

FORMING THE FUTURE



HYDRAULIC PRESS SYSTEMS FOR FIBER-REINFORCED PLASTICS

SCHULER 

Member of the ANDRITZ GROUP



WE PLAN TOMORROW'S SUCCESS TODAY. PROGRESS MANIFESTS ITSELF IN DETAILS.

As the technology and global market leader in forming technology, we have the necessary Know-How in press and plant engineering and can provide you with optimal guidance.

SUCCESS IN SERIES PRODUCTION: SERIES SYSTEMS FOR THE PRODUCTION OF FIBER-REINFORCED PLASTICS

Thanks to close collaboration with our partner Frimo, we offer you a workflow, which efficiently integrates the entire production process. This covers per-forming and pre-cutting to forming, cutting, joining and bonding as well as component assembly and automation.

COMPOSITE COMPETENCY ALONG THE WHOLE VALUE CHAIN.

Innovative system solutions from Schuler combine most modern components and proven modules into highly automated production lines. We provide consulting services along the entire value chain. It is possible thanks to our technical expertise about materials for lightweight construction and multi material mix, which for example will allow production of stable and lighter hybrid parts made of steel with fiber-reinforced plastics. In addition, our specialists also provide consulting for constant process improvement and flexible systems, which you can use for manufacturing innovative products such as B-Pillars as fiber composite.



Series production of carbon roofs.

For example in the production of CFR components for large-scale production. The result: maximizing resource efficiency with up to 30% less cycle time and 50% lower costs!

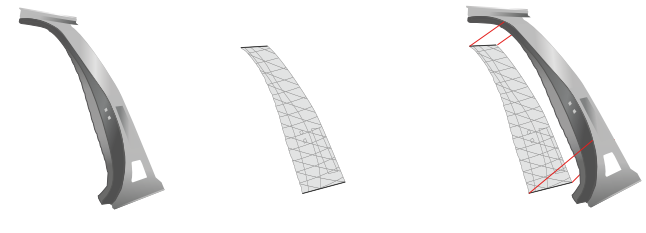
You tell us what you need and we will take care of the rest.

OVERVIEW OF THE PROCESS

	Thermoset	Thermoplastic
Long fibers < 50 mm unsorted fibers	<ul style="list-style-type: none"> • SMC 	<ul style="list-style-type: none"> • GMT • LFT/LFT-D
Continuous fibers > 50 mm oriented fiber direction	<ul style="list-style-type: none"> • HP-RTM • Wet presses • Prepreg 	<ul style="list-style-type: none"> • Organic sheet / tape

HYBRID PART MANUFACTURING

Hot Stamping of steel + Fibre reinforced plastics (FRP) = FRP-Steel Hybrid



THE TURNKEY SOLUTION FROM SCHULER, A TECHNOLOGY AND GLOBAL MARKET LEADER. REACH THE GOAL WITH EASE.



Modular system Production line for RTM components

We support you through close collaboration and thus provide you with a simple and uncomplicated planning and changeover to the new system.

As a systems and process specialist, we can offer you a turnkey solution. Thanks to our experience and Know-How and our partner Frimo.

Thus, we not only support you with the pressing plant and process planning, but we also help you in the selection and integration of appropriate tools leading to shortened production cycle.

Our on-site Schuler Service team will also provide constant support even during ongoing processes. In addition, we also offer you an opportunity to react to production peaks in a flexible manner by deploying our production systems and presses and to expand your capacity temporarily if required. These advantages have already convinced many of Schuler customers. Let us persuade you: We look forward to receiving your request!

COMPOSITES ALLIANCE

Partners in Lightweight Technology



HYDRAULIC PRESS SYSTEMS FOR FIBER-REINFORCED PLASTICS COST AND ENERGY EFFICIENT PRODUCTION.



Schuler 36.000 kN short-stroke press for our customer NCC.

Your benefits:

Cost-efficient presses for fiber-reinforced plastics

- Minimal parts rejection
- Reduction of cycle time
- Energy-efficient production
- Production of prototypes
- Reduced hall height
- Reduced tool change time
- Quicker process integration and analysis

TECHNICAL DATA

Press force [kN]	< 10,000	10,000	18,000	25,000	36,000
Press force at max. Parallel control force [kN]		8,500	16,000	22,000	32,000
Table size [mm]	on request	2,000 x 1,600	2,800 x 1,800	2,800 x 2,000	3,600 x 2,400
Slide stroke [mm]		1,700	1,800	1,800	1,900
Shut height [mm]		2,200	2,400	2,400	2,500

Other sizes on request. Subject to technical modifications.

OUR CUSTOMERS

DAIMLER

BMW Group

IVECO

HYUNDAI
STEEL

TENCATE

INNOVATIVE SOLUTIONS FOR YOUR SUCCESS. CONVINCING ANSWERS FOR FUTURE CHALLENGES.

Our capability to innovate is the main pillar of our market success.

We sell future. Our systems make it possible to produce products today with future requirements - for example in the domain of lightweight construction or energy efficiency.

The world moves with our help. As a complete solution provider, we make major investments in Research & Development to make it possible for our customers to achieve top performance in serial production of cars.

Innovative advanced technology for your daily operations. Due to this reason, it is our tradition that we are committed to high end research as a leading company and make the results of this research relevant for your daily production. NCC, AZL, IACMI: We are members in many important research institutes: Just like our own experts who are in the management board of VDMA working group for hybrid components. We do everything to keep up with the times.

AN EXAMPLE: ICOMPOSITE 4.0.

Change goes on. Under the leadership of Schuler, a new path is opened up with iComposite 4.0: This research project helps in economical serial production of parts made of fiber-reinforced plastics and increases resource efficiency. Additive continuous fiber spray-ups help in the quick and efficient production of base structure of



Continuous research and development help us excel.

the component. A networked production system with a controlling system intelligence - keyword: 'Industry 4.0' - enables cost savings, which make it possible to achieve cost-efficient serial use of composites. Thus, we merge two apparent contradictions: Performance with efficiency, speed and quality, innovation and cost effectiveness.

OUR MEMBERSHIPS



SCHULER SERVICE.

STATE-OF-THE-ART SERVICE FOR MORE PERFORMANCE.

Schuler Service offers a tailored portfolio of services covering the entire life cycle of your equipment.

Over 900 service employees worldwide provide expert support 24/7 in close cooperation with you – our partners. Our main priority is always to ensure the maximum productivity and safety of your production equipment in order to secure your company's continued success.

With over 175 years of experience and expertise, we can guarantee the best possible support for the operation of your machines – and not only those supplied by Schuler, but by all other manufacturers. Whatever the situation, Schuler Service has the right solution for your specific needs.



[www.schulergroup.com/
service_en](http://www.schulergroup.com/service_en)

ABOUT THE SCHULER GROUP – WWW.SCHULERGROUP.COM

Schuler is the technological and global market leader in the field of forming technology. The company provides presses, automation solutions, dies, process expertise and service for the entire metalworking industry and for lightweight automobile construction. Its customers include automotive manufacturers and suppliers, as well as companies in the forging, household appliance, packaging, energy and electronics industries. Schuler is a leading supplier of minting presses and implements system solutions for a wide range of different high-tech sectors. The company has a presence in approximately 40 countries with roughly 6 600 employees. Schuler is majority-owned by the Austrian ANDRITZ Group.

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