FORMING THE FUTURE

C-FRAME PRESSES AND BLANKING PRESSES

SCHULER
Member of the ANDRITZ GROUP

WELCOME TO SCHULER AND BEUTLER NOVA.
C-FRAME PRESSES AND BLANKING PRESSES.

For more than 175 years, Schuler has been supplying presses and automation systems for customers in the metal-processing industry. Beutler Nova has been manufacturing presses for industrial applications for more than 20 years now. Whether in the stamping shop or the press plant, the challenges facing our machines are redefined every day. With blanking and forming systems from Beutler Nova, you are guaranteed economical production with increased productivity, optimum output, the best possible component quality and extensive services. We are at home in forming technology, and we with you to develop the appropriate system solution. In doing so, we rely on innovative press technology, high-performance automation components, flexible service and, it goes without saying, personal contact with the forming experts in your company.

You too can benefit from the individual and expert advice of Beutler Nova's forming specialists. Whether the problem relates to component development, diemaking, press technology or automation systems – together we will find the appropriate solution for you.

Economical production of a wide range of parts.

SCHULER ONLINE

Find out more about Beutler Nova AG. Since 2007, the Swiss company has been part of the Schuler group of companies. It is synonymous with quality, reliability and service.
http://www.beutler-nova.ch

C-FRAME PRESSES.
250 – 2,500 KN.

ECONOMICAL PRODUCTION.

C-frame presses provide small and medium-size companies high product quality at low per unit cost. Innovative solutions for machines and controllers ensure an integrated production process.

MODULAR, FLEXIBLE AND ERGONOMIC.

The development of the new C-FLEXline series is based on the ideal mix of user insights and more than 125 years of experience with press construction. The presses are machines with a modular structure and an extensive range of basic equipment. They are designed both for manually fed press work and automatic mode. Peripheral devices can be conveniently integrated into the control system. In the range from 630 to 2,500 kN, they guarantee a high product quality with low unit costs. The price/benefit ratio takes top priority.

Components that can be produced on a C-frame press.

VIDEO

Find out more about C 630 and C 1000 C-frame presses – two-hand control panel, light curtain for automatic mode. Simply scan the QR code using the camera of your smartphone or tablet.
http://bit.ly/1o2CifM

COMPACT – FLEXIBLE – ECONOMICAL.
C-FRAME PRESSES »BASIC« AND C-FRAME PRESSES.

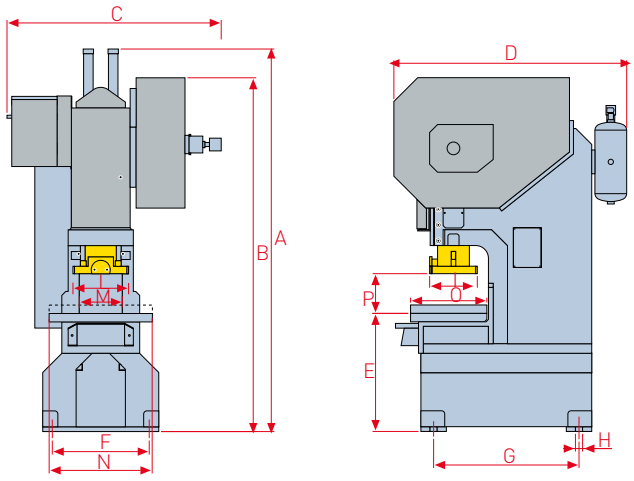
C-FRAME PRESSES »BASIC«.

- For manually fed press work
- Press force: 250 kN and 400 kN
- Equipped with two-channel safety control
- The press is initiated using the two-hand control panel or a foot pedal
- Four bronze guides run on wide steel surfaces
- The slide counterbalance is regulated by two pneumatic cylinders
- Die changes with rapid stroke adjustment pay off at every die change
- The hydraulic unblocking device enables the slide to be unblocked without special tools

C-FRAME PRESSES.

- For automatic mode and manually fed press work
- Press force: 400 kN
- The press is initiated using two-hand control panel, a foot pedal or a light barrier with cyclical operation
- The Dataplus-200 cam index gear allows the press peripherals to be controlled with angular position, and also provides process monitoring functions
- Infinitely variable adjustment of the stroke rate is possible with regard to the blanking process using a frequency converter
- A hydraulic overload safety device provides active protection for press and die

FACTS AND FIGURES



250 kN – 400 kN

	Press force [kN]	**250***	**400**
	Bolster dimension, N × O [mm]	465 × 360	650 × 480
	Opening in bolster [Ø] [mm]	110	120
	Opening in upright to rear, M [mm]	230	270
	Thickness of bolster plate [mm]	48	53
	Slide area, L × l [mm]	220 × 160	370 × 300
	Centering hole in slide [Ø] [mm]	30	50
	Slide adjustment [mm]	50	70
	C-press stroke rate with frequency converter [rpm]	–	60 – 140
	Basic press stroke rate [rpm]	150	140
	Drive power [kW]	1,5	2,2
	Adjustable stroke [mm]	5 – 75	5 – 100
	Shut height, P [mm]	270	240
	Depth of throat [mm]	185	220
	Weight with normal equipment [kg]	2,000	3,000
Dimensions	**A [mm]**	2,125	2,410
	B [mm]	2,050	2,230
	C [mm]	1,180	1,270
	D [mm]	1,200	1,480
	E [mm]	845	745
	F [mm]	590	610
	G [mm]	880	915
	H [mm]	26.5	45
	T-slots in bolster plate / DIN 650 [mm]	a=18	a=22
	T-slots in slide / DIN 650 [mm]	–	a=18

* only C-frame press »Basic«. Subject to technical modifications.

MODULAR – FLEXIBLE – ERGONOMIC.
C-FLEXLINE.

C-*FLEX*line 630 kN »comfort« with foot pedal.

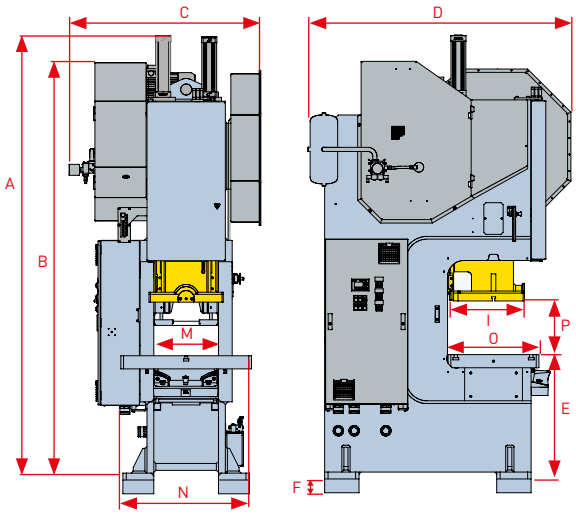
Control console »comfort« with 12-inch touchscreen.

C-FRAME PRESSES *FLEX*LINE.

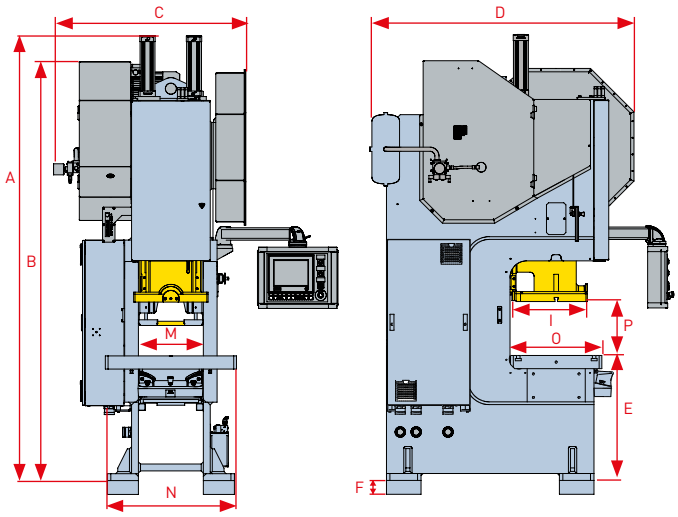
Modular structure of the press: if production conditions change, the press can be retrofitted at any time, from straightforward manual feeding through to fully automatic production.

- Press force: 630 kN, 1,000 kN, 1,600 kN, 2,500 kN
- Ergonomic operation and changeover of the press
- Manual rapid setting with 630 kN and 1,000 kN as well as motorized rapid setting with 1,600 kN and 2,500 kN
- Motorized slide adjustment for even easier and quicker changeovers (optional with 630 kN and 1,000 kN)
- Precise roller circulation units guarantee the slide is guided with high tilting stability. They require little maintenance and are wear-free
- The intermediate gear ensures a high working capacity even at low stroke rates
- Protection of machine and die by hydraulic overload protection
- Electronic cam index gear for controlling the peripheral devices with angular precision, including process monitoring functions (»comfort« version)
- Remote diagnosis via Internet access/Ethernet connection (»comfort« version)

FACTS AND FIGURES



»eco« version



»comfort« version

	Model	CFL-630	CFL-1000	CFL-1600	CFL-2500
	Press force [kN]	630	1,000	1,600	2,500
	Rated energy [J]	2,750	6,000	17,000	20,000
	Bolster dimension, N × O [mm]	820 × 590	950 × 660	1250 × 750	1400 × 840
	Opening in bolster [Ø] [mm]	165	165	165	200
	Opening in press upright (downward) [mm]	300 × 320	370 × 410	510 × 440	550 × 500
	Opening in press upright (to rear), M [mm]	410	470	550	600
	Thickness of bolster plate [mm]	75	95	115	115
	Slide area, L × I [mm]	470 × 410	540 × 510	850 × 630	1,000 × 700
	Centering hole in slide[Ø] [mm]	50	50	60	60
	Slide adjustment [mm]	100	100	110	130
	Stroke rate [spm]	30 – 120	30 – 90	20 – 70	20 – 60
	Drive power [kW]	4	7,5	18,5	18,5
	Slide stroke [mm]	8 – 120	10 – 130	12 – 180	19 – 250
	Shut height, P [mm]*	320	370	440	470
	Depth of throat [mm]	280	330	370	430
	Weight with normal equipment [kg]	5,000	7,000	14,000	28,000
Dimensions	A [mm]	3,070	3,235	3,780	4,400
	B [mm]	2,830	3,045	3,520	4,100
	C [mm]	1,360	1,500	1,800	2,150
	D [mm]	1,700	1,950	2,460	3,000
	E [mm]	860	900	1,005	1,075
	F [mm]	ca. 80	ca. 90	ca. 100	ca. 100
	T-slots in bolster plate / DIN 650 [mm]	a = 22	a = 22	a = 22	a = 22
	T-slots in slide / DIN 650 [mm]	a = 18	a = 18	a = 18	a = 18

* Maximum stroke down, slide adjustment up, without clamping plate. Subject to technical modifications.

BLANKING PRESSES.
630 – 5,000 KN.

FOR THE REQUIREMENTS OF TODAY AND TOMORROW.

Practically-oriented consulting.
Always the best solution, from component investigation and simulations to overall process consideration.

High efficiency.
Optimum output levels, with significantly higher die lives as well as lower service and maintenance costs.

Best component quality.
Consistent quality of components is guaranteed, even when complex parts are involved.

Greater flexibility.
The slide movement can be adapted to various process requirements. Not only stroke heights, but also forming speeds, can be programmed individually.

Maximum process reliability.
Adapted forming speeds guarantee a stable production process as well as the best forming results. It is also possible to integrate further processes into the press cycle in a reliable process.

Best energy efficiency.
Compared to conventional presses, presses with ServoDirect technology generally consume less energy per produced part.

Reliable service.
Whether technical service, increased performance or individual training – the Schuler service team is available worldwide.

VIDEO

Find out more about MC 2000 automatic blanking presses – optionally available with servo drive.
Simply scan the QR code using the camera of your smartphone or tablet.
http://bit.ly/1eeksWa

COMPACT – FLEXIBLE – ECONOMICAL.
AUTOMATIC BLANKING PRESSES AND AUTOMATIC BLANKING PRESSES WITH SERVO DRIVE.

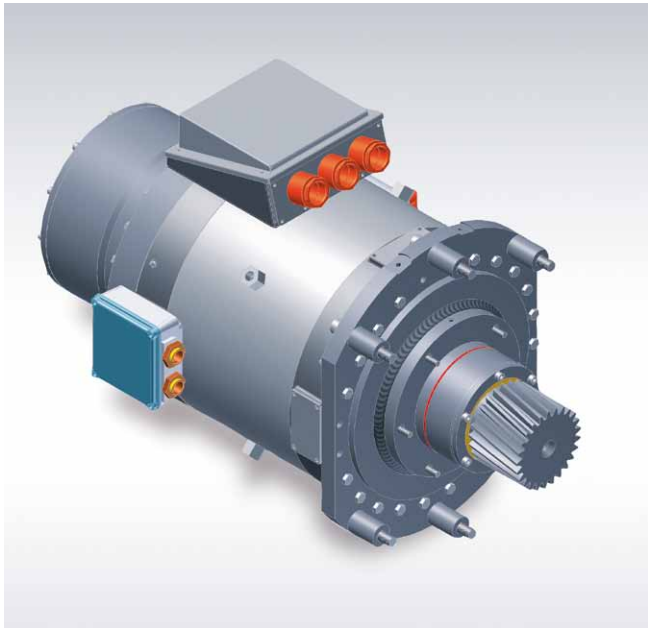
Blanking press MC 3000 with transfer.

Wide range of components.

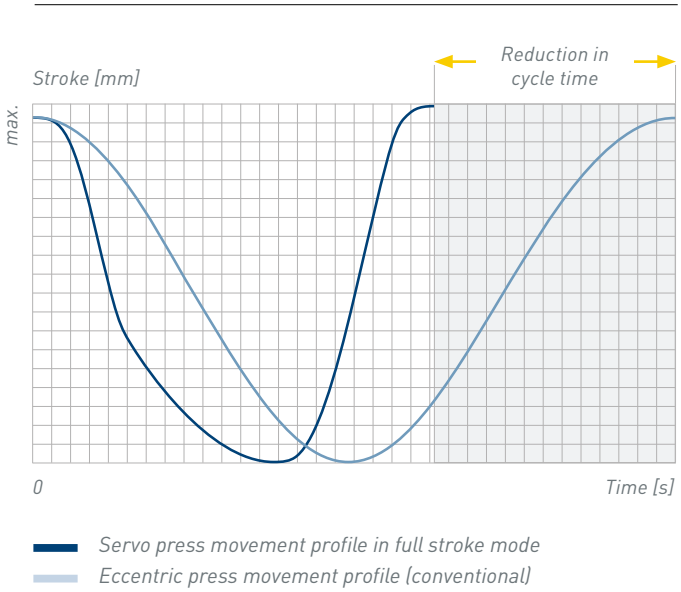
BLANKING PRESSES MC.

Blanking presses are modular machines with extensive basic equipment for blanking classic sheet metal components from the coil.

- Press force: 1,250 kN, 2,000 kN, 3,000 kN, 4,000 kN and 5,000 kN
- The welded bodies of the monoblock machines are annealed to reduce stresses; they are rigid and keep bolster deflection very low to permit high-precision parts and long die lives
- The counter-rotating transverse shafts compensate for lateral rotation forces
- The long, 8-way guide of the slide optimally absorbs off-center forces
- Automatic change of cams, slide length, slide position and die protection
- The intermediate gear increases working capacity and permits complex bending and drawing work
- Machine and die are protected by infinitely variable hydraulic overload protection
- The controller, with a 12-inch touchscreen as standard, has a user-friendly structure, is web-based and has interfaces for PLC connections
- Peripheral equipment can be integrated in the press control system, and is operated using the press visualization system
- Reduction in unit costs as a result of an optimum price/performance ratio



Highly dynamic torque motor for optimized drive



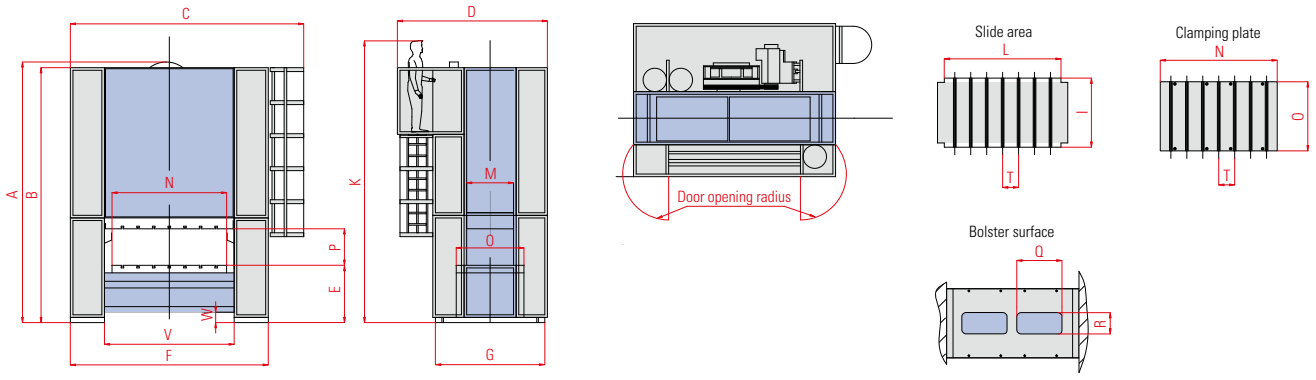
Higher production rate because of shorter cycle times.

BLANKING PRESSES WITH SERVO DRIVE MSC.

Blanking presses with servo drive are modular machines with extensive basic equipment for blanking classic sheet metal components from the coil, delivering greater production rates and flexibility. The servo drive permits speeds of up to 130 strokes per minute. With an integrated high-performance transfer system, it is also possible to manufacture stampings with complex geometry directly from the die.

- Press force: 1,250 kN and 2,000 kN
- The basic design of the MC and MSC blanking presses is identical
- A torque servomotor provides eight preset slide speed profiles that can be optimally adapted to the stampings
- The effective production output is shown on the process visualization compared to the working speed
- The working speed can be optimized during production using the press visualization
- An optional energy management system is available for reducing main connection loads
- Higher production output by optimizing the speed profiles and longer die lives because of lower impact velocities
- Reduction in unit costs as a result of an optimum price/performance ratio

FACTS AND FIGURES



TECHNICAL DATA BLANKING PRESSES MC

Press force [kN]	1,250	2,000	3,000	4,000	5,000
Rated energy [J]	11,000	16,000	25,000	60,000	90,000
Clamping plate, N × O [mm]	1,400 × 1,000	1,800 × 1,100	2,200 × 1,300	3,000 × 1,300	3,000 × 1,400
Opening in bolster, Q × R [mm]	600 × 300	800 × 350	(2×) 850 × 400	(3×) 850 × 400	(3×) 800 × 400
Opening in upright to side, M [mm]	670	720	870	970	1,100
Slide area, L × I [mm]	1,400 × 1,000	1,800 × 1,100	2,200 × 1,300	3,000 × 1,300	3,000 × 1,400
Slide adjustability [mm]	150	150	150	200	250
Stroke rate with frequency converter [spm]	30 – 150	30 – 130	25 – 100	20 – 80	20 – 70
Drive power [kW]	22	30	43	75	90
Adjustable stroke [mm]	20 – 180	20 – 220	40 – 315	40 – 315	40 – 315
Shut height, P [mm]	450	550	650	750	800
Weight with normal equipment [kg]	18,000	27,500	43,000	72,000	85,000

Subject to technical modifications.

TECHNICAL DATA BLANKING PRESSES WITH SERVO DRIVE MSC

Press force [kN]	1,250		2,000	
Press force before BDC Bottom Dead Center [mm]	3.5	5.0	3.5	5.0
with stroke length [mm]	150	100	150	100
Stroke rate [rpm]	130	130	130	100

Subject to technical modifications.

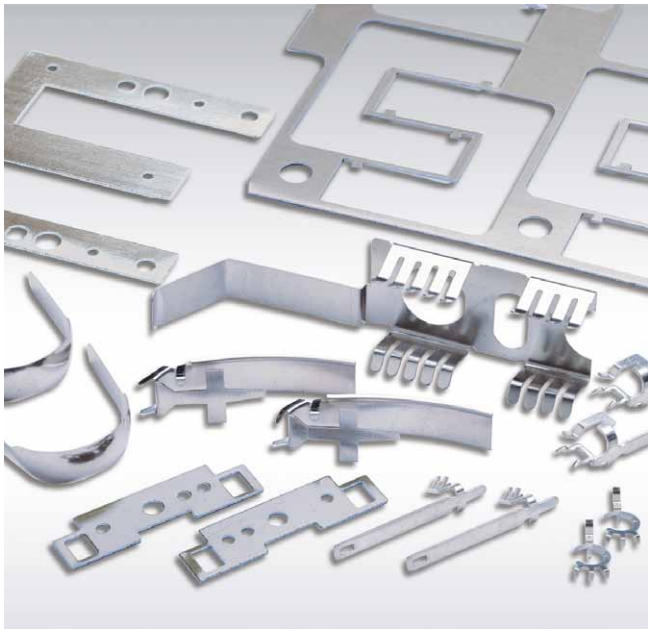
DIMENSIONS [MC + MSC]

Press force [kN]	1,250	2,000	3,000	4,000	5,000
A [mm]	3,900	4,240	5,100	6,050	6,600
B [mm]	3,900	4,240	5,000	5,500	6,150
C [mm]	3,380	3,900	4,480	5,400	5,500
D [mm]	2,510	2,640	2,880	3,300	3,450
E [mm]	950	1,050	1,100	1,400	1,445
F [mm]	2,600	3,100	3,700	4,600	4,660
G [mm]	1,600	1,740	2,100	2,100	2,300
K [approx. mm]	4,550	5,000	5,500	5,800	6,000
T [mm]	200	200	250	250	250
V [mm]	1,620	2,050	2,450	3,250	3,250
W [mm]	200	250	145	85	165
T-slots / DIN 650	a=22	a=22	a=28	a=28	a=28

Subject to technical modifications.

FAST – COMPACT – ECONOMICAL.
HIGH-SPEED BLANKING PRESSES.

MCF 800 high-speed blanking press.



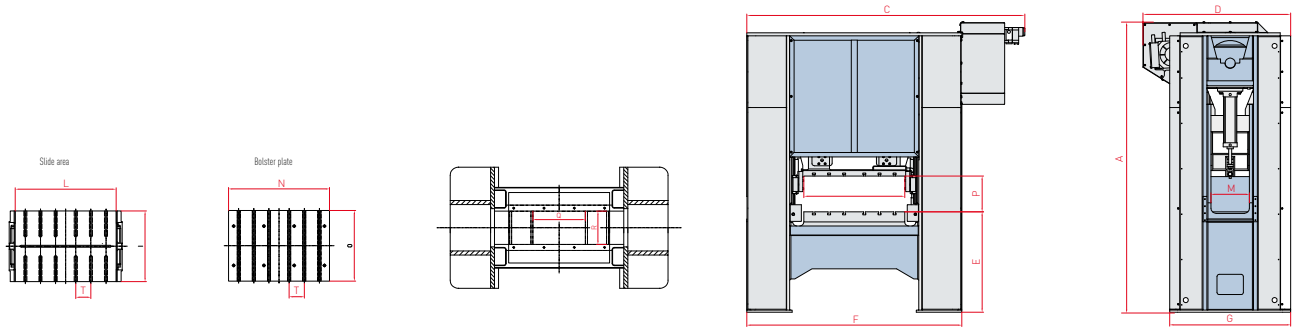
Precision components with tight die clearances.

HIGH-SPEED BLANKING PRESSES MCF.

Double-conrod high-speed blanking presses are modular machines for producing components with output rates of up to 300 strokes per minute. The slide guidance system with preloaded, play-free roller bearing units guarantees the necessary precision in the process: the best prerequisites for series production of small components with tight die clearances.

- Sizes: 630 kN, 800 kN, 1,000 kN, 1,250 kN, 1,600 kN and 2,000 kN
- The welded bodies of the monoblock machines are annealed to reduce stresses; they are rigid and keep bolster deflection very low to permit high-precision parts and long die lives
- The slide is guided by eight prestressed roller recirculation units and is specially designed for high-speed machines.
- The machine and die are protected by infinitely variable overload protection

FACTS AND FIGURES



TECHNICAL DATA HIGH-SPEED BLANKING PRESSES MCF

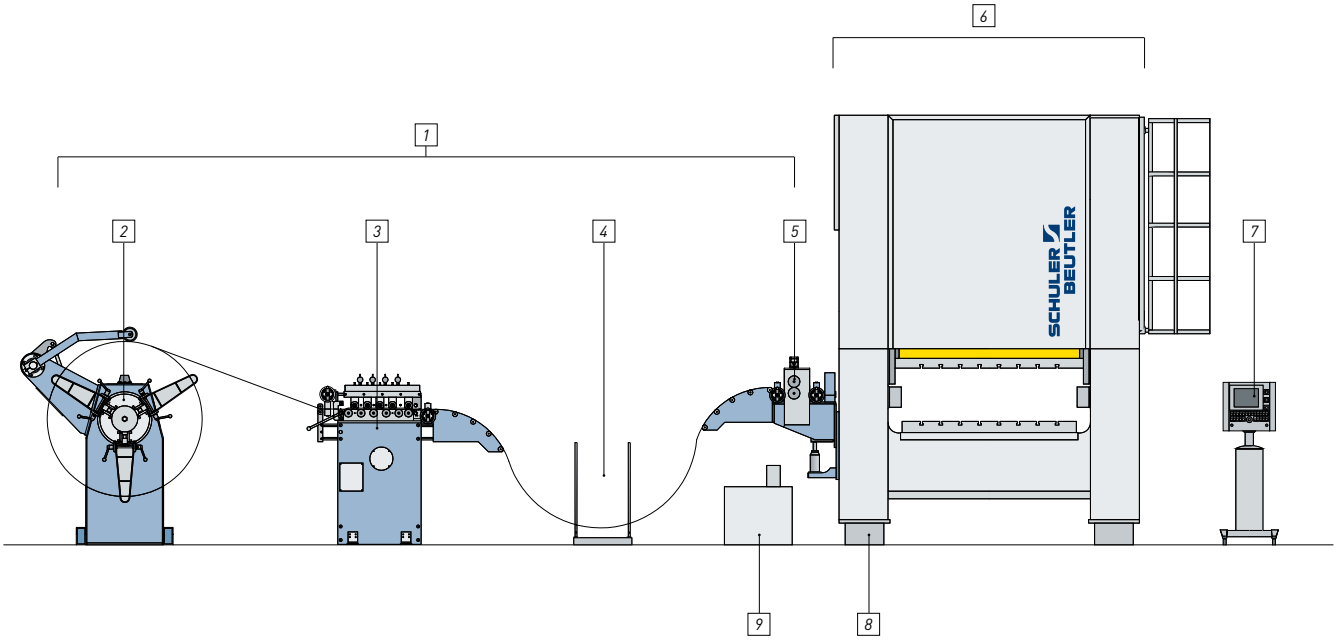
Maximum rated force [kN]	**630**	**800**	**1.000**	**1.250**	**1.600**	**2.000**
Rated energy [J]	3,200	4,700	5,300	6,200	8,600	9,500
Bolster plate, N × O [mm]	1,000 × 700	1,000 × 700	1,300 × 800	1,300 × 800	1,600 × 1,000	1,600 × 1,000
Opening in bolster, Q × R [mm]	500 × 200	500 × 200	500 × 200	500 × 200	800 × 250	800 × 250
Opening in upright to side, M [mm]	380	380	490	490	650	650
Slide area, L × I [mm]	1,000 × 700	1,000 × 700	1,300 × 800	1,300 × 800	1,600 × 1,000	1,600 × 1,000
Slide adjustability [mm]	70	70	100	100	100	100
Stroke rate with frequency converter [spm]	30 – 300	30 – 300	30 – 280	30 – 280	30 – 260	30 – 260
Drive power [kW]	11	16	18	21	27	30
Adjustable stroke [mm]	9 – 80	9 – 100	11 – 100	11 – 120	10 – 120	10 – 130
Shut height*, P [mm]	350	350	400	400	500	500
Weight with normal equipment [kg]	9,000	10,000	12,000	14,500	19,500	21,000
Bolster height, (incl. bolster plate without damping elements), E [mm]	800	800	800	800	900	900
Height of the press without damping elements, A [mm]	2,900	2,900	3,100	3,100	3,400	3,400
Width of the press, C [mm]	2,950	2,950	3,250	3,250	3,600	3,600
Depth of the press, D [mm]	1,415	1,415	1,515	1,515	1,675	1,675
Width of the press upright, F [mm]	2,160	2,160	2,460	2,460	2,850	2,850
Depth of the press upright, G [mm]	1,200	1,200	1,300	1,300	1,460	1,460
T-slot dimension, T [mm]	200	200	200	200	200	200
T-slots / DIN 650 [mm]	a=18	a=18	a=18	a=18	a=18	a=22

* Maximum stroke down, slide adjustment up, without clamping plate. Subject to technical modifications.

VIDEO

Find out more about the MCF 1250 high-speed banking press – precise, flexible and efficient.
Simply scan the QR code using the camera of your smartphone or tablet.
http://bit.ly/1hNVY9F

OVERVIEW OF OVERALL LINE



AUTOMATIC BLANKING PRESS WITH COIL FEED LINE

1 *Coil feed line*
2 *Decoiler*
3 *Leveling machine*
4 *Loop control*
5 *Roll feed unit*
6 *Automatic blanking press*
7 *Control panel CCS (Compact Control System)*
8 *Dampening elements*
9 *Hydraulic unit*

See for yourself. We are looking forward to work with you on your system solution and to demonstrate our press capabilities.

PRESSES FOR ALUMINUM FORMING.
400 – 630 KN.

PAZ 630 aluminum forming press.

Presses for aluminum forming are specifically designed for can production, and are a specialty from Beutler Nova. All over the world, many machines are in use, stamping the most challenging containers in multi-shift operation. The machines are developed in close cooperation with expert partners.

The presses have an extremely long stroke, a large shut height and an increased bed size. The controller, with a 12-inch touchscreen as standard, has a user-friendly structure, is web-based and has interfaces for PLC connection. Peripheral devices can be integrated into the press control system.

Aluminum forming press PAZ 630.

The PAL 400 is a double-walled, overhanging C-frame design in which rigidity has been improved with an additional tie rod fixing, while its working capacity has been upgraded by installing extra flywheel weights.

The PAZ 630 is a closed and flexible single-upright design in a welded design which has been annealed to reduce stresses. The large flywheel mounted on the rear of the machine gives it a high working capacity. The prestressed roller guides are highly precise and do not heat up. The stroke and slide can be adjusted by servo motors. The slide weight is pneumatically compensated.

TECHNICAL DATA PAL AND PAZ ALUMINUM PRESSES

Model	PAL 400	PAZ 630
Press force [kN]	400	630
Depth of throat horizontal [mm]	350	–
Bolster width [mm]	975	1,300
Bolster depth [mm]	650	950
Slide width [mm]	340	1,300
Slide depth [mm]	265	820
Slide adjustment [mm]	100	110
Adjustable stroke [mm]	80 – 180	16 – 160
Shut height [mm]*	475	650
Opening in the bolster [mm]	600 × 420	1,000 × 600
Drive power (depending on unit) [kW]	7.5	15
Stroke rate (continuous operation) [spm]	40 – 140	30 – 150
Weight with normal equipment [kg]	7,500	15,000
Opening to rear [mm]	740	–
Overload stroke with mech. shear plate [mm]	13	–
Overload stroke hydraulic overload protection [mm]	–	20

* Maximum stroke down, slide adjustment up, without clamping plate. Subject to technical modifications.

FROM THE COIL TO THE FINISHED COMPONENT. EVERYTHING DIRECT FROM A SINGLE SOURCE.

As system partners in forming technology, Schuler and Beutler Nova have many years of extensive process expertise, and offer individual machine concepts for the automotive industry and their suppliers. Whether C-frame presses, blanking and forming systems, mechanical presses for large-scale mass production or hydraulic machines for flexible production of small and medium batch sizes – all the solutions concentrate on increasing customer benefit.

The range of products and services spans the entire process chain of forming technology. Intelligent system and automation technology offers users a decisive edge over their competitors, and a leading position in terms of quality whether in medium-sized stamping and forming plants, the domestic appliance industry, large component suppliers or in press shops of the automotive industry.

SCHULER **SERVICE.**
OPTIMUM SERVICE FOR MORE PERFORMANCE.

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

Schuler Service – Customer-oriented, efficient, worldwide.

EXPERTISE
PARTNERSHIP
PRODUCTIVITY
SAFETY
FUTURE

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 ultimate 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.

OUR SERVICES FOR YOU.

Technical Customer Support:
- Machine inspections
- Safety inspections
- Preventive maintenance
- Repair
- Repair welding
- Production support

Components and Accessories:
- Spare parts and spare part packages
- Maintenance kits
- Repair parts
- Replacement parts

Project Business:
- Modernization
- Retrofits
- Refurbishment
- Machine relocations

Special Services:
- Service contracts
- Hotline and remote service
- Training
- Tailored customer training
- Optimizing plant & processes
- Consulting

Used Machinery:
- Purchase and sale
- Evaluation

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