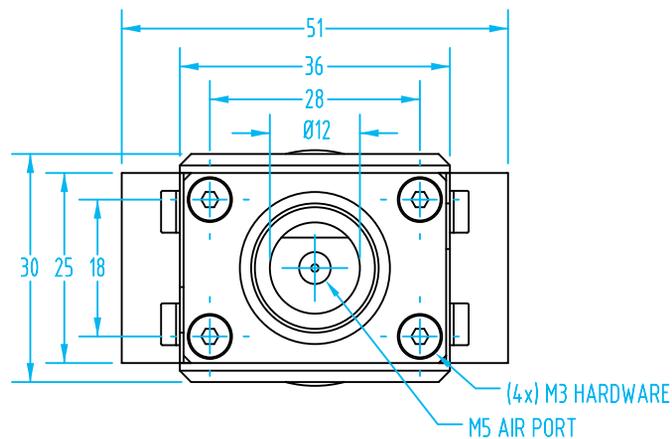
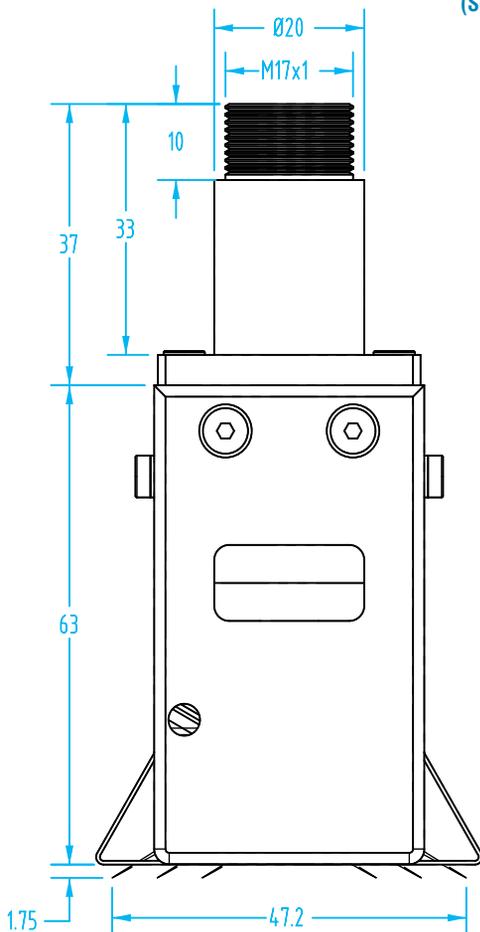
- Features 18 needles.
- Needle depth is adjustable between 0–2mm in 0.025mm increments.
- Single acting.
- Air blow-off port.
- Optional sensor for needle position.
- The NGR-16-18EZ has thinner needles (0.7mm) and includes a cover for thin and limp materials. (Shown installed here.)



Quick#	Part#	>ASS< #	Price	Needle Depth	Air Connection	Wt.
3767	NGR-16-18EZ	1-460-19-00	\$542.85	(18x) 0–1.75mm*	M5	255g
Replacement Needles for 18 pin - Sold with 2 locators, each with 9 needles						
3825	NEEDLE-NGR-16	1-460-18-20	\$194.78			
Optional Sensor						
3809	MFS-T2-3-7	1-808-30-00	\$75.21	C-Slot with 3m Lead & M8 Connection		

*Note: Measurement with additional cover attached.

(See website for full dimensional drawing)

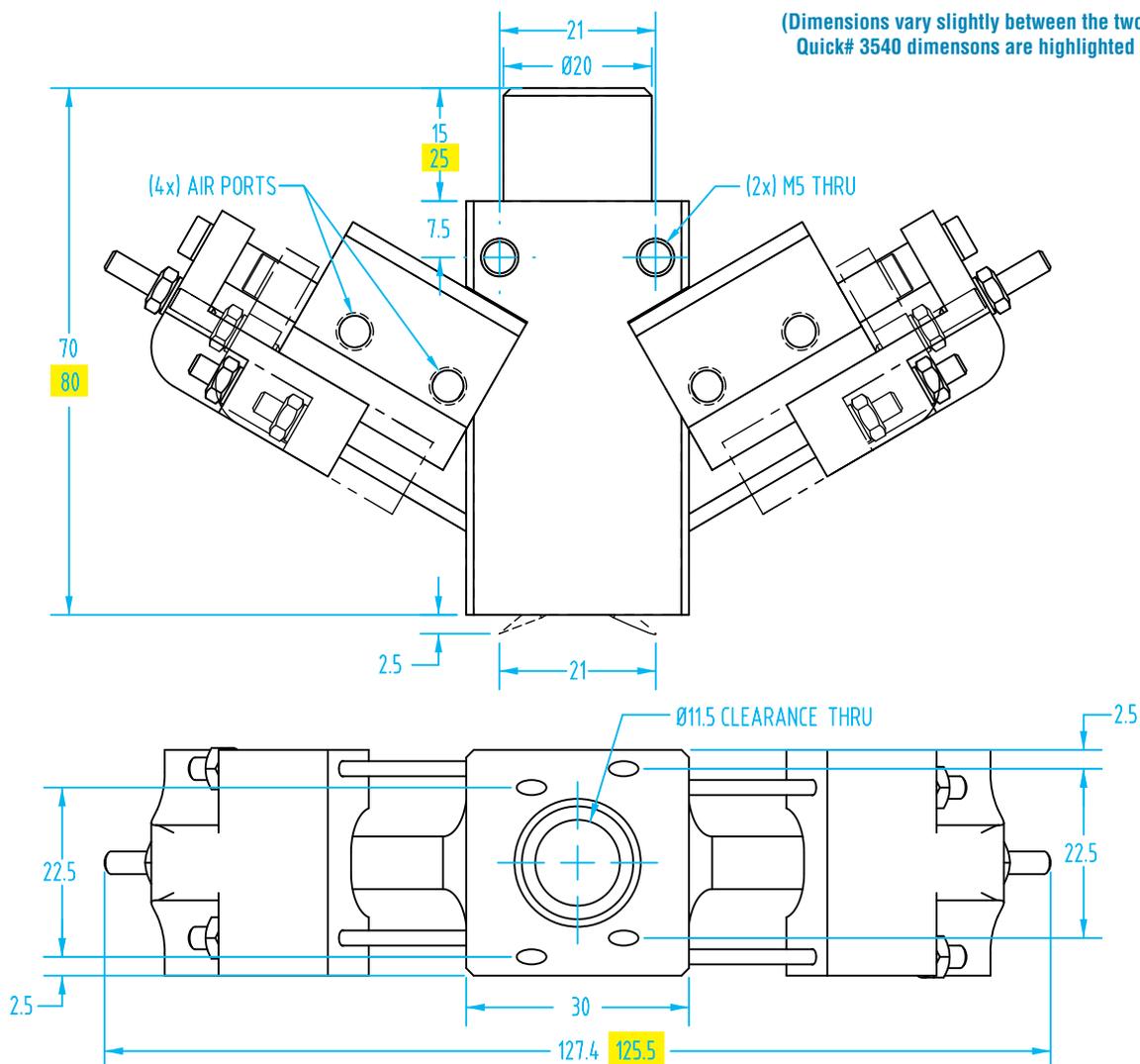


Needle Gripper with Through Hole – NGR-12-D / NGR-12-DL

- Features 4 needles, suitable for textile, cloth, carpet or any other material that can be penetrated.
- Through hole allows placement of cloth onto locating pins.
- Lightweight selective laser sintering version is 30% lighter than the aluminum body.
- Independent needle positioning and tandem stroke adjustment for fine tuning.
- Each cylinder is double acting.



Quick#	Part#	>ASS< #	Price	Body Style	Needle Depth	Air Connection	Wt.
3542	NGR-12-D	1-460-09-00	\$410.00	Aluminum	0–2.5mm	M5	249.2g
3540	NGR-12-DL	1-460-12-00	\$601.13	Laser Sintered	0–2.5mm	M5	160g
50mm Replacement Needles - (1 piece)							
3445	NEEDLE-50	1-460-03-06	\$5.25				

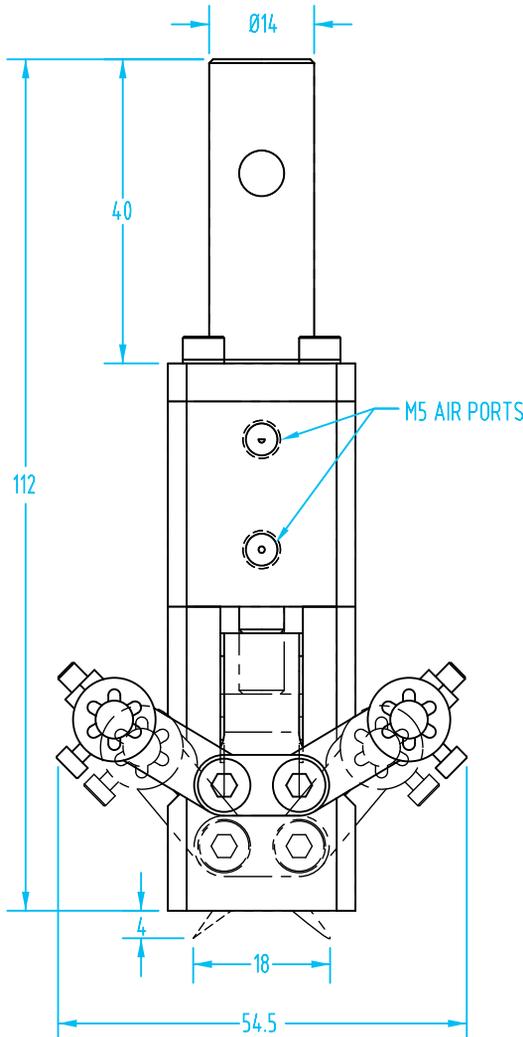


Needle Gripper with Adjustable Needles – NGR12 / NGR-12-6

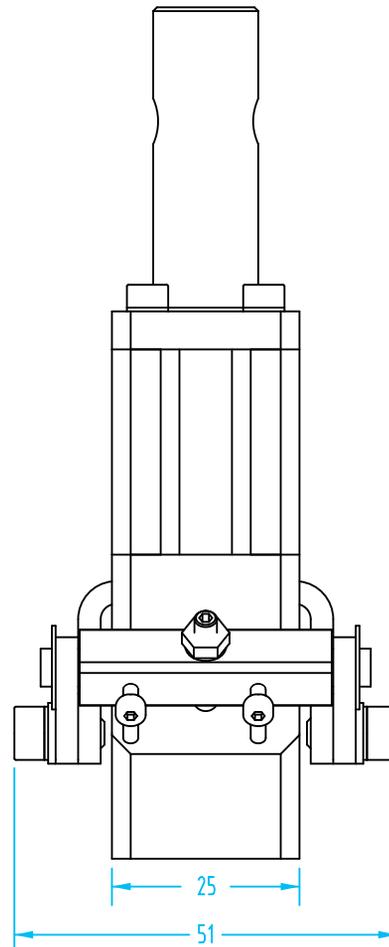
- #3485 features 4 needles, while the #3484 has 6 needles for a secure grip of fabrics.
- Needles cross-penetrate and stretch the fabric for a more secure grip.
- Independent needle positioning and stroke adjustment.
- Double acting.
- Clampable mounting bracket included, remove for direct plate mount.



Quick#	Part#	>ASS< #	Price	Needle Depth	Air Connection	Wt.
3485	NGR12	1-460-06-00	\$420.00	0–4mm	M5	185g
3484	NGR-12-6	1-460-08-00	\$582.75	0–4mm	M5	190g
37mm Replacement Needles - (1 piece)						
3408	NEEDLE-37	1-460-06-09	\$5.25			



(See website for full dimensional drawing)

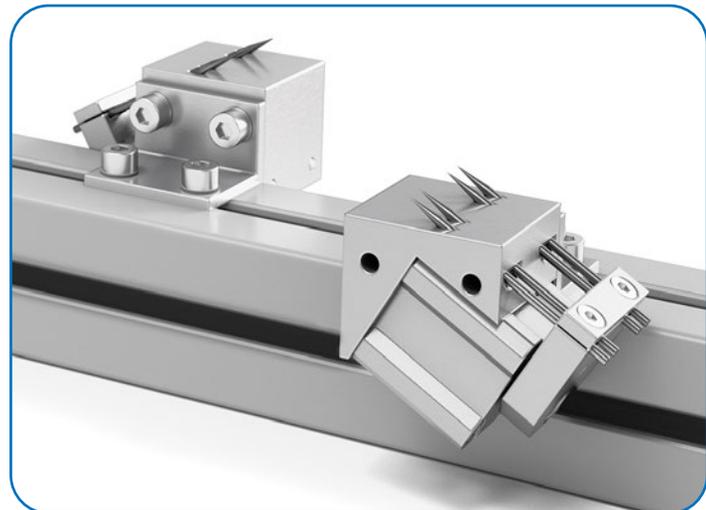
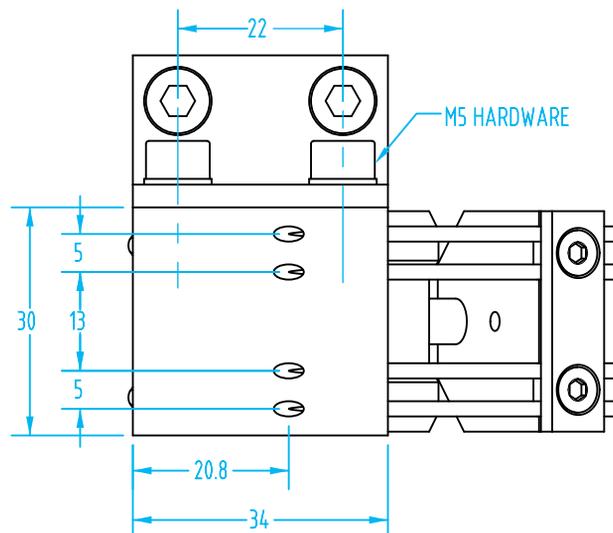
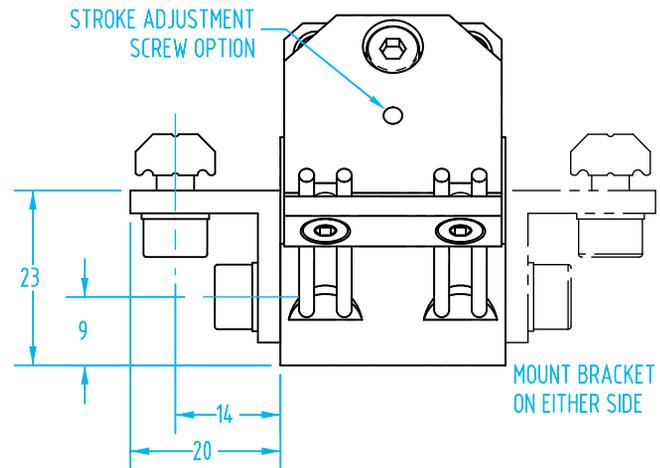
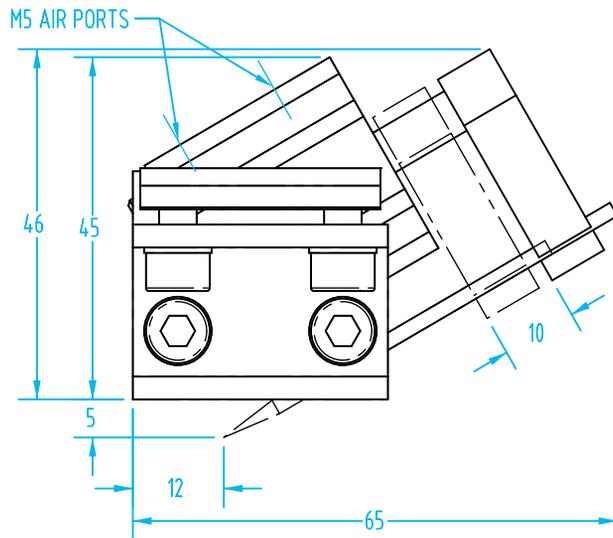


Uni-directional Needle Gripper – NGR-X-16-10

- Features 4 needles, suitable for textile, cloth, carpet or any other material that can be penetrated.
- Designed for installation on X-profile.
- When used in pairs, the grippers should be facing opposite directions.
- Mounting bracket included.
- Double acting (each unit).
- Sold individually.



Quick#	Part#	>ASS< #	Price	Needle Depth	Air Connection	Wt.
3535	NGR-X-16-10	1-460-03-00	\$225.75	0-5mm	M5	150.3g
50mm Replacement Needles - (1 piece)						
3445	NEEDLE-50	1-460-03-06	\$5.25			



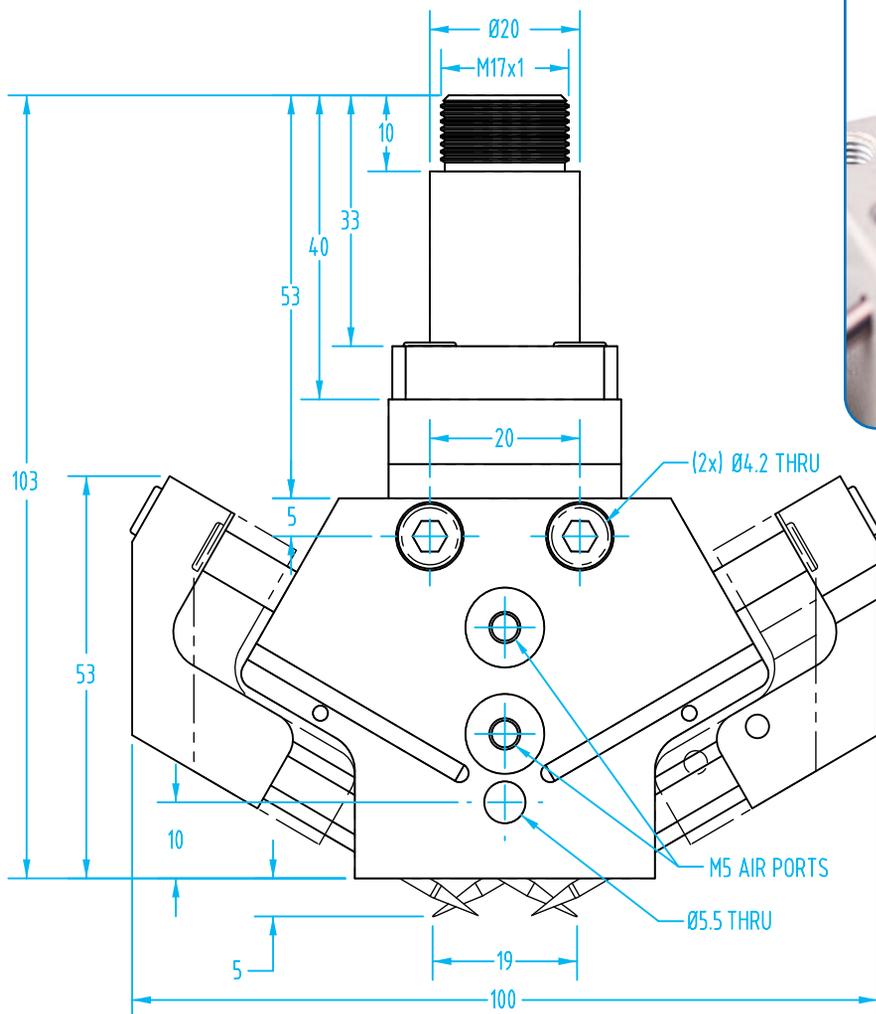
Slim, Adjustable Needle Gripper – NGR-12-6-DS-A

- Suitable for textile, cloth, carpet or any other material that can be penetrated.
- Able to combine many units into a series.
- 6 PTFE coated needles are stepless adjustable and working position can be monitored with optional sensors.
- Double acting.
- Clampable mounting bracket included, remove for direct plate mount.



Quick#	Part#	>ASS< #	Price	Needle Depth	Air Connection	Wt.
3768	NGR-12-6-DS-A	1-460-70-00	\$582.23	0-5mm	M5	241g
Replacement Needles - (sold per side)						
3951	NGR-12-6-DS-LHNB	9-07-460-154-0	\$76.13	Left hand side needles & bracket		
3952	NGR-12-6-DS-RHNB	9-07-460-156-0	\$76.13	Right hand side needles & bracket		
Optional Sensor						
3809	MFS-T2-3-7	1-808-30-00	\$75.21	C-Slot with 3m Lead & M8 Connection		

(See website for full dimensional drawing)



Designed and manufactured in Germany, >ASS< has been building end-of-arm tooling components since 1984. Relied upon for years by many of the world's largest robot users, these parts are known for their exceptionally high quality and innovative engineering. These are the authentic components made by the original manufacturer.

We have them in stock in the United States and Mexico available for immediate shipment.

Quick Changers



Vacuum Cups



Finger Grippers



Sprue Grippers



Lightweight ID Grippers



Cylinders



>ASSK Framing



Profile & Slotted Nuts

Cross & Angle Connectors

Angle & Elbow Arms



Vacuum Cup Connectors

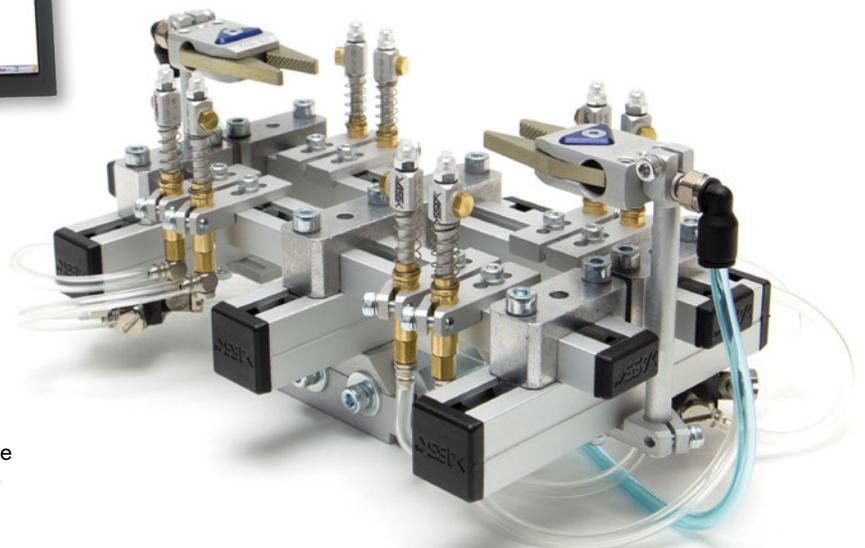
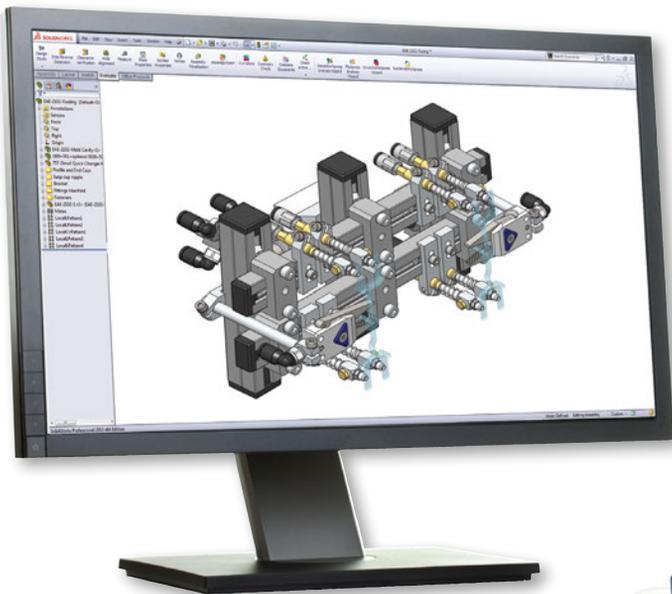
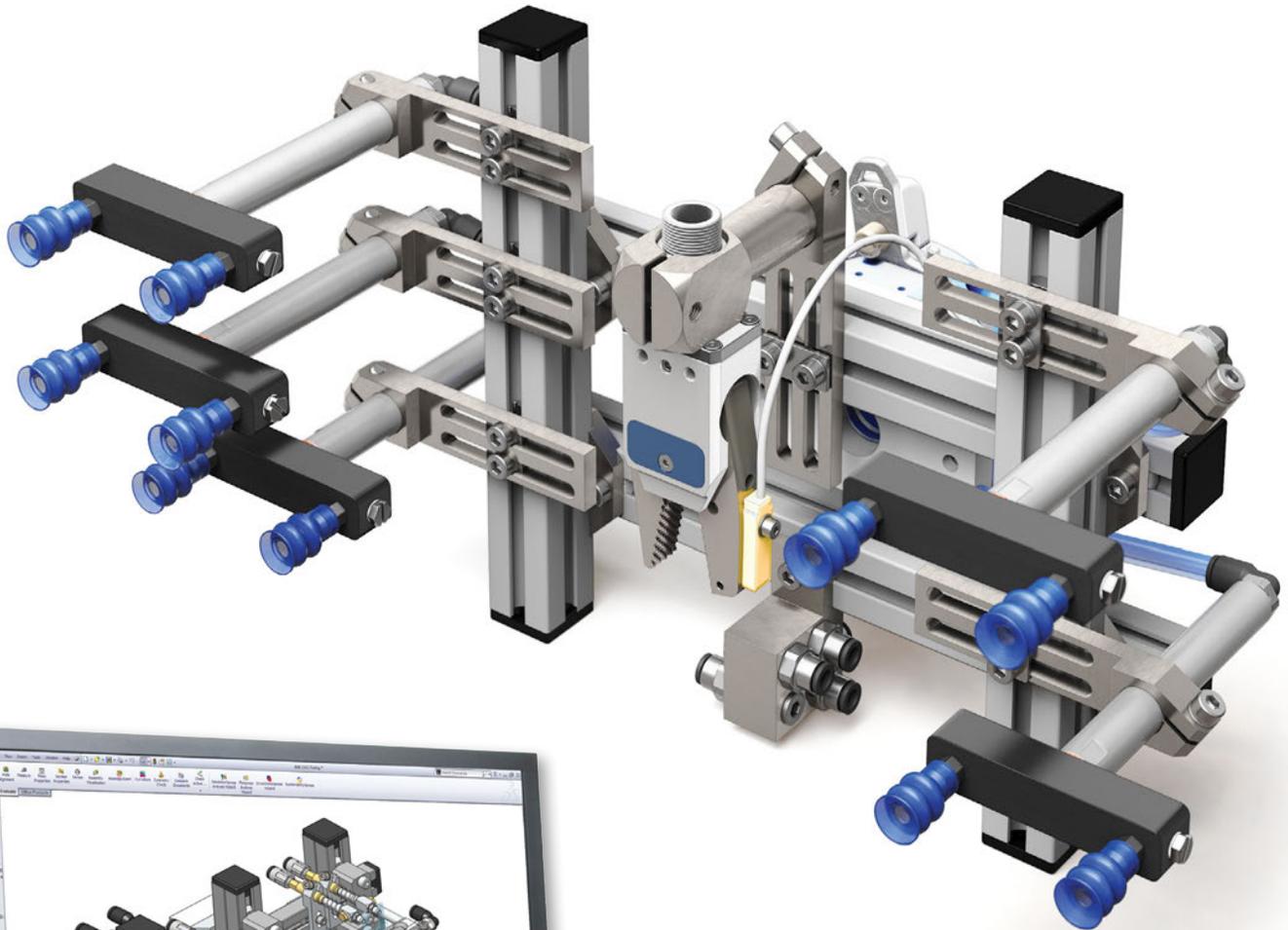
Blue Series Components

Ø6mm / M6 Micro Series

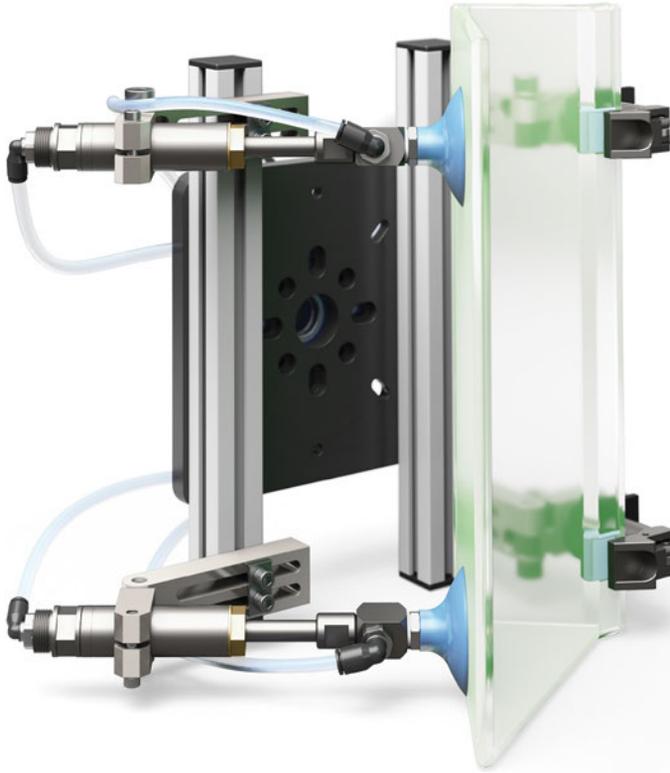


EMI Built Toolings

From the simplest to the most complex tooling, EMI's experienced team of EOAT engineers and assemblers consistently deliver custom designed and built EOATs at a competitive cost and painless out-of-the-box experience.

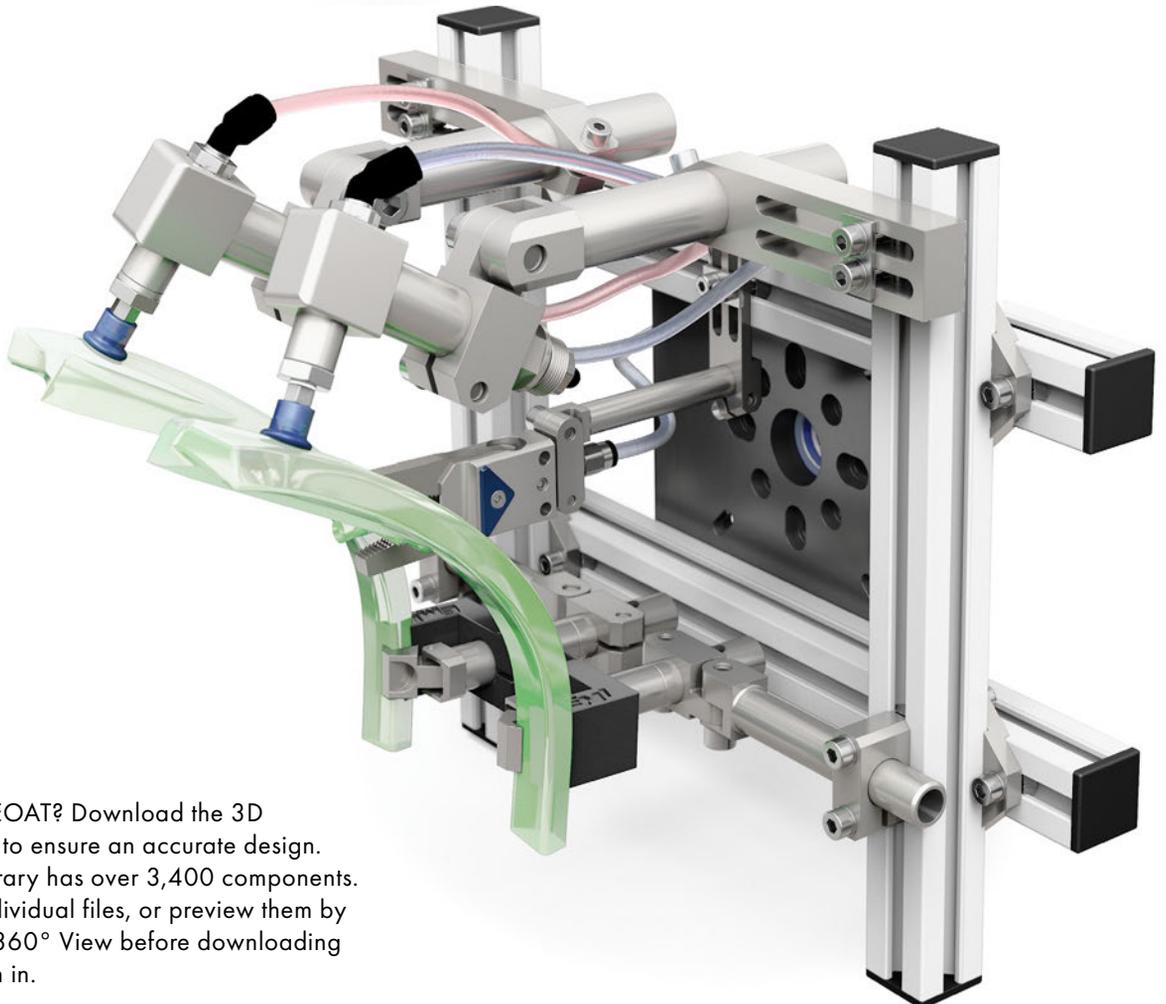


With a clamping diameter of 6mm, the >ASS< Micro EOAT System is significantly smaller and lighter than any other framing components available. With this system it is possible to handle even the smallest components simply and cleanly in the tightest of spaces.



EMI EOAT Solutions

From the grippers and mounting interfaces, to the hardware and sensors, EMI has everything needed to design, order, build, and install your custom EOAT.



Building your own EOAT? Download the 3D CAD files you need to ensure an accurate design. Our EOAT CAD Library has over 3,400 components. Download all or individual files, or preview them by Quick# with EMI's 360° View before downloading with no need to sign in.



Easy Online Ordering!

EMI product detail pages include all the information you need: pricing, availability, dimensional drawings, related items, spare parts and more!



3542 >ASS< Aluminum Needle Gripper with 4 Needles

Needle grippers provide the option of reliable gripping of work-pieces which are difficult to grip using vacuum. Crossing needles ensure an optimal holding force. These grippers are particularly suitable for textiles, fiber composite materials, and food industry

Item #: NGR 12 D
\$410.00 Each

Quantity:

[Add To Cart](#)

[Available: In Stock](#)
[Technical Specifications](#)
[CAD File Download](#)
[360 Degree View](#)

Overview | **Dimensional Drawing**

- 249g
- Needle Stroke: 0-2.5mm
- Suitable for textile, cloth, or any material that can be penetrated
- Through hole allows placement of cloth onto centering pins
- Independent needle positioning and tandem stroke adjustment for fine tuning
- Each cylinder is double acting

• Reference Similar: GRN 12-10-20 LP, 1-460-09-00

Related Items

102 Threaded Male M5 Push-In Fitting for 4mm Tube	104 Threaded Male M5 Push-In Fitting for 6mm Tube	3737 >ASS< Framing Spring Loaded Elbow Arm 20mm Shaft, 20mm Stroke	3697 >ASS< Framing Spring Loaded Elbow Arm 20mm Shaft, 50mm Stroke



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