

Mechanical Presses

Mechanical Presses

History



1974
C Frame
Presses



1992
Press Lines

1995
Automatic
Stroke Changing

1997 Link
Drive Soft
Blanking



Since 1951 we take care of your needs

Mechanical Presses



A unique partner for all your needs

Mechanical Presses

Safety



Safety is fundamental milestone of Omera policy.

The collaboration of a **Notified Body**, allow to develop the proper safety levels according to 2006/42/EC Directive.

Specific safety solutions available for **light curtains**, and **barriers** improving operator comfort.

Crown protection and **ladder** as standard.

Sound proof panels or **cabin** available

Specific **Risk Analysis** can be supplied on request involving Press and Press Lines.





A **Smart Energy Management** for the main motors allows to store braking energy in the flywheel avoiding energy exchanges during the cycle.

SEM improves efficiency, allows motor & drive downsizing and reduces current peaks to minimum.

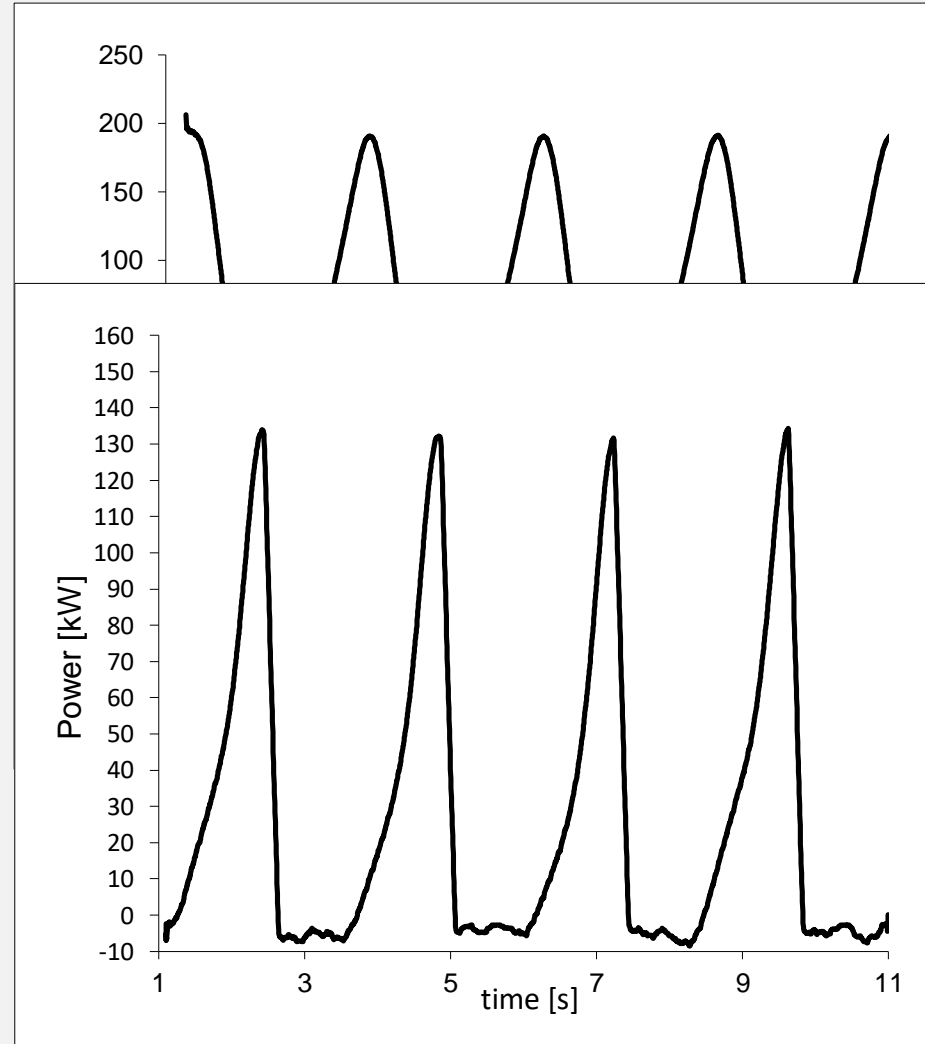
High Efficiency Motors and Inverters for large presses.

Regenerative drives available for recover flywheel braking energy.

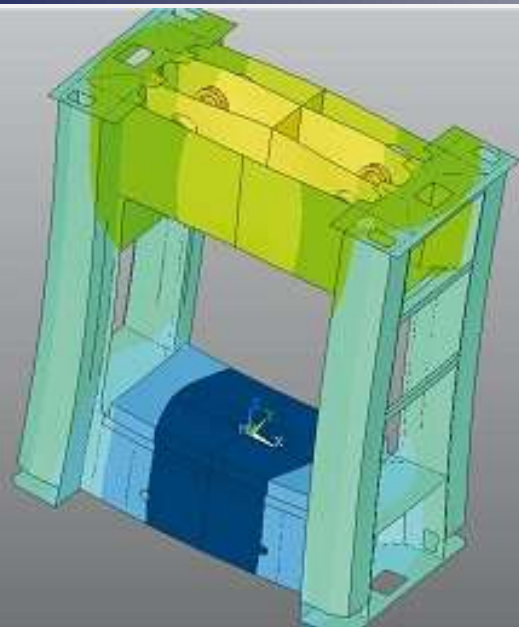
Auxiliary hydraulic functions and lubricating units fed by **inverters**.

Pneumatic technology reduced to minimum.

Hydraulic balancing cylinder, blank holders and ejectors available



Frame stiffness



FEM Analysis of the frame

Press Frame an guide response optimized by automatic FEM Routines.

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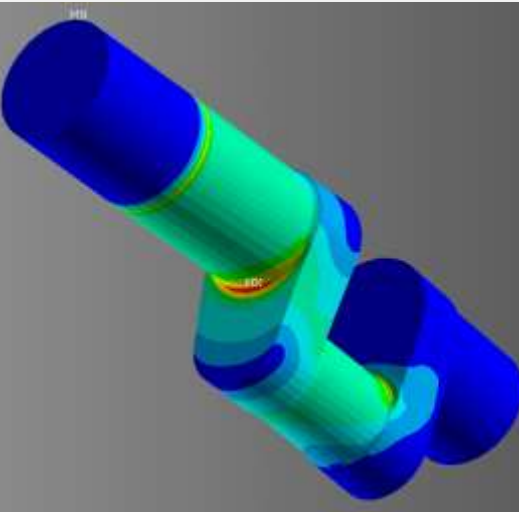
P: OP00000001_010-Harga.1st - Bocco aste
File: Modulo: Param: Modulo: 1
/COM disegno: 5
/Mod: spiga/11ta,80

/COM spessore1 per real: const*****
/Mod: ualfo,30      | (Real Constant 11) spessore lamiera principale zona testata
/Mod: ulato,30     | (Real Constant 12) spessore lamiera principale zona montante
/Mod: ulasso,30    | (Real Constant 13) spessore lamiera principale zona base
/Mod: u,20         | (Real Constant 14) spessore cappello superiore
/Mod: ua,20        | (Real Constant 15) spessore lamiera laterale montante
/Mod: uo,80        | (Real Constant 16) spessore pignone
/Mod: uy,45        | (Real Constant 17) spessore piastrina appoggio cilindro principale
/Mod: ucs,30       | (Real Constant 18) spessore rinforzo in x cilindro principale a quota os
/Mod: u,30         | (Real Constant 19) spessore rinforzo in y cilindro principale a quota os
/Mod: uAND,20      | (Real Constant 17) spessore bandiera attacco encoder/appoggio slitta
/Mod: uMNT,20      | (Real Constant 23) spessore rinforzo dietro guida slitta
/Mod: u,20         | (Real Constant 41) spessore lamiera lato guida
/Mod: ucsa,30      | (Real Constant 23) spessore rinforzo sottotavola a quota H1
/Mod: uZZZ,30      | (Real Constant 20) spessore rinforzo sottotavola a quota K1
/Mod: u,30         | (Real Constant 31) spessore lamiera longitudinale sotto tavola
/Mod: uasalat,20   | (Real Constant 15) spessore zampa appoggio a terra
/Mod: ucs12,30     | (Real Constant 14) spessore rinforzi centrali in x a quote os1slitta e os2slitta
/Mod: ucs13,30     | (Real Constant 14) spessore rinforzi centrali in y a quote os1slitta e os2slitta
/Mod: ucs14,30     | (Real Constant 25) spessore rinforzi centrali in x a quota say1slitta
/Mod: ucs15,30     | (Real Constant 25) spessore rinforzi centrali in y a quota say1slitta
/Mod: ucs16,20     | (Real Constant 26) spessore lamiera longitudinale lato slitta
/Mod: ucs17,20     | (Real Constant 27) spessore lamiera trasversali fronta/retra slitta

/****
/COM variab(1) non dichiarate-----
/COM variab(1) dimensionali-----
/COM struttura
/Mod: sc,150
/Mod: dgd_b-macchina
/Mod: zcl_macchina - (macchine10)
/Mod: zzz_n - (macchine10)
/Mod: lunghfiv_MSC-120
/Mod: r14,45
/Mod: rPR00001,175
/Mod: rPR00002,172
/Mod: rQ110000,45
/Mod: rQ11,25
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/Mod: rPR00002,20
/Mod: l,745-80
/Mod: rmaser,41
/Mod: rsk1,151
/Mod: rsk1,80

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/Mod: rsk1_rsk1+11_rsk1, THEN
/Mod: rsk1_rsk1+sk1+11
    
```

Optimization FEM Routine



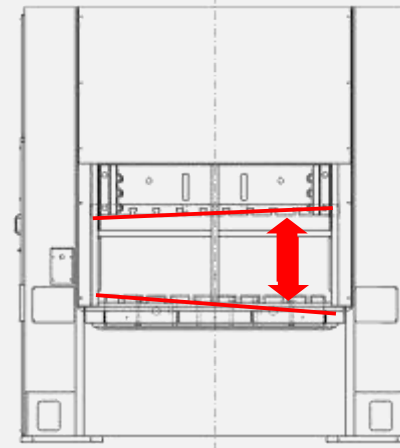
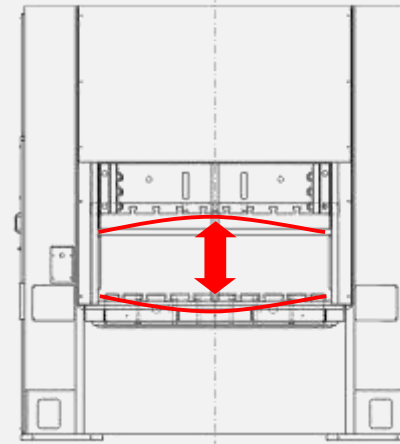
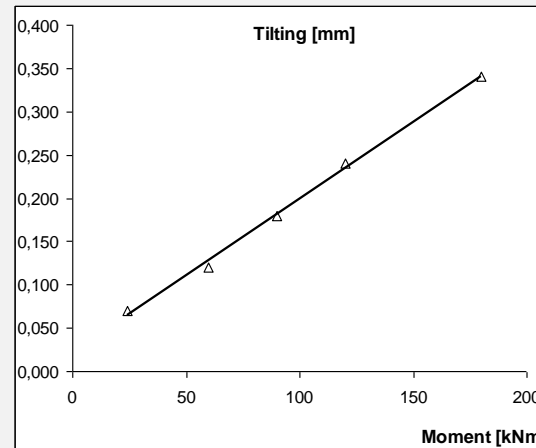
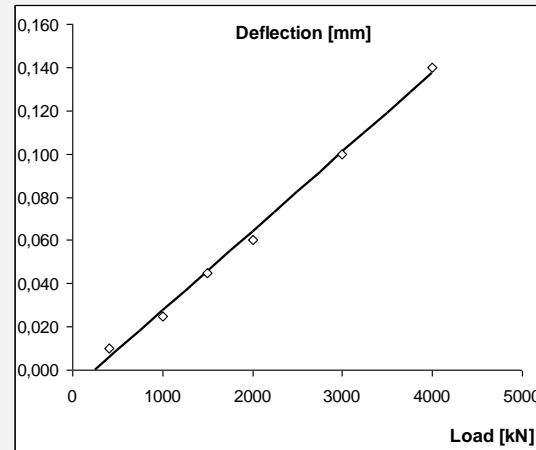
FEM Analysis of an eccentric shaft

Mechanical Presses

Frame stiffness



Stiffness response measured and certified



Mechanical Presses

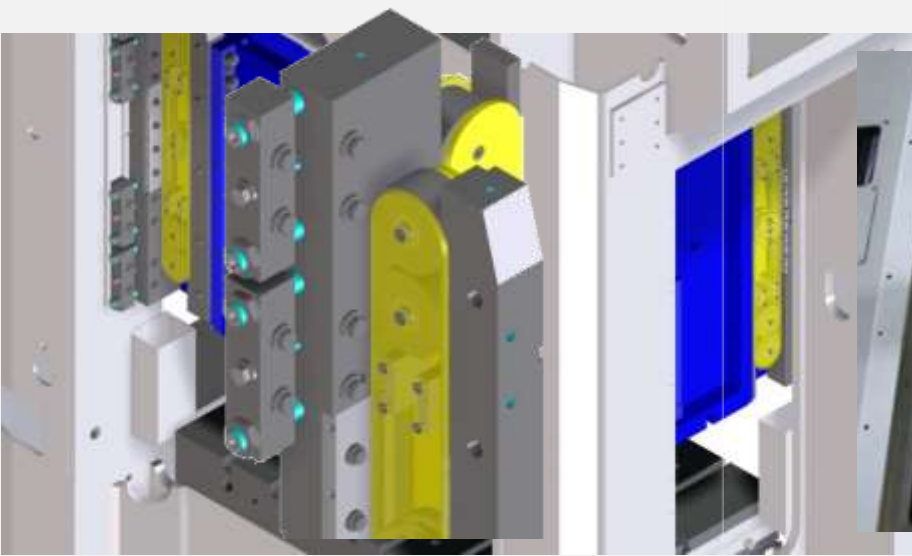
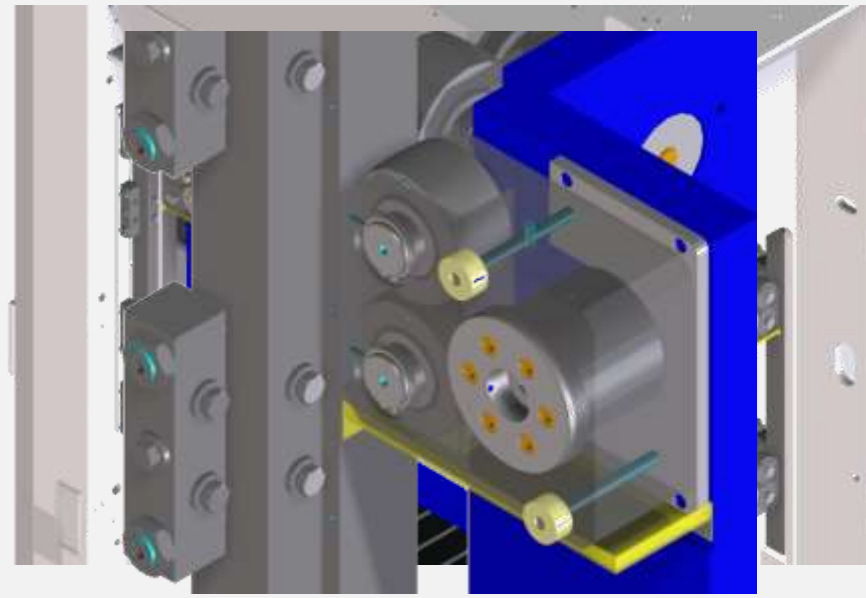
Slide Guiding



Roller guides for precise and high rigidity guiding of the slide

State of the art **roller guides** are effected by maximum bearings load

Omera roller guides design allows higher rigidity and load improvement



Mechanical Presses



Hydraulic Blank Holders and Ejectors for **pressure vessels downsizing.**

Filters over sized for long life.

Platform and **ladder** in the press crown for easy access to clutch and brake.

Safety PLC and **Safe Encoder** solutions for avoid cams and switches.

Hydraulic balancing cylinders for avoid overheating and prolong seals maintenance.



Flexibility



Motion profile for SB models can be designed according to tools and automation optimization.

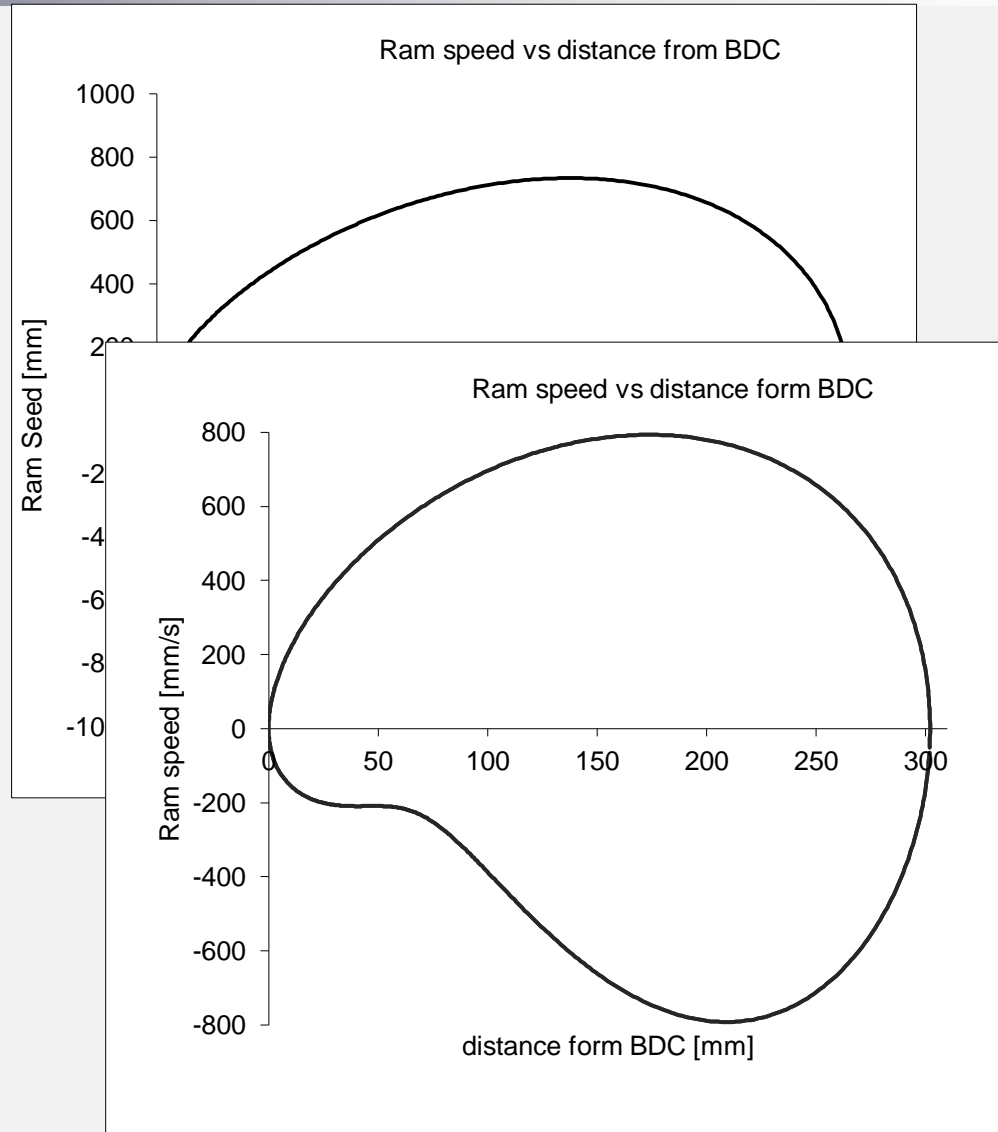
Two basic designs are available.

Blanking/Coining profile, developed for blanking/coining press where speed profile is focused closed to BDC.

Drawing/Stamping profile, developed for multi step presses where speed profile is kept almost constant in $\frac{1}{4}$ of the total stroke.

This profile has been also optimized in the lifting stroke for use of **nitrogen springs**

Customized profiles, developed on request, depending on customer needs.

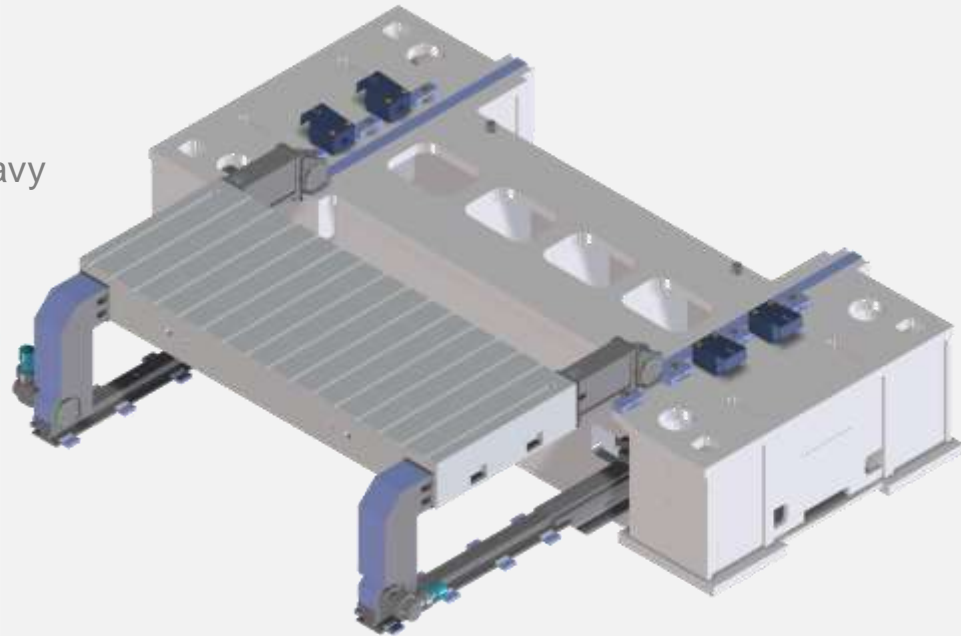




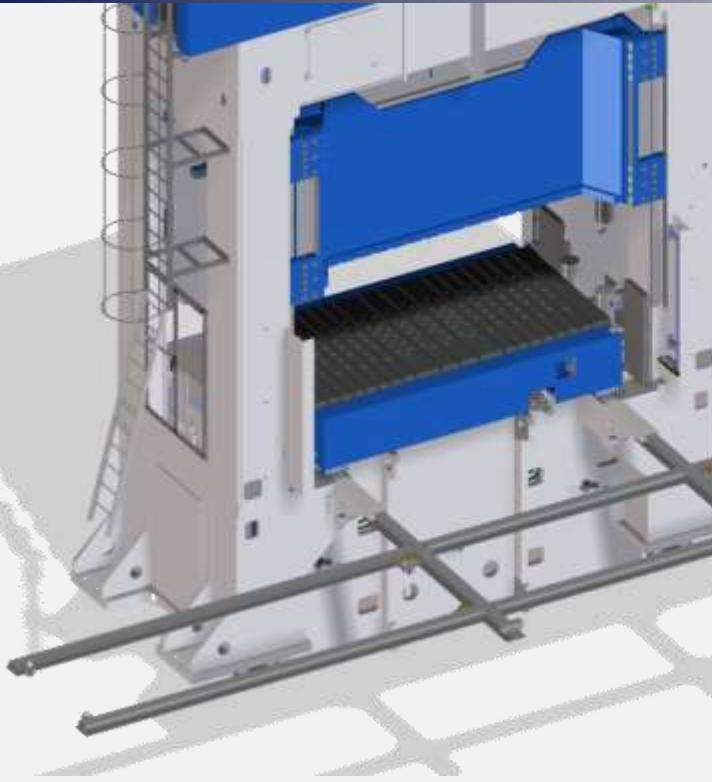
Quick die changing system

Automatic clamps + **Die lifter** + **brackets** available on the whole portfolio moving for small C frame presses to large composite.

Moving Table / Bolster and rails for heavy mono block dies



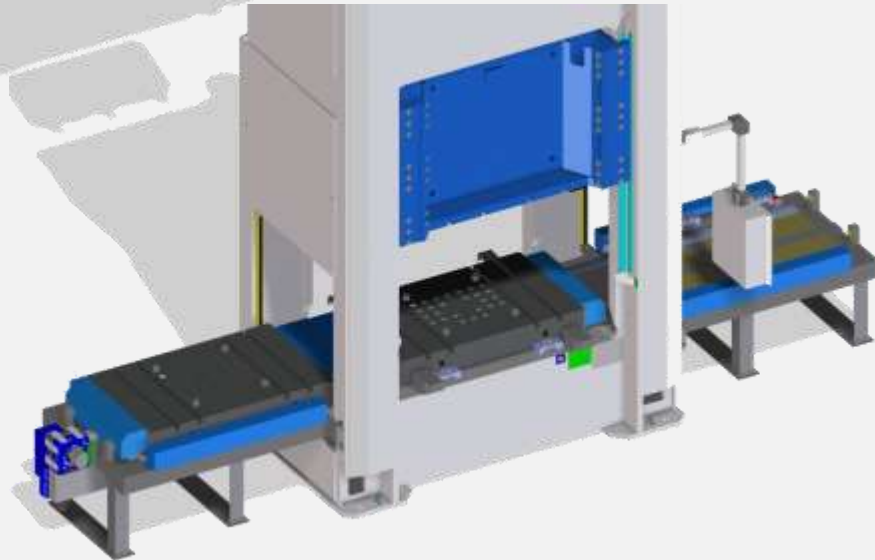
Flexibility



Reduced job changes **machine downtime**

T track - large presses

Double Table solutions - presses lines



Mechanical Presses

Standard portfolio



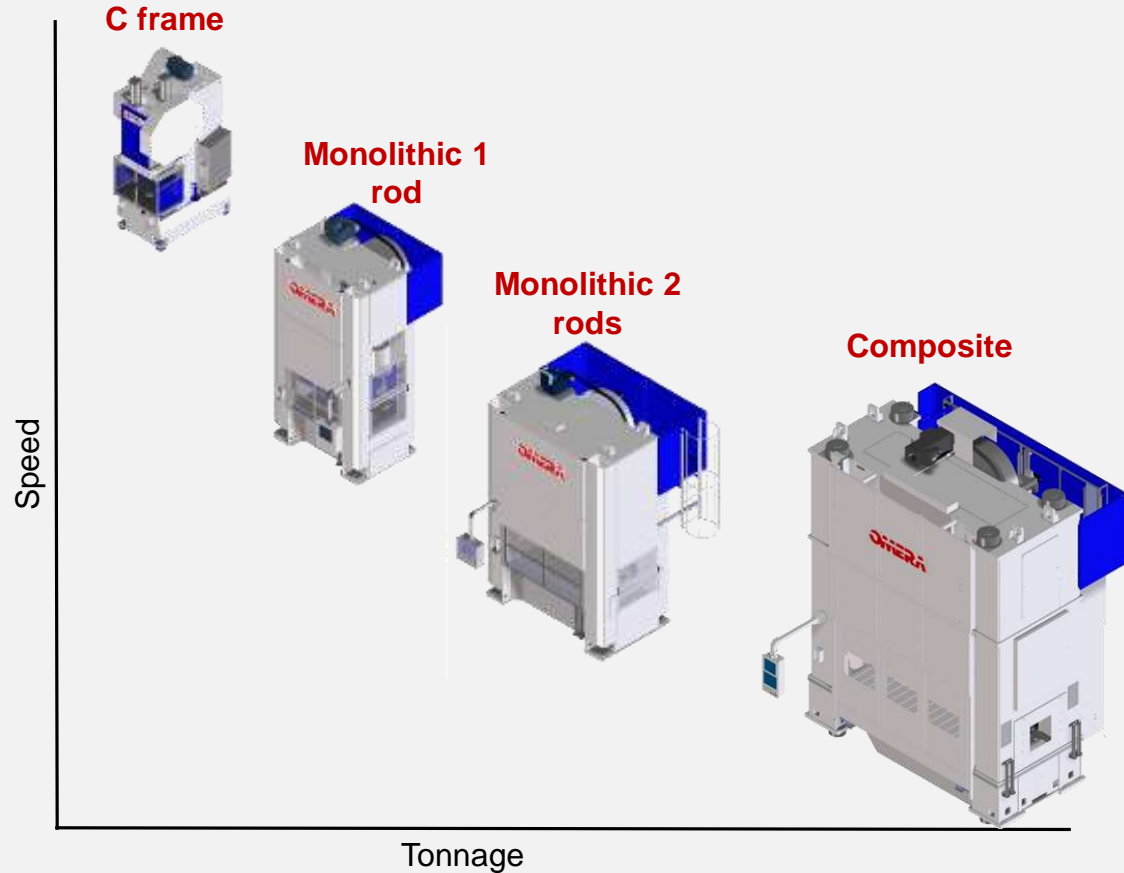
Wide machine **Portfolio**.

High **Scalability** of solutions.

Wide range of **Performances** available.

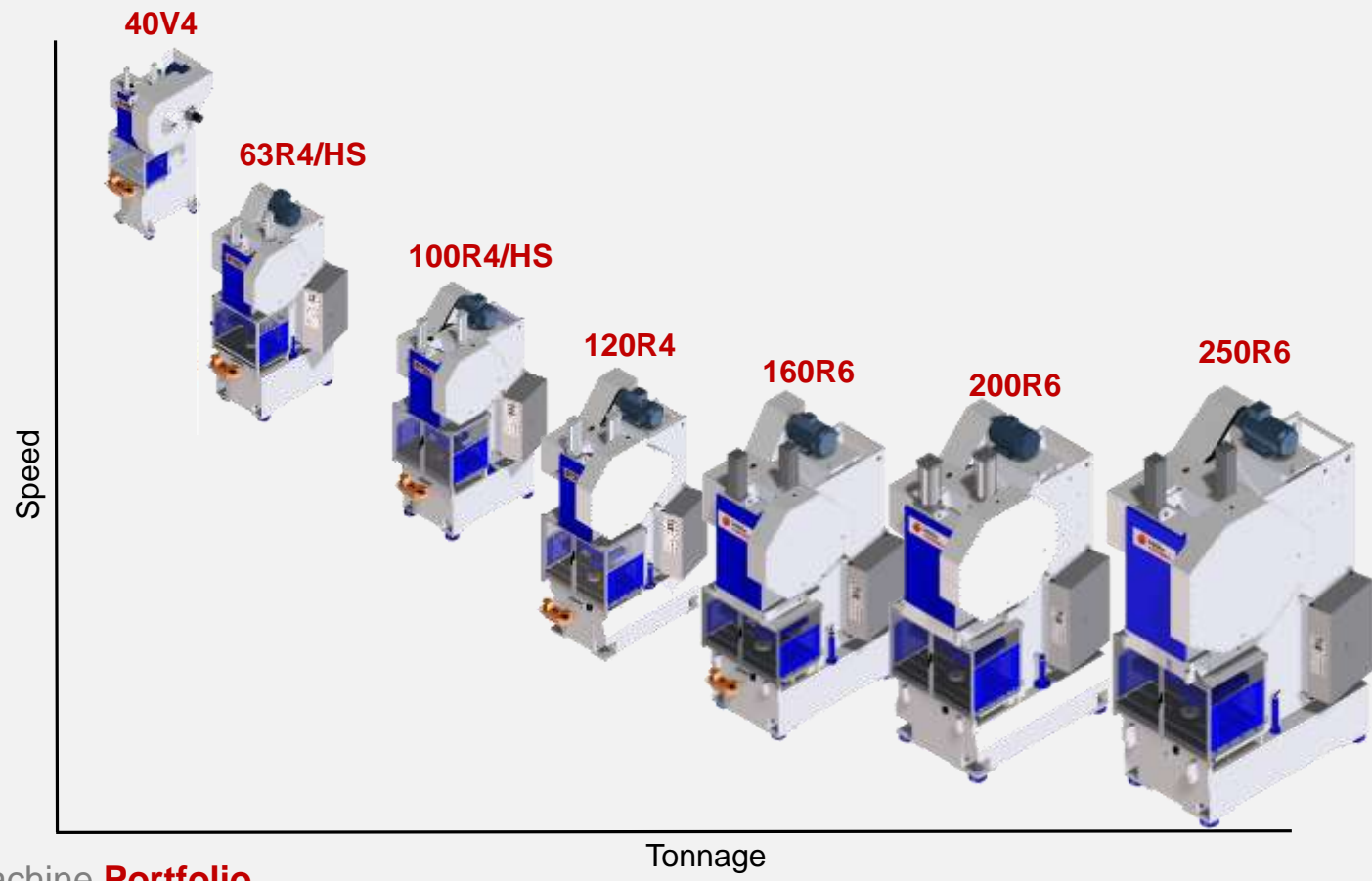
Basic Manual to **High Automated** machines for optimizing investment plan.

Customized solutions for specific needs.



Mechanical Presses

C frame



Mechanical Presses

Wide machine **Portfolio**.

Robust and efficient.

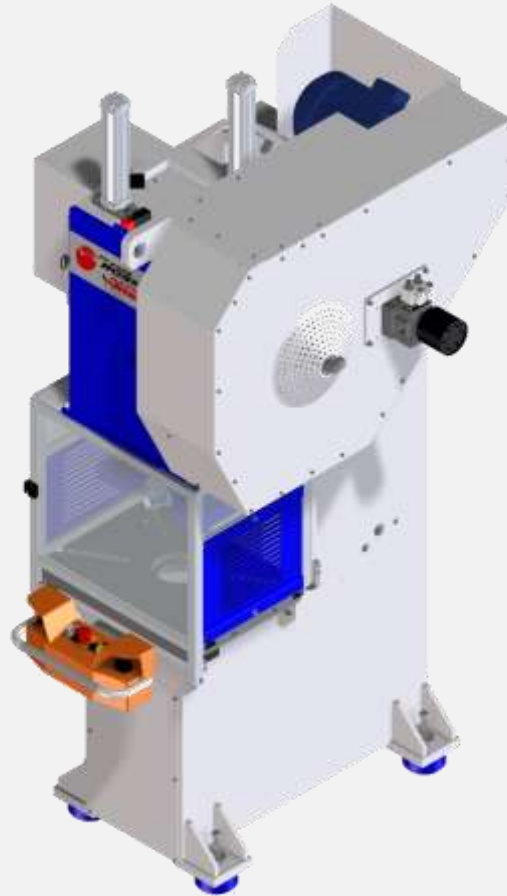
Short delivery time

C frame



Optional

- Light curtain
- Table shim
- Dampers
- Cam encoder
- Balancing cylinders
- Automation interface
- Separate pulpit



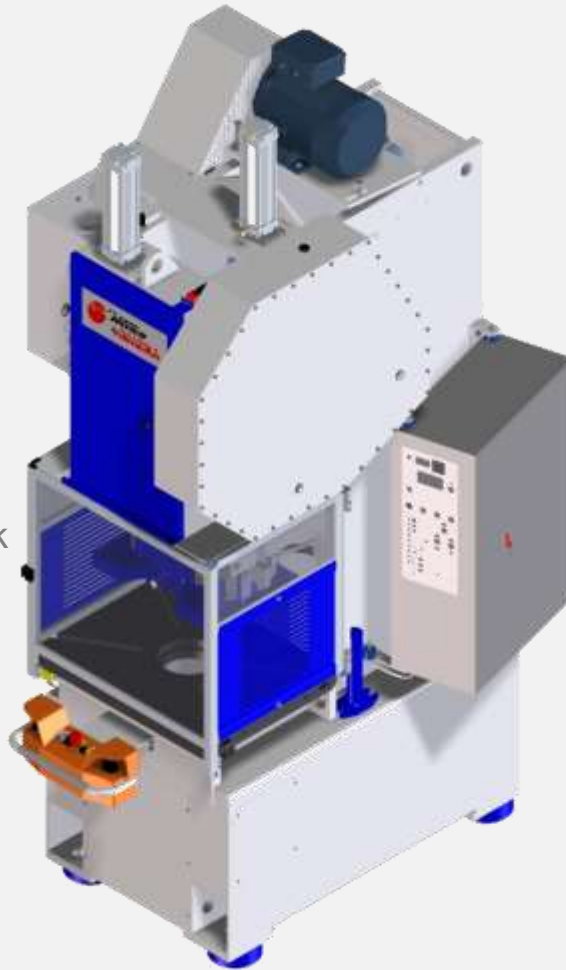
Data	40V4
Nominal Force [kN]	400
Stroke [mm]	7-100
Regulation Stroke [mm]	60
Throat deep [mm]	200
Max opening [mm] (Slide at BDC)	275
Speed range [rpm]	90-200
Table dimensions [mm]	600 x 450
Slide dimensions [m]	400 x 260
Motor Power [kW]	4

C frame



Optional

- Light curtain
- Table shim
- Dampers
- Cam encoder
- Automation interface
- Separate pulpit
- Pneumatic blank holder



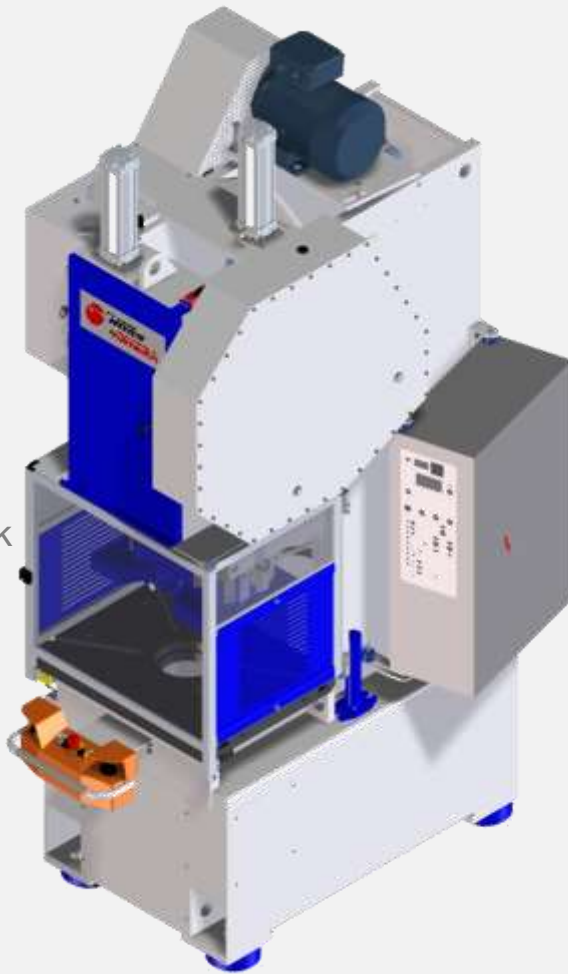
Data	63R4	63R4 HS
Nominal Force [kN]	630	630
Stroke [mm]	9-120	9-120
Regulation Stroke [mm]	80	80
Throat deep [mm]	275	275
Max opening [mm] (Slide at BDC)	310	310
Speed range [rpm]	45-105	65-150
Table dimensions [mm]	750 x 570	750 x 570
Slide dimensions [m]	500 x 350	500 x 350
Motor Power [kW]	5,5	5,5

C frame



Optional

- Light curtain
- Table shim
- Dampers
- Cam encoder
- Automation interface
- Separate pulpit
- Pneumatic blank holder



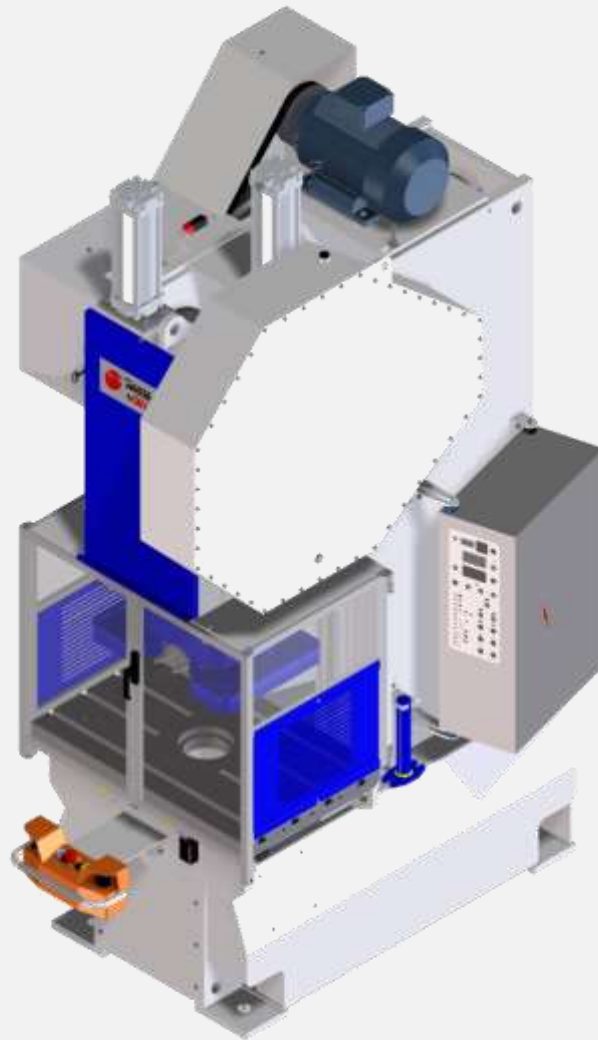
Data	100R4	100R4 HS
Nominal Force [kN]	1000	1000
Stroke [mm]	10-140	10-140
Regulation Stroke [mm]	100	100
Throat deep [mm]	330	330
Max opening [mm] (Slide at BDC)	370	370
Speed range [rpm]	35-90	40-120
Table dimensions [mm]	950 x 660	950 x 660
Slide dimensions [m]	570 x 390	570 x 390
Motor Power [kW]	11	11

C frame



Optional

- Light curtain
- Table shim
- Dampers
- Cam encoder
- Automation interface
- Separate pulpit
- Pneumatic holder blank



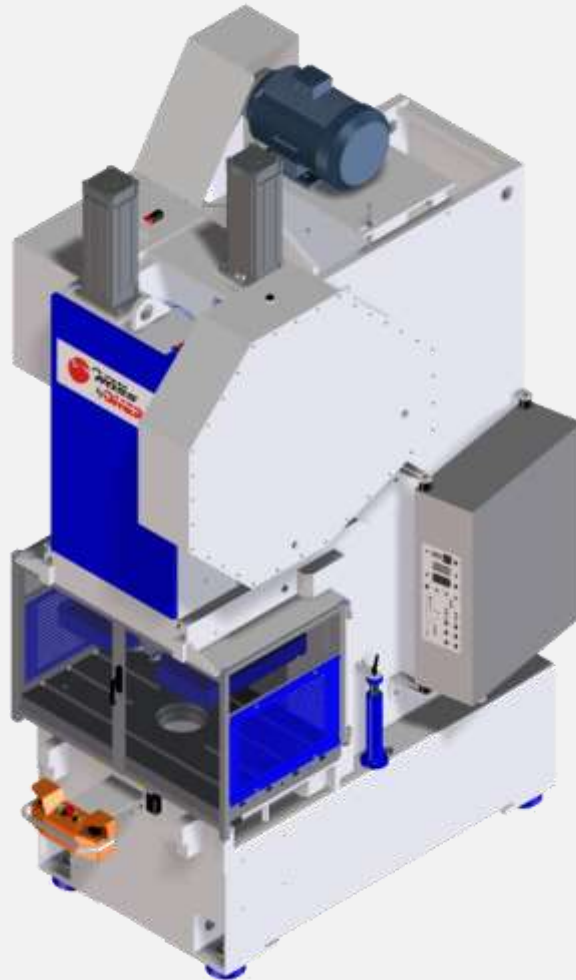
Data	120R4
Nominal Force [kN]	1200
Stroke [mm]	10-140
Regulation Stroke [mm]	100
Throat deep [mm]	330
Max opening [mm] (Slide at BDC)	390
Speed range [rpm]	36-82
Table dimensions [mm]	1020 x 660
Slide dimensions [m]	660 x 470
Motor Power [kW]	15

C frame



Optional

- Light curtain
- Table shim
- Dampers
- Cam encoder
- Automation interface
- Separate pulpit
- Pneumatic blank holder

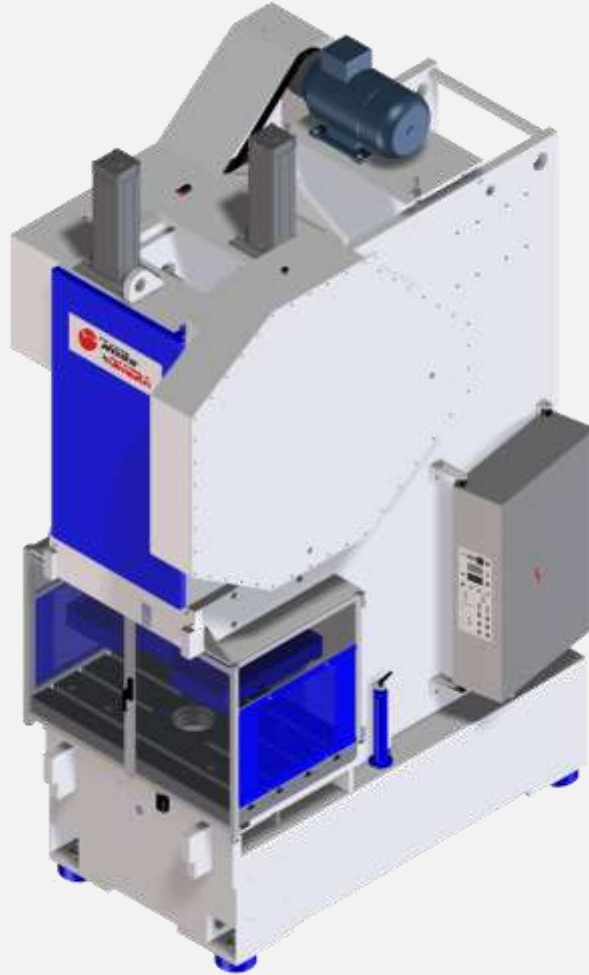


Data	160R6
Nominal Force [kN]	1600
Stroke [mm]	13-180
Regulation Stroke [mm]	115
Throat deep [mm]	350
Max opening [mm] (Slide at BDC)	415
Speed range [rpm]	30-78
Table dimensions [mm]	1200 x 720
Slide dimensions [m]	900 x 610
Motor Power [kW]	18,5

C frame

Optional

- Light curtain
- Table shim
- Dampers
- Cam encoder
- Automation interface
- Separate pulpit
- Pneumatic blank holder



Data	200R6
Nominal Force [kN]	2000
Stroke [mm]	16-220
Regulation Stroke [mm]	135
Throat deep [mm]	390
Max opening [mm] (Slide at BDC)	520
Speed range [rpm]	27-62
Table dimensions [mm]	1300 x 810
Slide dimensions [m]	1000 x 625
Motor Power [kW]	22

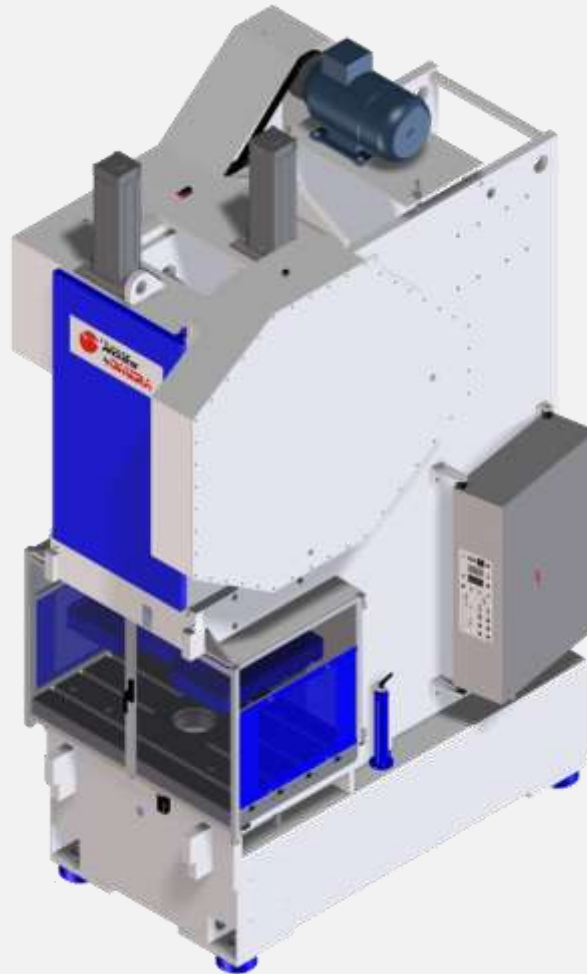


C frame



Optional

- Light curtain
- Table shim
- Dampers
- Cam encoder
- Automation interface
- Separate pulpit
- Pneumatic blank holder



Data	250R6
Nominal Force [kN]	2500
Stroke [mm]	18-250
Regulation Stroke [mm]	150
Throat deep [mm]	445
Max opening [mm] (Slide at BDC)	480
Speed range [rpm]	27-60
Table dimensions [mm]	1400 x 880
Slide dimensions [m]	1100 x 720
Motor Power [kW]	30

Monolithic 1 Link

Standard

- Automatic parameters setting
- Safety PLC
- Crown protection and ladder

Optional

- Automatic changing stroke
- Soft Blanking cinematics
- Roller guides
- Hydraulic clutch / brake
- Rapid die changing
- Automation interface
- Teleservice
- Cam encoder
- Light curtain
- Dampers
- Pneumatic blank holder
- Thermic Bushings monitoring
- Force monitoring



Monolithic standard range



Data	160	200	250	250SB
Nominal Force [kN]	1600	2000	2500	2500
Max Stroke [mm]	200	200	250	200
Regulation Stroke [mm]	150	150	150	150
Working Height [mm]	6,35	6,35	6,35	6,35
Max opening [mm] (Slide at BDC)	500	500	600	600
Speed range [rpm]	25-80	25-80	20-60	25-80
Table dimensions min [mm]	1200 x 1000	1200 x 1000	1400 x 1200	1400 x 1050
Slide dimensions min [mm]	1200 x 1000	1200 x 1000	1400 x 1200	1400 x 1050
Motor Power [kW]	22	30	30	30

Mechanical Presses

Monolithic 2 Links



Standard

- Automatic parameters setting
- Safety PLC
- Crown protection and ladder

Optional

- Automatic changing stroke
- Soft Blanking cinematics
- Roller guides
- Hydraulic clutch / brake
- Rapid die changing
- Automation interface
- Teleservice
- Cam encoder
- Light curtain
- Dampers
- Pneumatic blank holder
- Thermic Bushings monitoring
- Force monitoring



Monolithic standard range



Data	200	250	315	315 SB
Nominal Force [kN]	2000	2500	3150	3150
Max Stroke [mm]	200	250	250	200
Regulation Stroke [mm]	150	150	150	150
Working Height [mm]	6,35	6,35	6,35	6,35
Max opening [mm] (Slide at BDC)	500	650	600	650
Speed range [rpm]	24-80	24-80	20-60	25-80
Table dimensions min [mm]	1600 x 1000	2000 x 1000	2000 x 1250	2250 x 1250
Slide dimensions min [mm]	1600 x 1000	2000 x 1000	2000 x 1250	2250 x 1250
Motor Power [kW]	30	37	37	45

Mechanical Presses

Monolithic standard range



Data	400	400	400 SB	500	500 SB
Nominal Force [kN]	4000	4000	4000	5000	5000
Max Stroke [mm]	250	300	250	300	300
Regulation Stroke [mm]	150	200	200	150	150
Working Height [mm]	6,35	12,7	6,35	12,7	12,7
Max opening [mm] (Slide at BDC)	800	800	800	800	800
Speed range [rpm]	15-45	15-45	20-60	15-45	15-45
Table dimensions min [mm]	2000 x 1250	2250 x 1250	2500 x 1250	2500 x 1250	2750 x 1250
Slide dimensions min [mm]	2000 x 1250	2250 x 1250	2500 x 1250	2500 x 1250	2750 x 1250
Motor Power [kW]	37	55	45	75	75

Mechanical Presses



Standard

- Automatic parameters setting
- Safety PLC
- Crown protection and ladder

Optional

- Automatic changing stroke
- Soft Blanking cinematics
- Roller guides
- Hydraulic clutch / brake
- Rapid die changing
- Automation interface
- Teleservice
- Cam encoder
- Light curtain
- Dampers
- Pneumatic blank holder
- Thermic Bushings monitoring
- Force monitoring



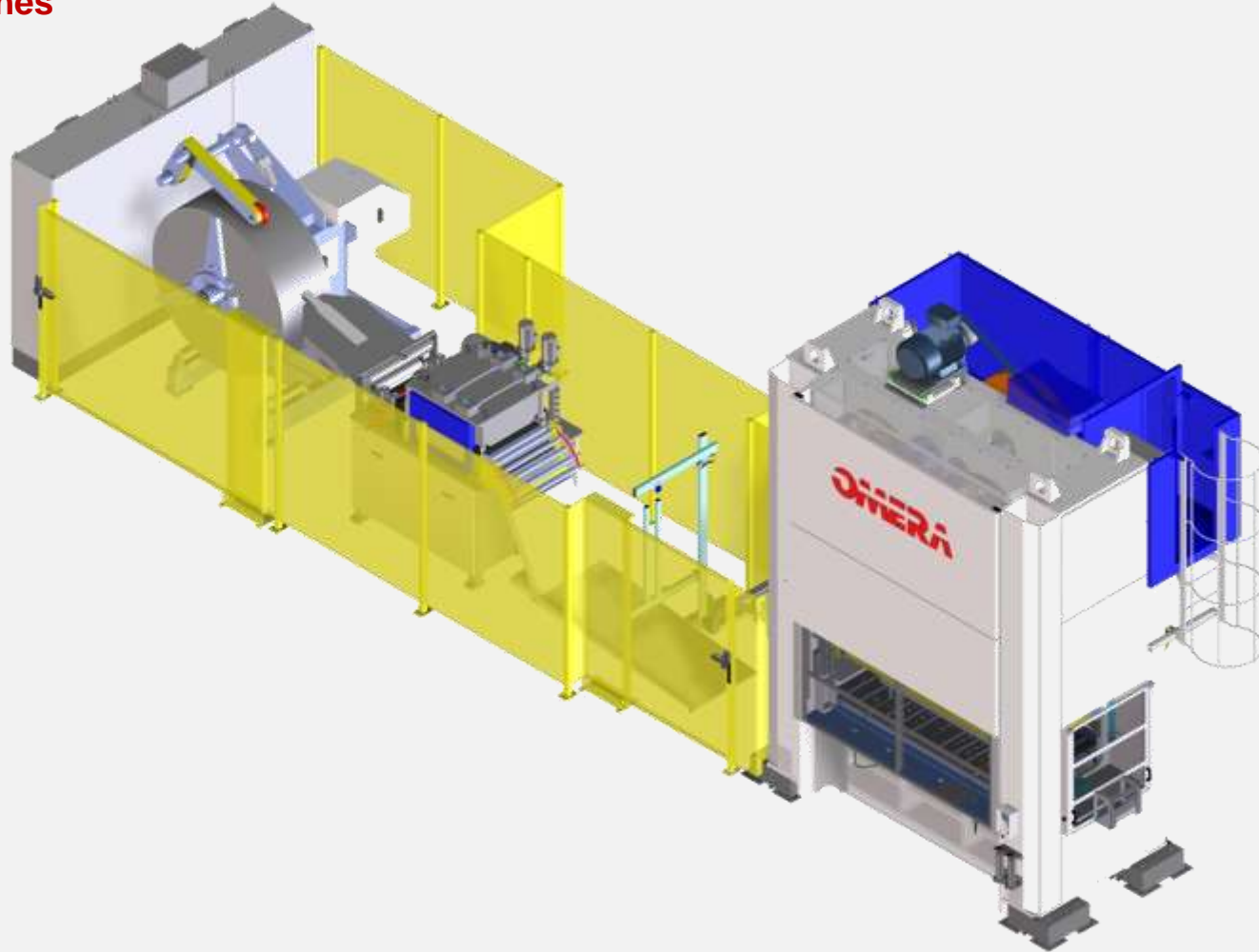
Composite standard range



Data	630	630	800	1000	1250
Nominal Force [kN]	6300	6300	8000	10000	12500
Max Stroke [mm]	300	400	400	400	400
Regulation Stroke [mm]	200	200	250	250	250
Working Height [mm]	12,7	18	18	18	18
Max opening [mm] (Slide at BDC)	800	800	800	1000	1000
Speed range [rpm]	15-45	10-30	10-30	10-30	10-30
Table dimensions min [mm]	3250 x 1250	3500 x 1250	4250 x 1500	4250 x 1750	4500 x 1750
Slide dimensions min [mm]	3250 x 1250	3500 x 1250	4250 x 1500	4250 x 1750	4500 x 1750
Motor Power [kW]	110	110	130	150	175

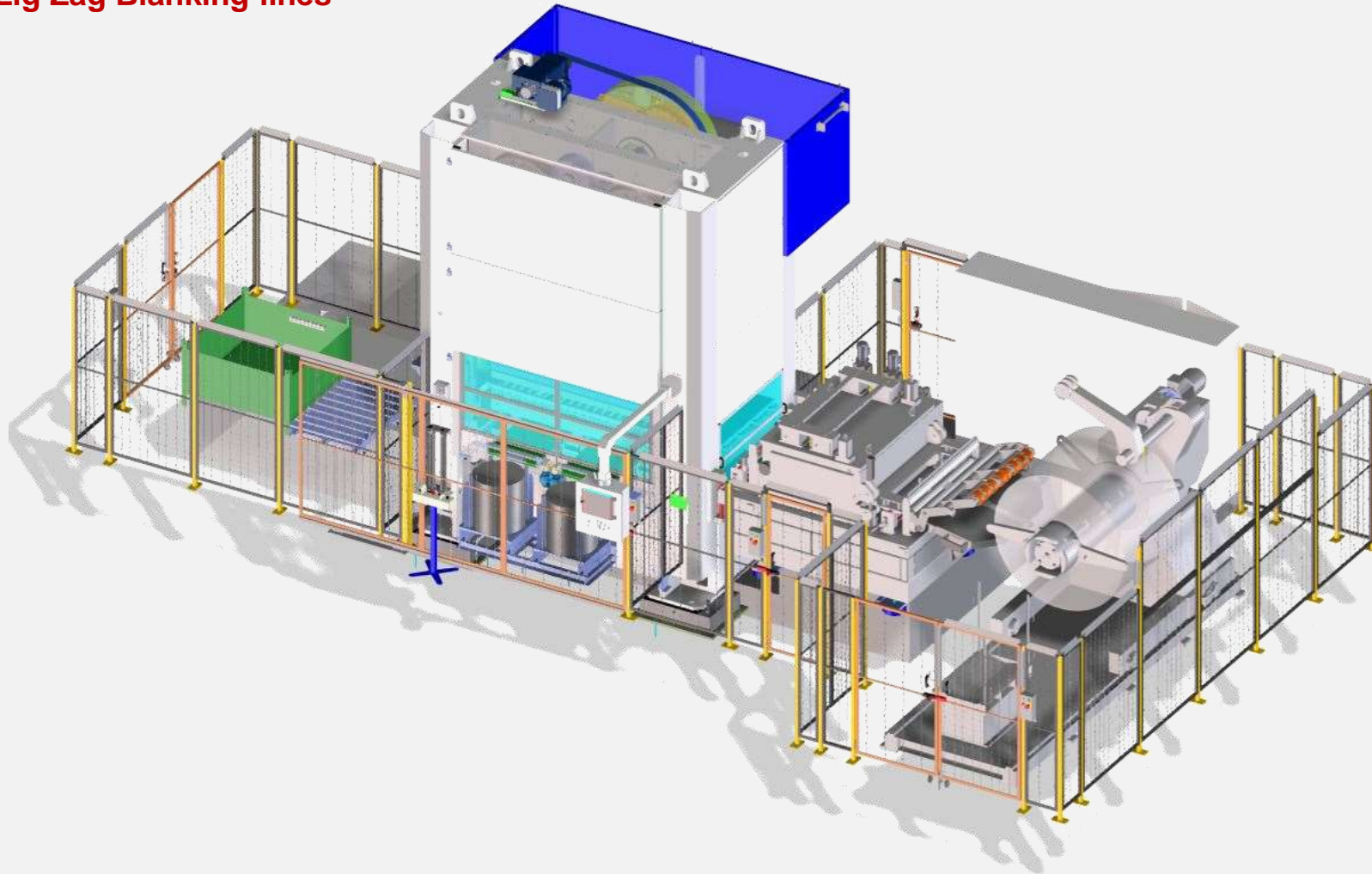
Mechanical Presses

Blanking lines



Mechanical Presses

Zig Zag Blanking lines



Mechanical Presses

Stator lines



Mechanical Presses