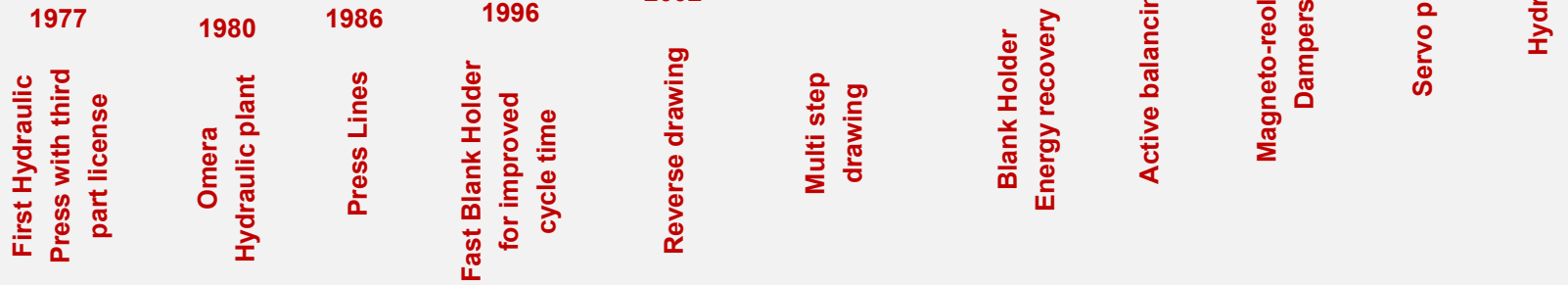
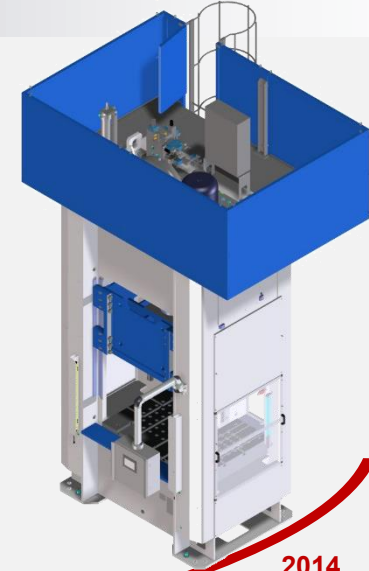




## Hydraulic Presses

Hydraulic Presses

# History



**Since 1951 we take care of your needs**

**Hydraulic Presses**



**A unique partner for all your needs**

**Hydraulic Presses**



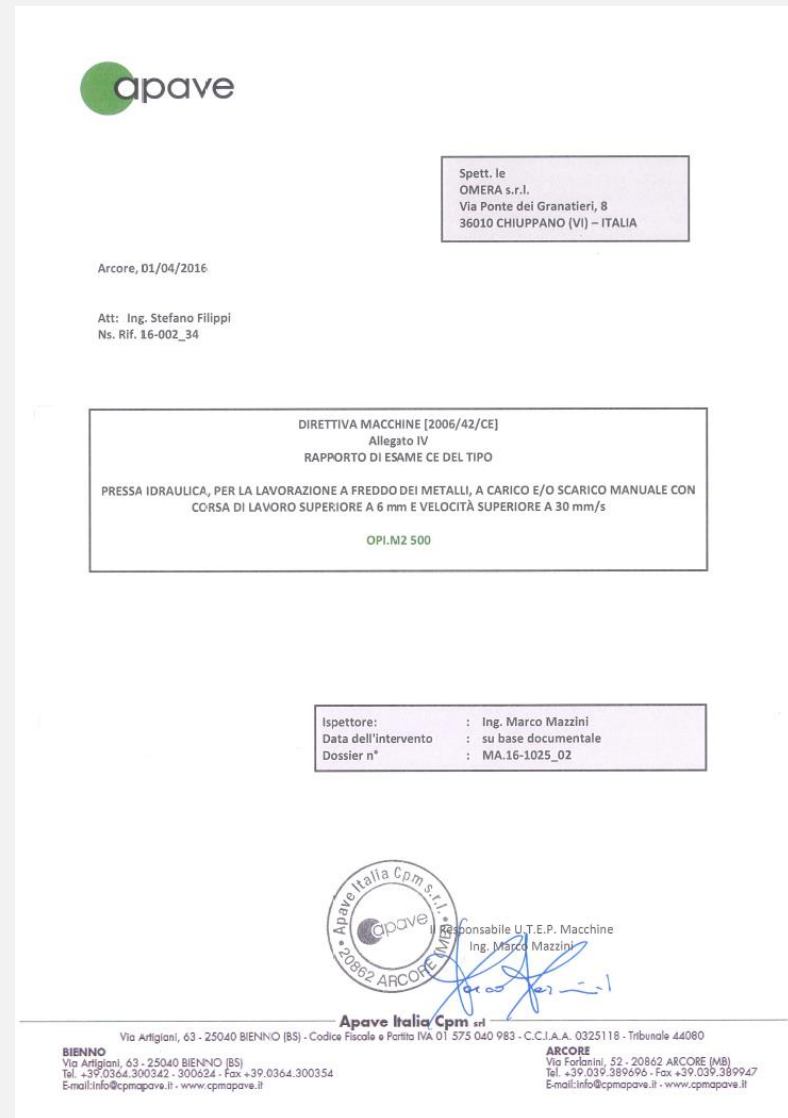
**Safety** is fundamental milestone of Omera policy.

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

Specific **noise reduction system**, improving operator comfort.

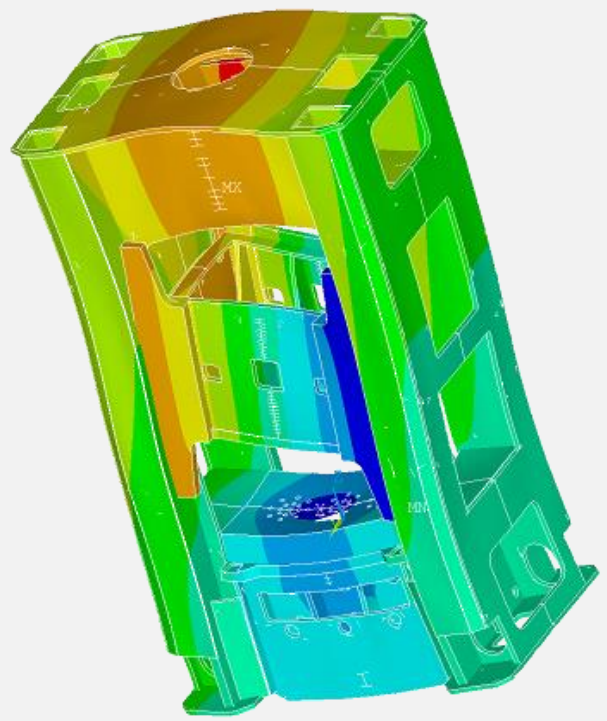
**Crown protection** and **ladder** as standard.

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



# Frame stiffness

Press Frame an guide response optimized by FEM



FEM Analysis

```
OPIM100Delphi_216-9larga.txt - Blocco note
File Modifica Formato Visualizza ?
/COM disegno 5
*set,sp1gs11tta,80

/COM spessori per real const+++++++

*SET,ualto,30      | (real Constant 11) spessore lamiera principale zona testata
*SET,ulato,30     | (real Constant 5) spessore lamiera principale zona montante
*SET,ubasso,30   | (real Constant 2) spessore lamiera principale zona base
*SET,s,20        | (real Constant 13) spessore cappello superiore
*SET,vA,20       | (real Constant 15) spessore lamiera laterale montante
*SET,vB,80       | (real Constant 10) spessore piegato
*SET,y,45        | (real Constant 12) spessore piastra appoggio cilindro principale
*SET,rcs,30      | (real Constant 14) spessore rinforzo in x cilindro principale, a quota osx
*SET,t,30        | (real Constant 18) spessore rinforzo in y cilindro principale, a quota osy
*SET,BAND,20     | (real Constant 17) spessore bandiera attacco encoder/aggancio slitta
*SET,MONTE,20    | (real Constant 23) spessore rinforzo dietro guida slitta
*SET,h,20        | (real Constant 4) spessore lamiera lato tavola
*SET,sz21,30     | (real Constant 22) spessore rinforzo sottotavola a quota h1
*SET,sz22,30     | (real Constant 20) spessore rinforzo sottotavola a quota k1
*SET,z,30        | (real Constant 3) spessore lamiera longitudinale sotto tavola
*SET,base1at,30  | (real Constant 19) spessore zampa appoggio a terra
*SET,Sosx12,30   | (real Constant 24) spessore rinforzi centrali in x, a quote osx1slitta e osx2slitta
*SET,Sosy,30     | (real Constant 25) spessore rinforzi centrali in y, a quote osy1slitta
*SET,per1mx,20   | (real Constant 26) spessore lamiere longitudinali lato slitta
*SET,per1my,20   | (real Constant 27) spessore lamiere trasversali fronte/retro slitta

/PREP7
/COM variab111 non dichiarate-----
/COM variab111 dimensionali+++++++
/COM struttura
*set,sc,160
*set,deb,b-bmacchina
*set,z21,bmacchina - (bcassone+10)
*set,z22,m - (mcassone+10)
*set,lunghRIN,mhsc-120
*set,yRIN,40
*set,yFOR0cus,175
*set,yFOR0cus,k1/2
*set,rGU1sotto,40
*set,rGU1,25
*set,xGU1,190
*set,yGU1,135
*set,rFOR0cus,20
*set,l,745-80
*set,r1entr,65
*set,ask1,125
*set,bsk,80
*IF,ask21,EQ,ask31,THEN
*set,ask2,ask1+ask21/2
*set,ask3,ask2+ask21/2
*ELSEIF,ask21,LT,ask31,THEN
*set,ask2,ask1+ask21
```

YS  
WYSYS

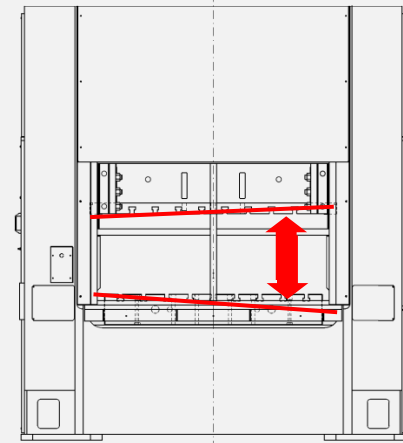
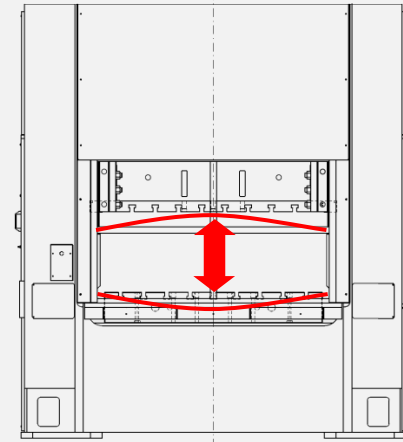
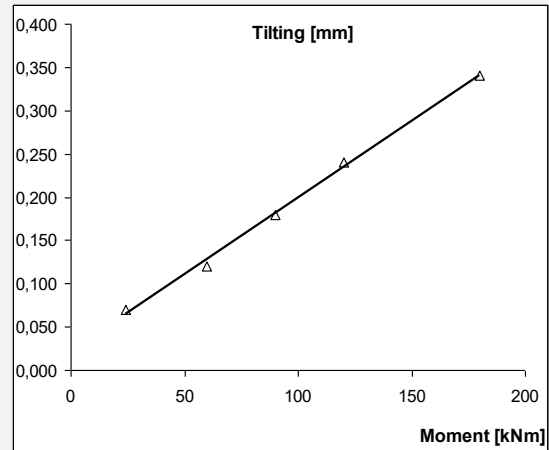
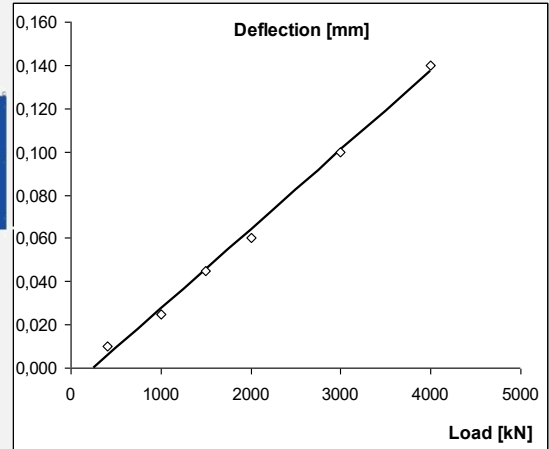
Optimization FEM Routine

Hydraulic Presses

# Frame stiffness



Stiffness response measured and certified



Hydraulic Presses

# Flexibility



Complex drawing process management.

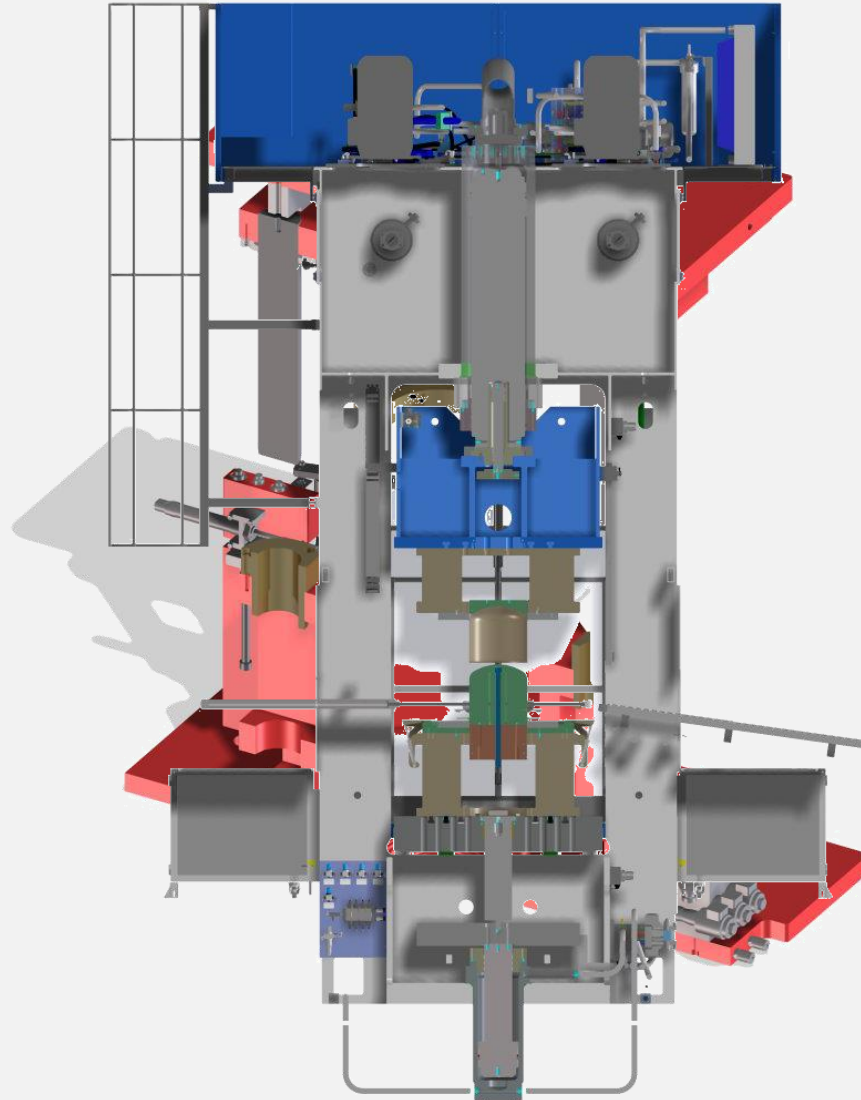
Drawing **passive/active** ejector/ejectors

Lower **passive/active** blank Holder

Upper **passive/active** blank Holder

Drawing lower punch for **active reverse drawing**

Multiple effects machines for **multi step integrated** dies



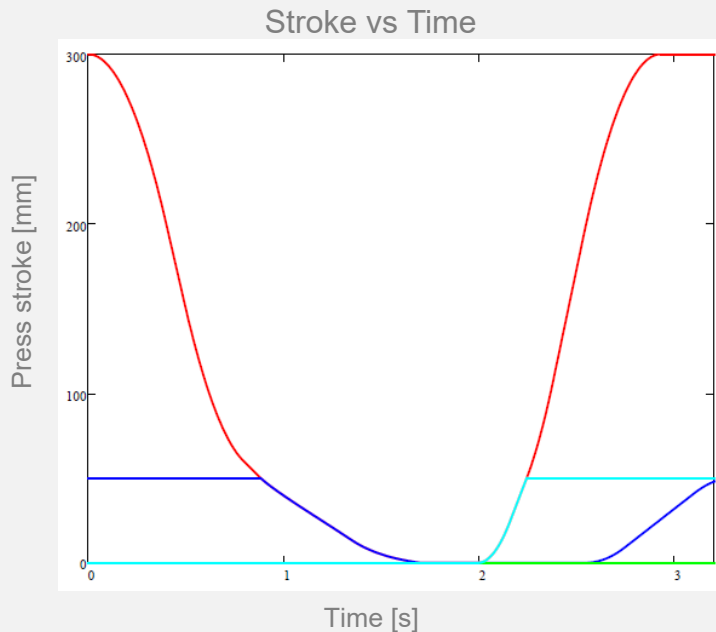
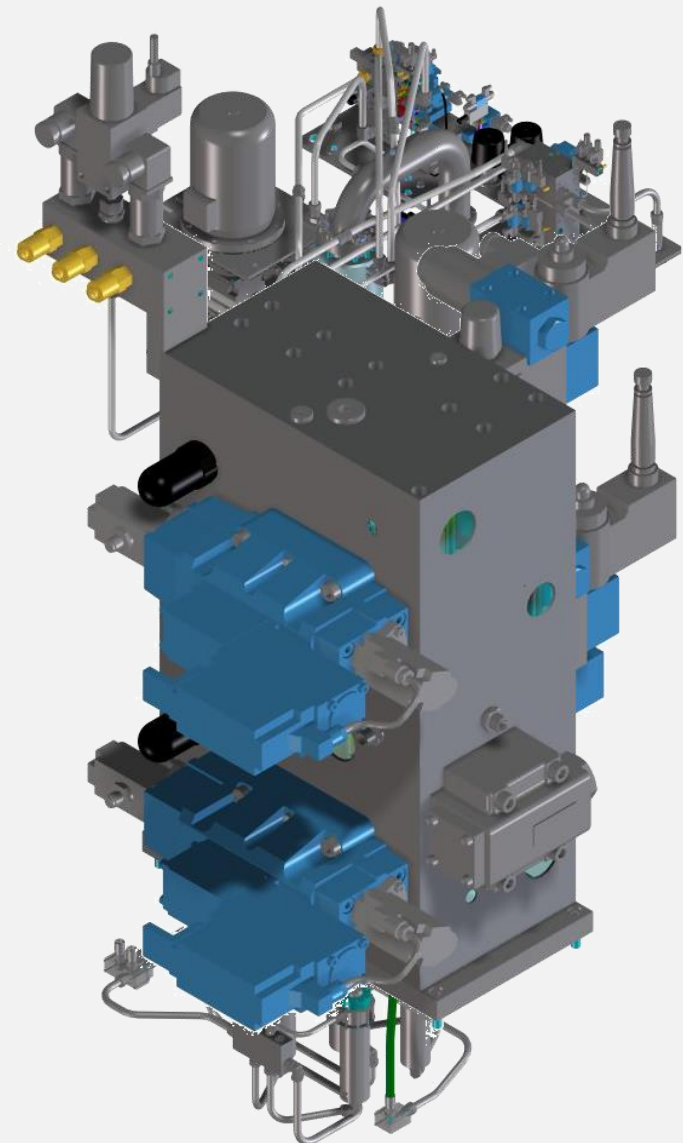
Hydraulic Presses



**Basic to complex** hydraulic plant architecture.

**Multiple pump based** solution for improved drawing speed, fast blank holder return, independent active or passive ejectors, punches

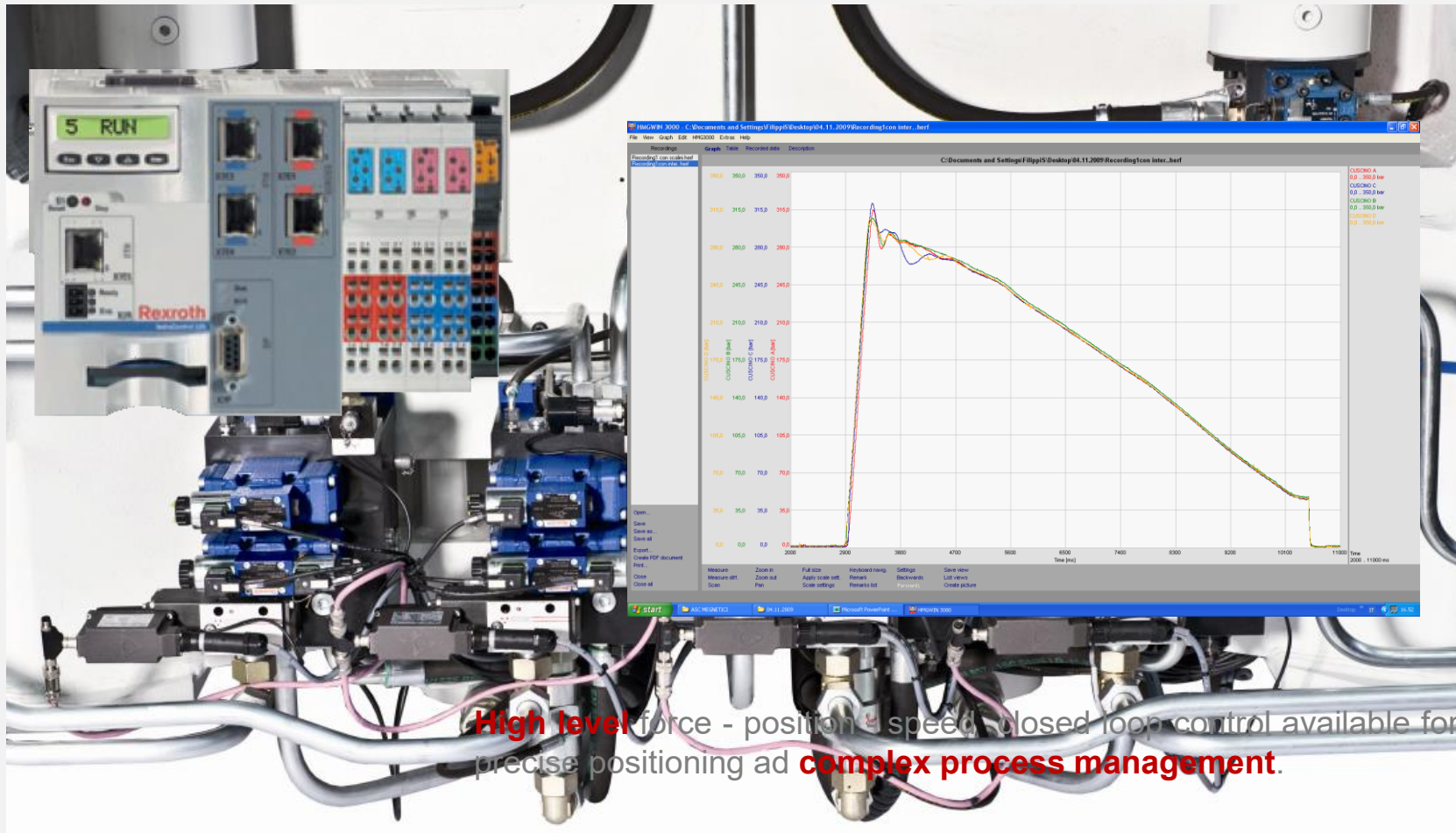
**Proportional direction valve** solution for high productivity press lines.







**PLC based** closed loop pressure controls as a standard.



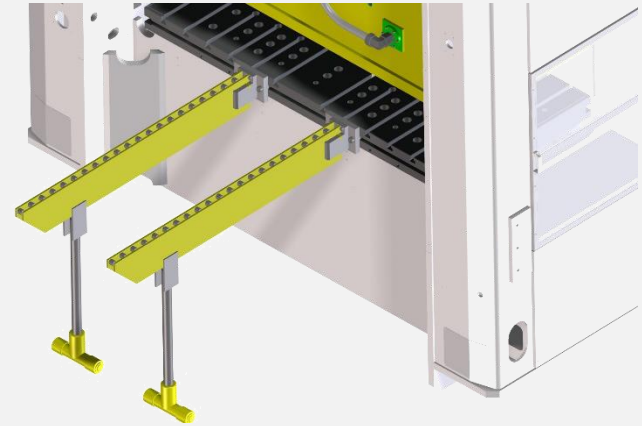
**High level force - position & speed closed loop control** available for precise positioning and **complex process management.**

Hydraulic Presses

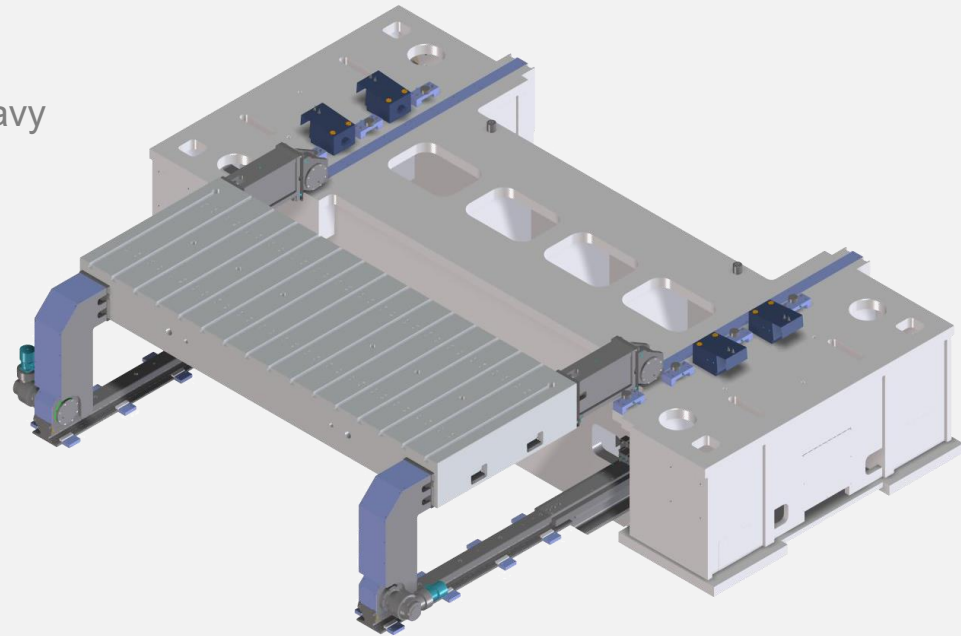


**Quick die changing** system

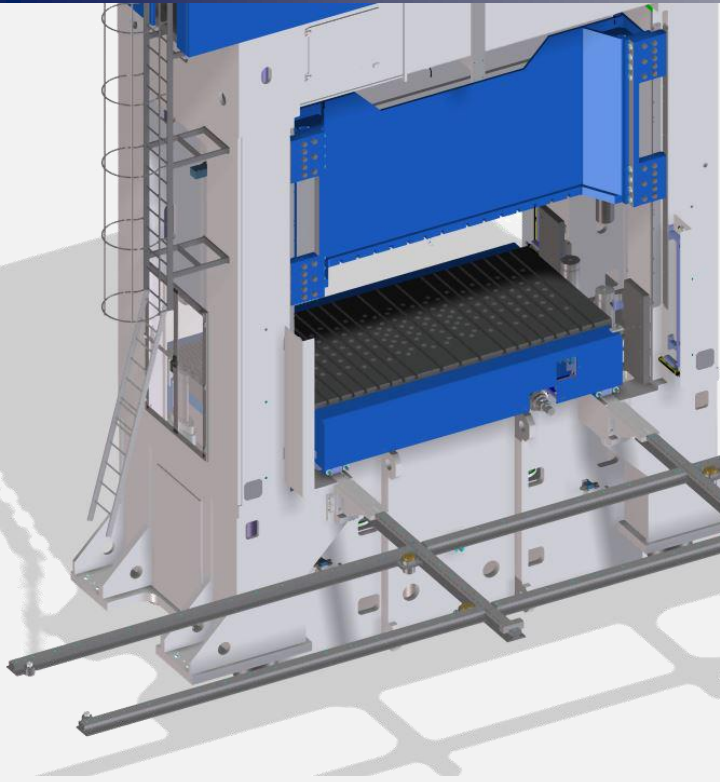
**Automatic clamps** + **Die lifter** + **brackets** available on the whole portfolio moving for small C frame presses to large composite.



**Moving Table / Bolster** and rails for heavy mono block dies



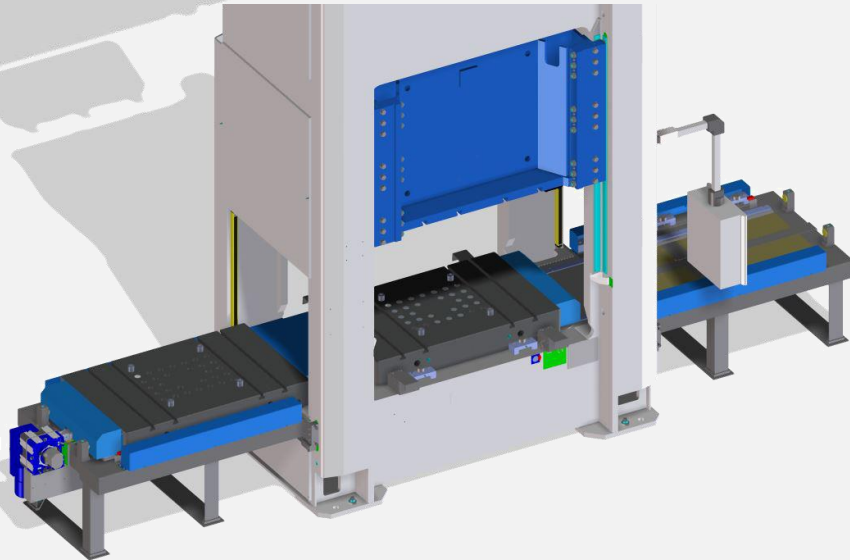
# Flexibility



Reduced job changes **machine downtime**

**T track** - large presses

**Double Table** solutions - presses lines



Hydraulic Presses

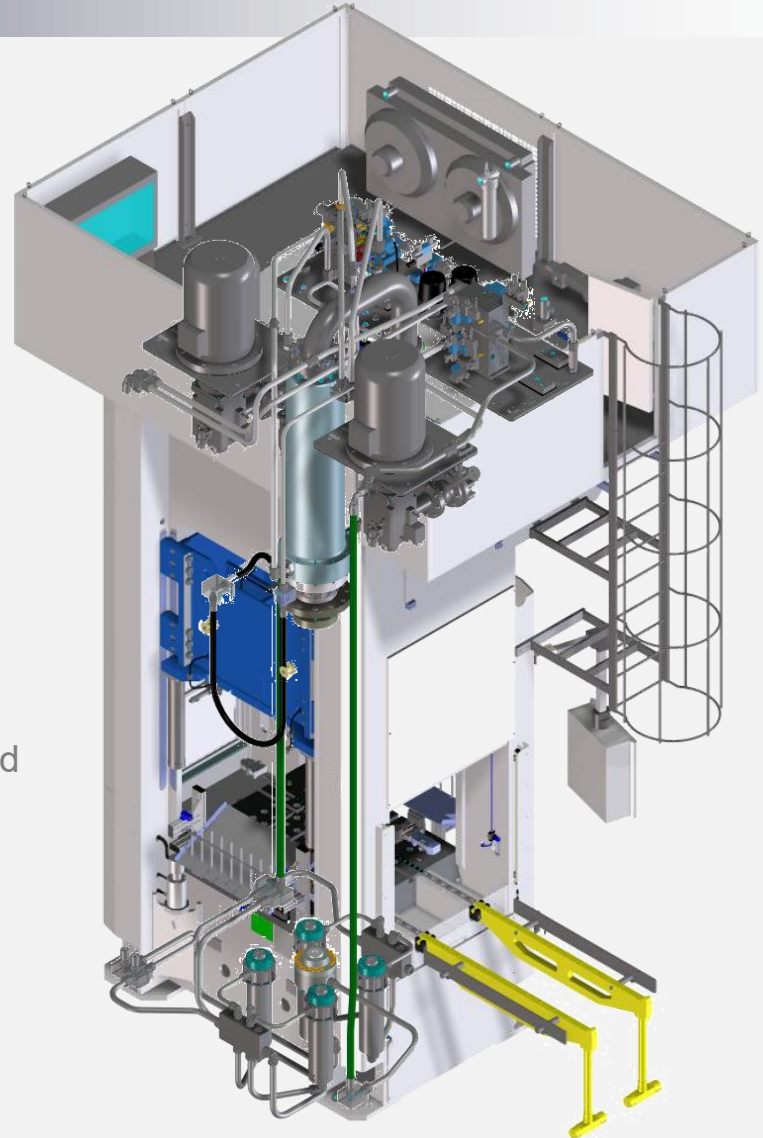
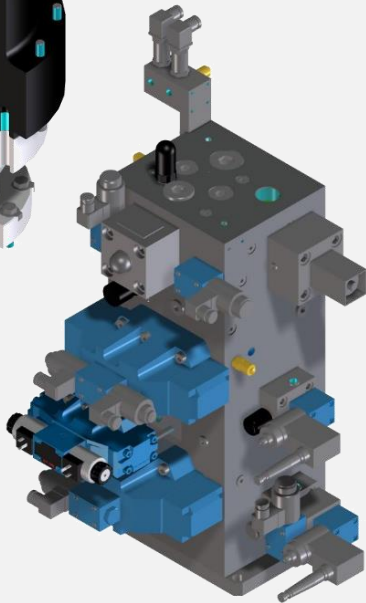


Cylinders surfaces with **NIPRE** treatment

**Hydraulic block** design for easy access and maintenance

**Filters** and **heat exchangers** oversized for long life.

Hydraulic blocks and piping in the press crown with **ladder** and **platform**.



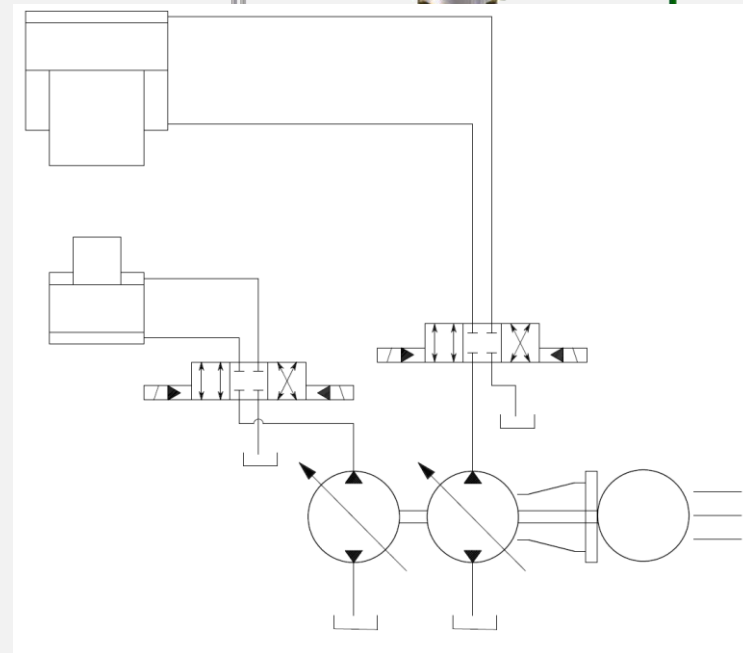
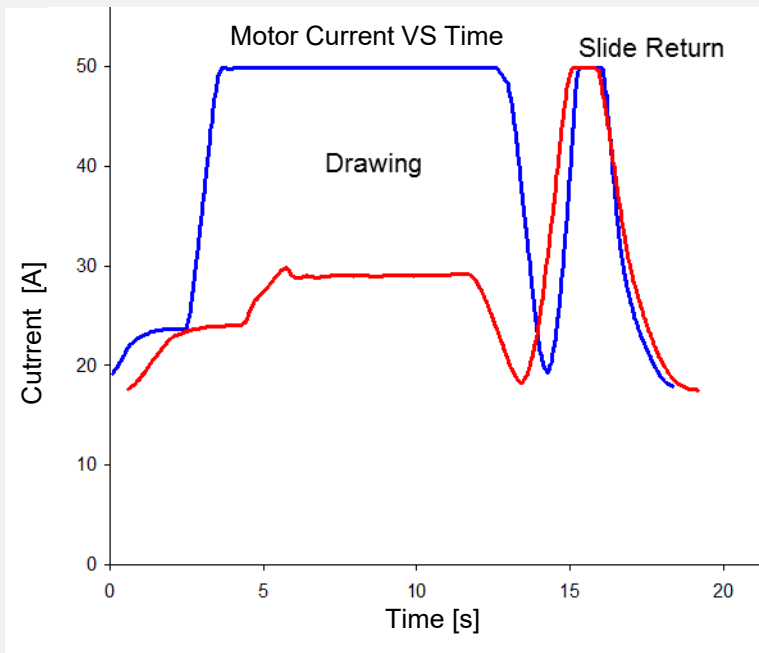
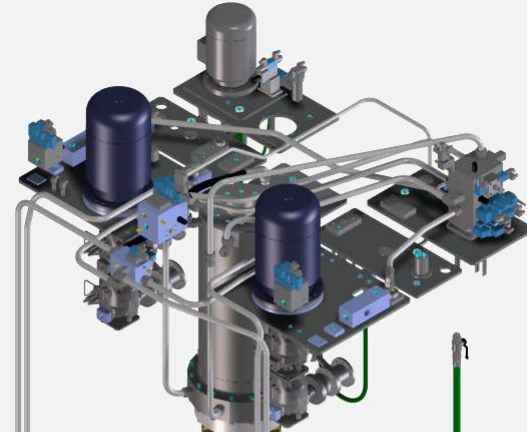
# Energy Management



**Blank Holder Energy** Manager recovers passive effect energy losses introducing an electronic controlled pump/motor to manage blank holder force.

**BHE** can be used alternatively to improve drawing speed with the same power consumption of a basic presses.

**BHE** architecture also fast blank holder return and active Blank holder effect.





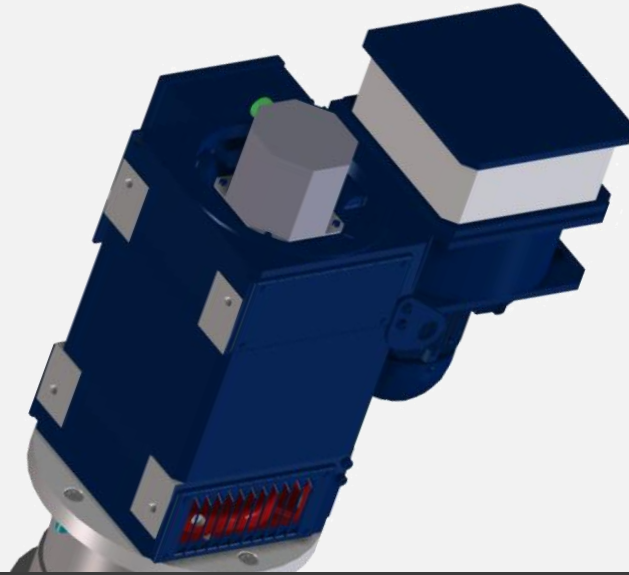
**Servo pump** concept allow to optimize energy management during stand by phases.

In **basic version** it involves a low inertia motor an drive and a fixed displacement pump.

In **high level version** variable displacement pump are used.

**Benefits** in terms of:

- Power consumption
- Low noise
- Cooling units downsizing
- Efficient dynamic control
- Improved reliability



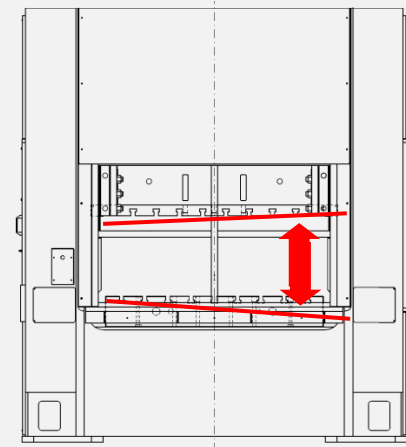
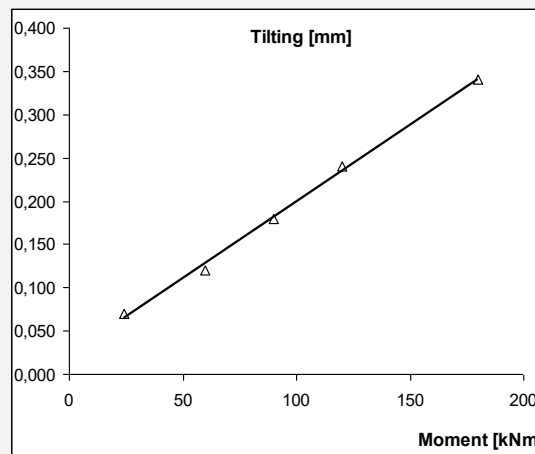
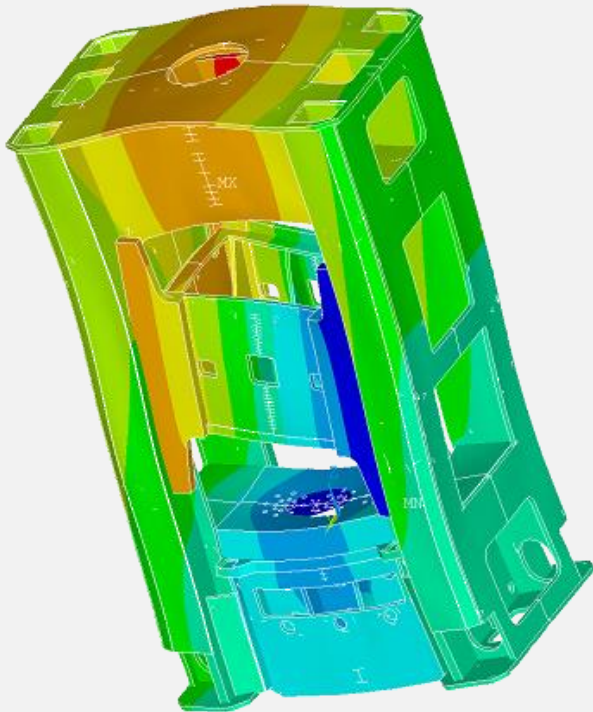
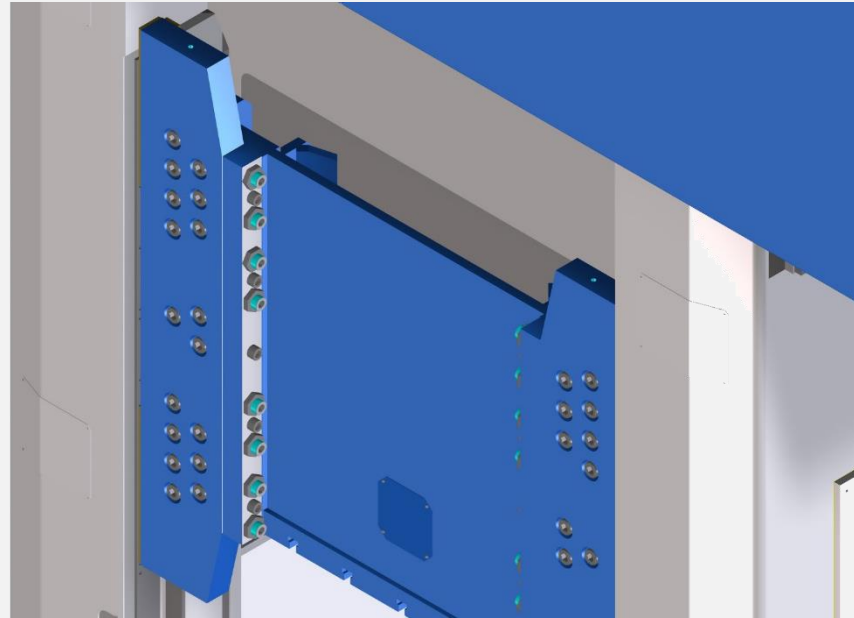
# Slide guiding



**High Guide** Rigidity is available on request.

Max tilting limit due to eccentric load is investigated by proper **FEM** analysis.

Performances are tested and certified.



# Active Tilting Control

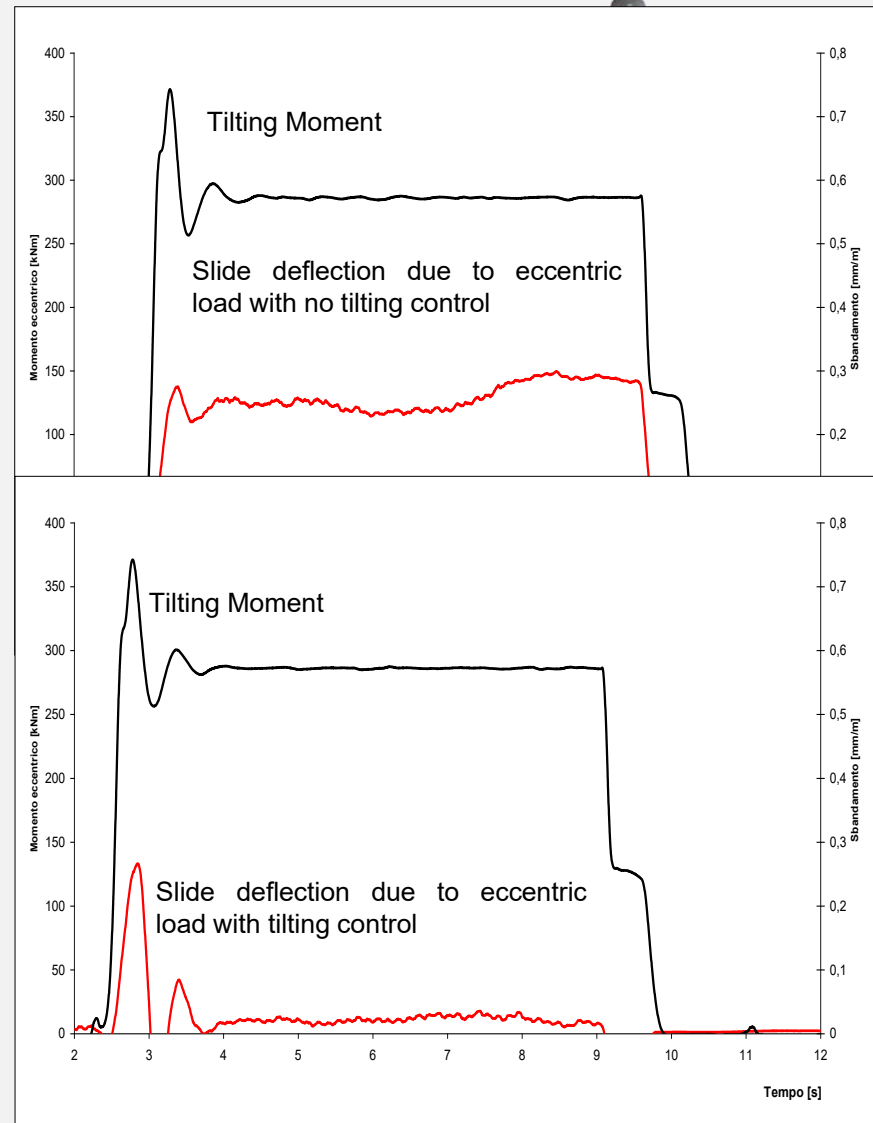


**Active Tilting Control** allows to reduce to negligible values the slide/table angle due to eccentric load.

**ATC** involves a high response proportional valve and passing rod cylinders.

**ATC** balances only the tilting moment, no force disposal occurs to the process.

**ATC** is very efficient for multi step deep drawing operations.





# Anti Shock Devices

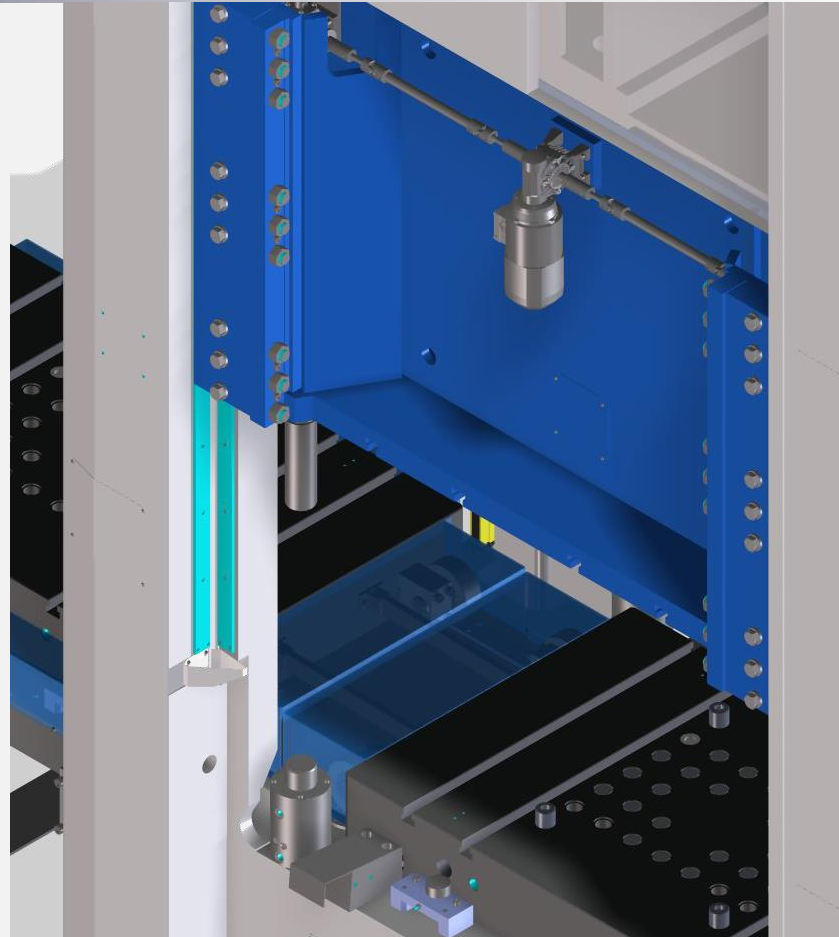


**Anti Shock Device** allows to reduce strongly vibrations due to blanking operations.

**ASD** involves in its basic design hydraulic dampers connected to the main hydraulic plant.

**ASD** working point can be changed manually operating on a regulation screw.

**ASD** can be equipped with motorized regulations pins for fast changing of working point.



# Standard portfolio

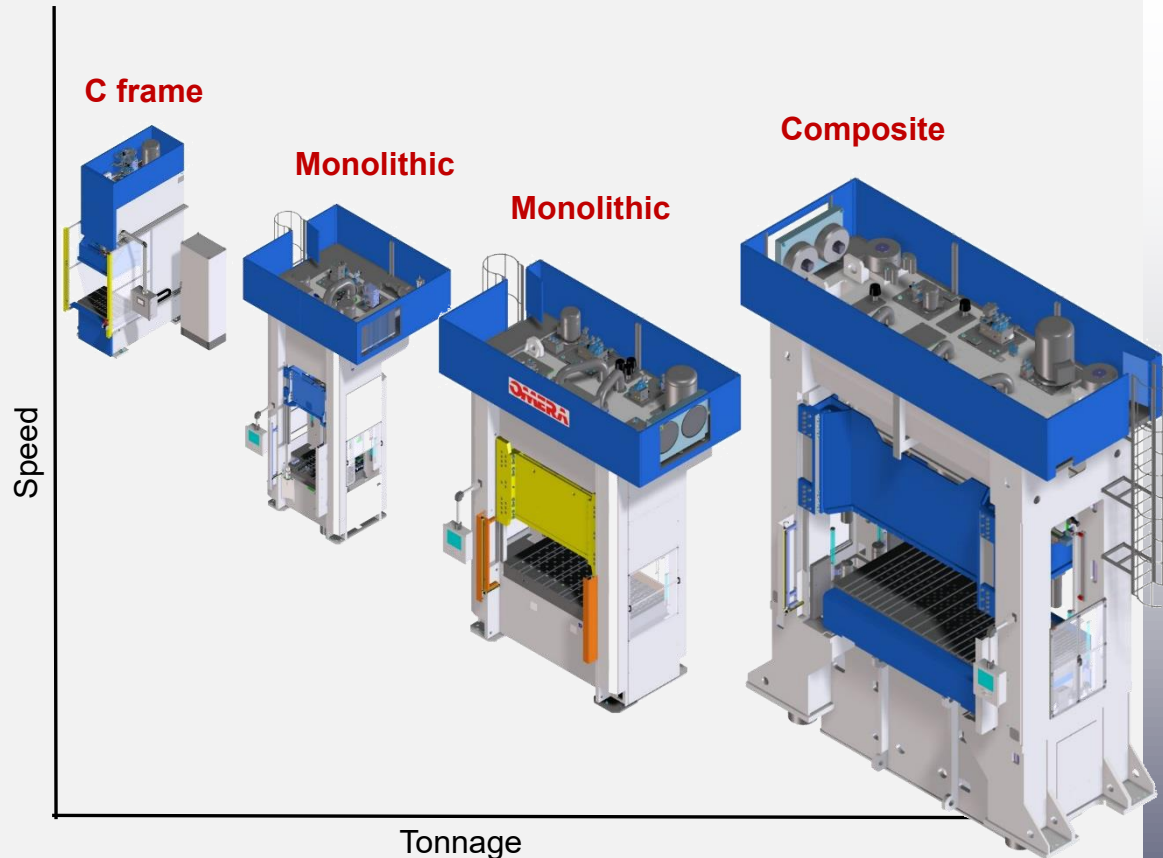


Wide machine **Portfolio**.

High **Scalability** of solutions.

Wide range of **Performances** available.

**Customized** solutions for specific needs.



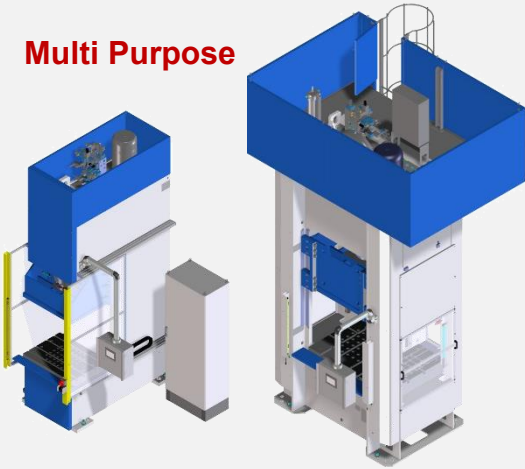
**Basic Manual** to **High Automated** machines for optimizing investment plan.

Hydraulic Presses

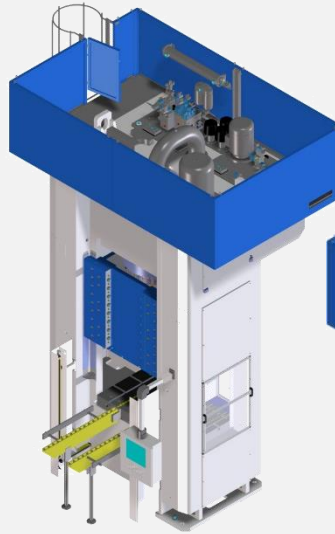
# Standard portfolio



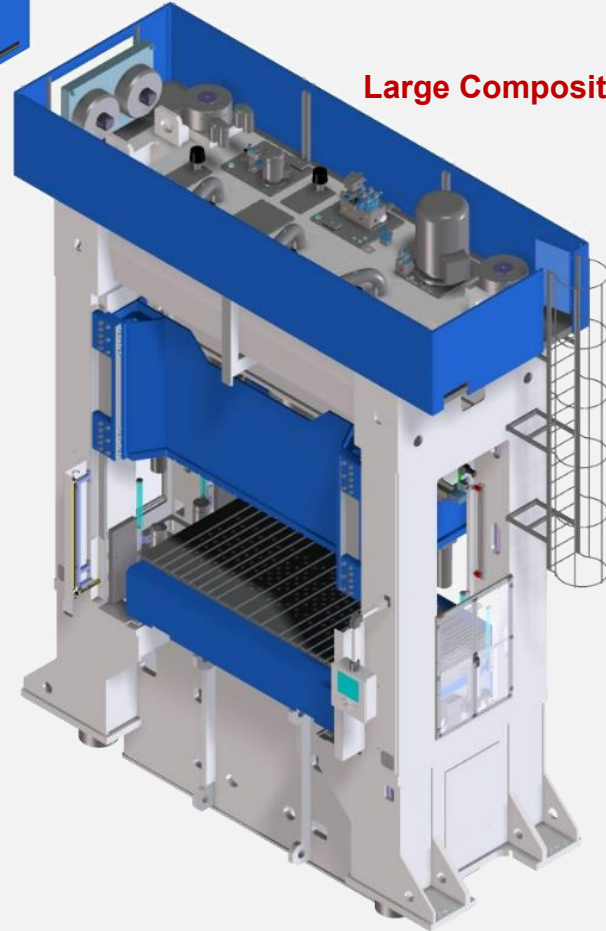
Multi Purpose



Coining

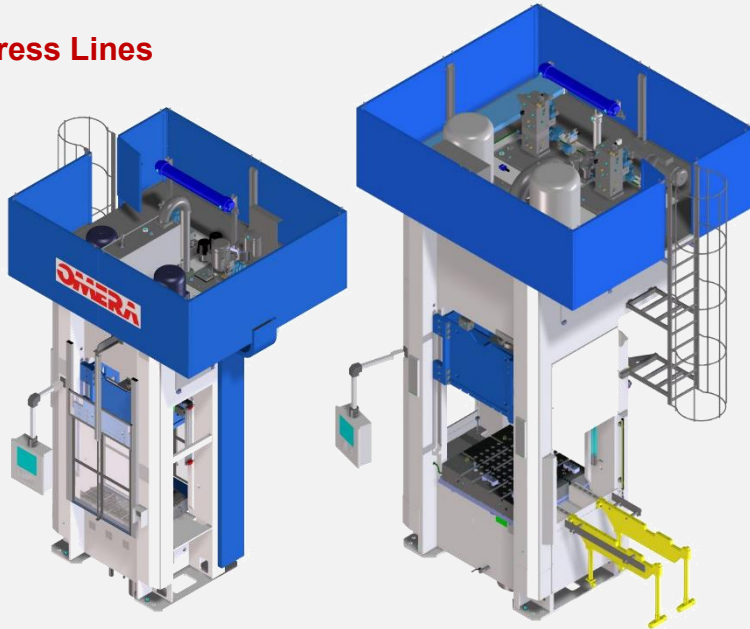


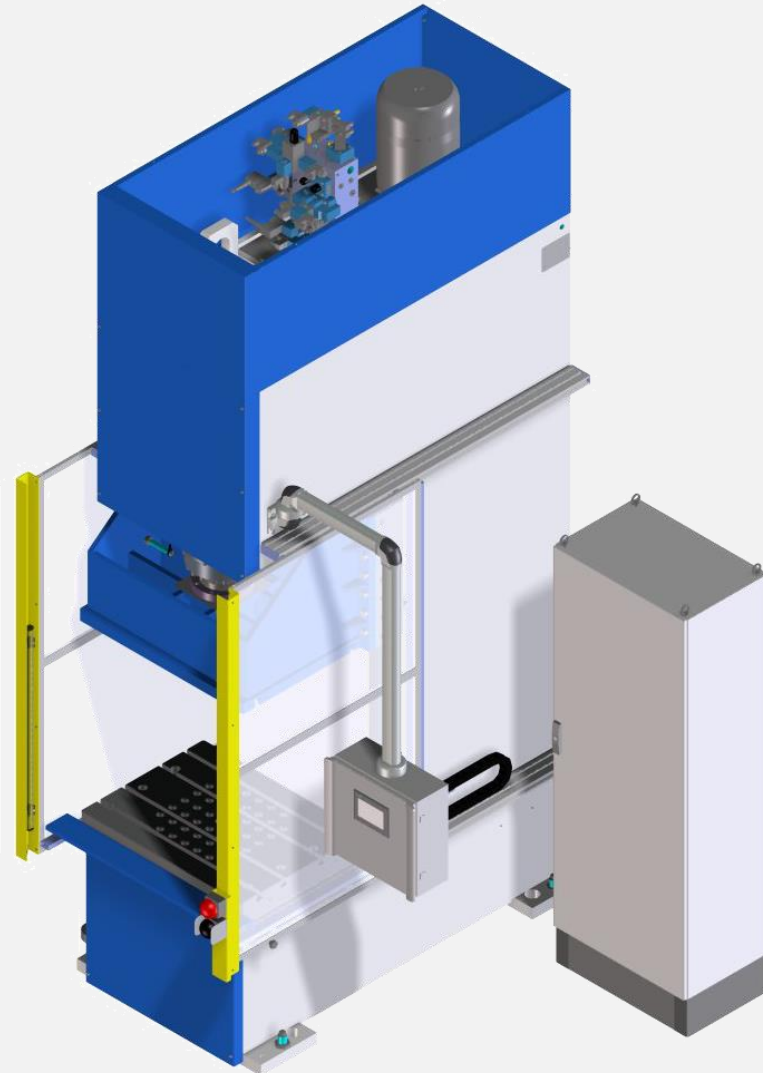
Large Composite



Hydraulic Presses

Press Lines





## Standard

- Proportional pressure and speed control
- Blank holder and ejector

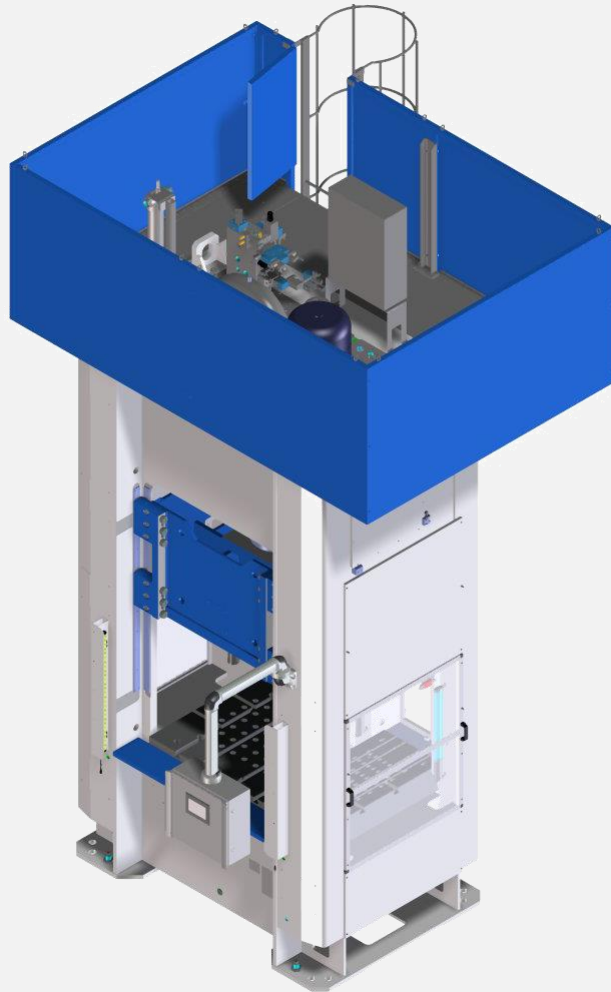
## Optional

- Light curtain with cycle initiation single or double brake
- Passive/active ejector
- Active blank holder
- Anti shock device
- Servo pump
- Safe working speed
- Automation interface
- Quick die changing
- Fast blank holder
- Close loop force and speed control





| Data                    | 50        | 80        | 125       | 160        | 200        |
|-------------------------|-----------|-----------|-----------|------------|------------|
| Slide Force [kN]        | 500       | 800       | 1.250     | 1.600      | 2.000      |
| Slide Stroke [mm]       | 500       | 600       | 600       | 650        | 650        |
| Blank Holder Force [kN] | 200       | 315       | 500       | 630        | 1200       |
| Throat deep [mm]        | 275       | 350       | 420       | 450        | 450        |
| Max opening [mm]        | 800       | 1000      | 1000      | 1000       | 1000       |
| Table dimensions [mm]   | 600 x 500 | 750 x 600 | 980 x 750 | 1000 x 800 | 1000 x 800 |
| Main motor Power [kW]   | 11        | 15        | 22        | 30         | 30         |
|                         |           | 15 + 22   | 22 + 22   | 30 + 22    | 30 + 22    |



## Standard

- Proportional pressure and speed control
- Blank holder and ejector
- Sound proof crown and ladder

## Optional

- Light curtain
- Passive/active ejector
- Active blank holder
- Anti shock device
- Servo pump
- Safe working speed
- Automation interface
- Quick die changing
- Fast blank holder
- Close loop force and speed control



# Monolithic standard range



| Data                       | 125        | 200         | 250         | 315         |
|----------------------------|------------|-------------|-------------|-------------|
| Slide Force [kN]           | 1250       | 2000        | 2500        | 3150        |
| Slide Stroke [mm]          | 800        | 650         | 1000        | 1000        |
| Blank Holder Force [kN]    | 630        | 630         | 1500        | 1600        |
| Max opening [mm]           | 1200       | 1000        | 1300        | 1300        |
| Table dimensions min. [mm] | 1000 x 800 | 1200 x 1100 | 1200 x 1100 | 1200 x 1100 |
| Main motor Power [kW]      | 22         | 37          | 55          | 75          |
|                            | 22 + 22    | 55          | 75          | 90 + 30     |
|                            |            | 55 + 55     | 90 + 30     | 110 + 110   |

Hydraulic Presses

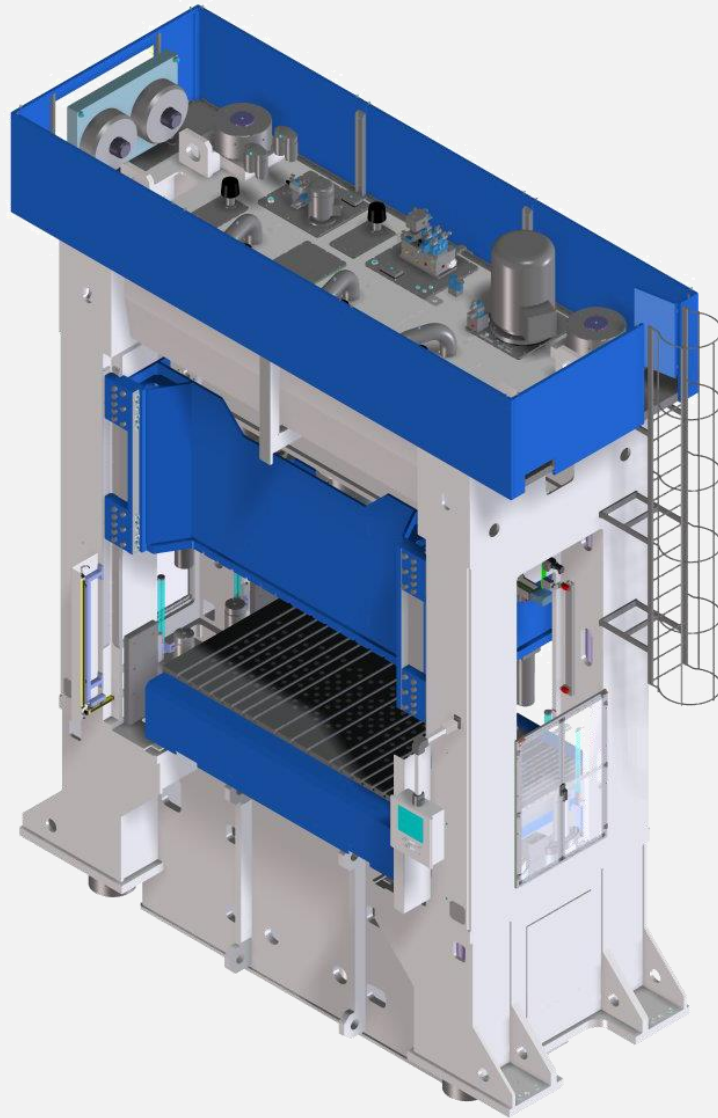
# Monolithic standard range



| Data                       | 400         | 500         | 630         | 800         |
|----------------------------|-------------|-------------|-------------|-------------|
| Slide Force [kN]           | 4000        | 5000        | 6300        | 8000        |
| Slide Stroke [mm]          | 1000        | 1000        | 1000        | 1000        |
| Blank Holder Force [kN]    | 2500        | 3150        | 4000        | 5000        |
| Max opening [mm]           | 1300        | 1600        | 1600        | 1600        |
| Table dimensions min. [mm] | 1600 x 1200 | 1600 x 1400 | 1600 x 1400 | 2000 x 1500 |
| Main motor Power [kW]      | 75          | 75          | 75          | 75          |
|                            | 90 + 30     | 90 + 90     | 90 + 90     | 90 + 90     |
|                            | 110 + 110   | 110 + 110   | 110 + 110   | 110 + 110   |

Hydraulic Presses





## Standard

- Proportional pressure and speed control
- Sound proof crown and ladder

## Optional

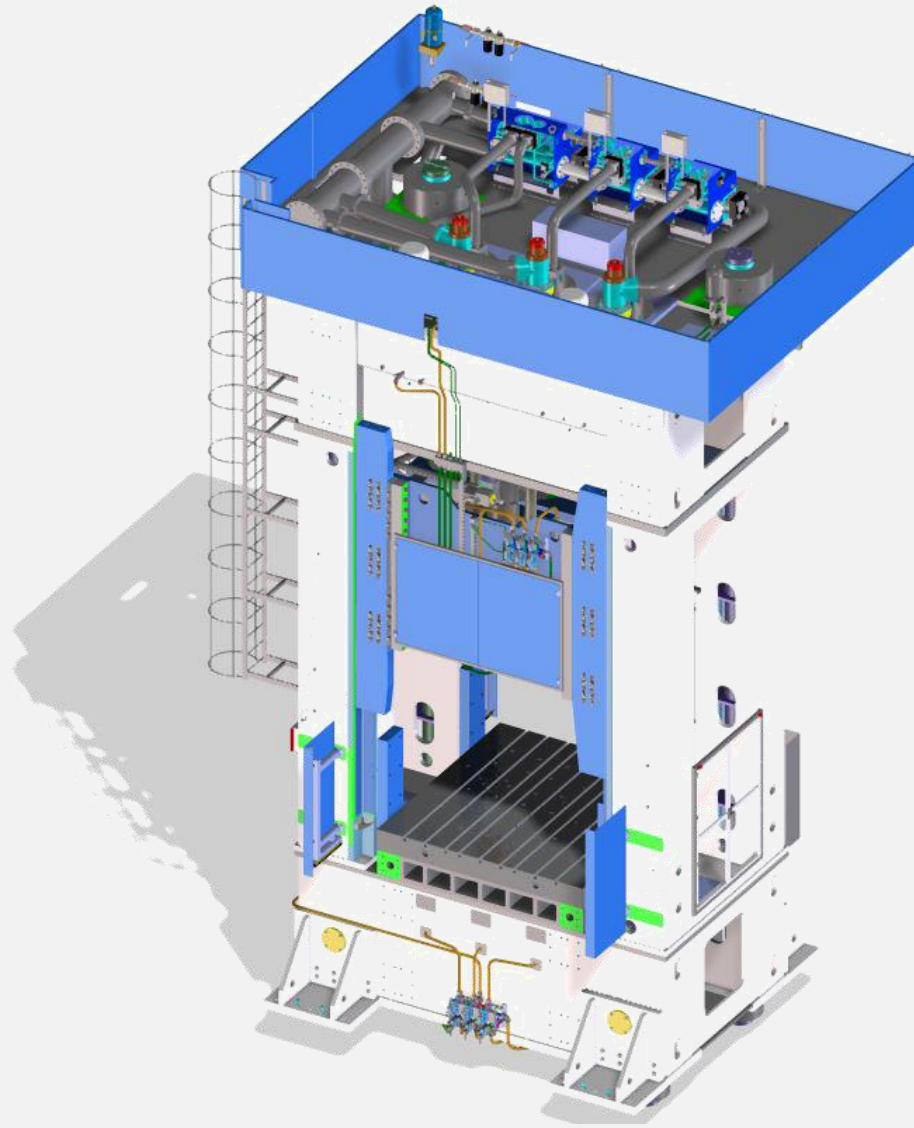
- Light curtain
- Passive/active ejector
- Active blank holder
- Anti shock device
- Servo pump
- Safe working speed
- Automation interface
- Quick die changing
- Fast blank holder
- Close loop force and speed control





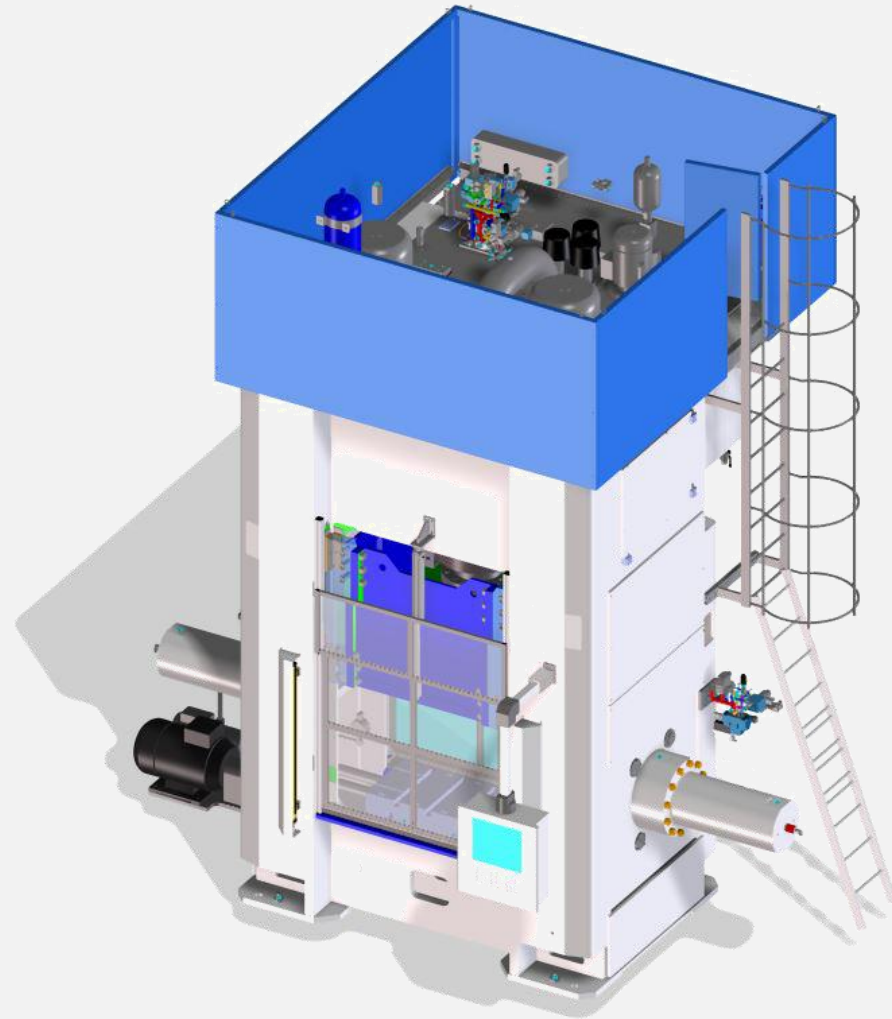
| Data                       | 630         | 800         | 1000        | 1600        |
|----------------------------|-------------|-------------|-------------|-------------|
| Slide Force [kN]           | 6300        | 8000        | 10000       | 16000       |
| Slide Stroke [mm]          | 1000        | 1000        | 1250        | 1600        |
| Blank Holder Force [kN]    | 2500        | 3150        | 4000        | 6300        |
| Max opening [mm]           | 1300        | 1300        | 1600        | 2000        |
| Table dimensions min. [mm] | 1600 x 1400 | 2000 x 1500 | 3000 x 2000 | 3000 x 2000 |
| Main motor Power [kW]      | 75          | 75          | 75          | 75          |
|                            | 90+90       | 90+90       | 90+90       | 90+90       |
|                            | 110+110     | 110+110     | 110+110     | 110+110     |

Hot Forming presses.



Hydraulic Presses

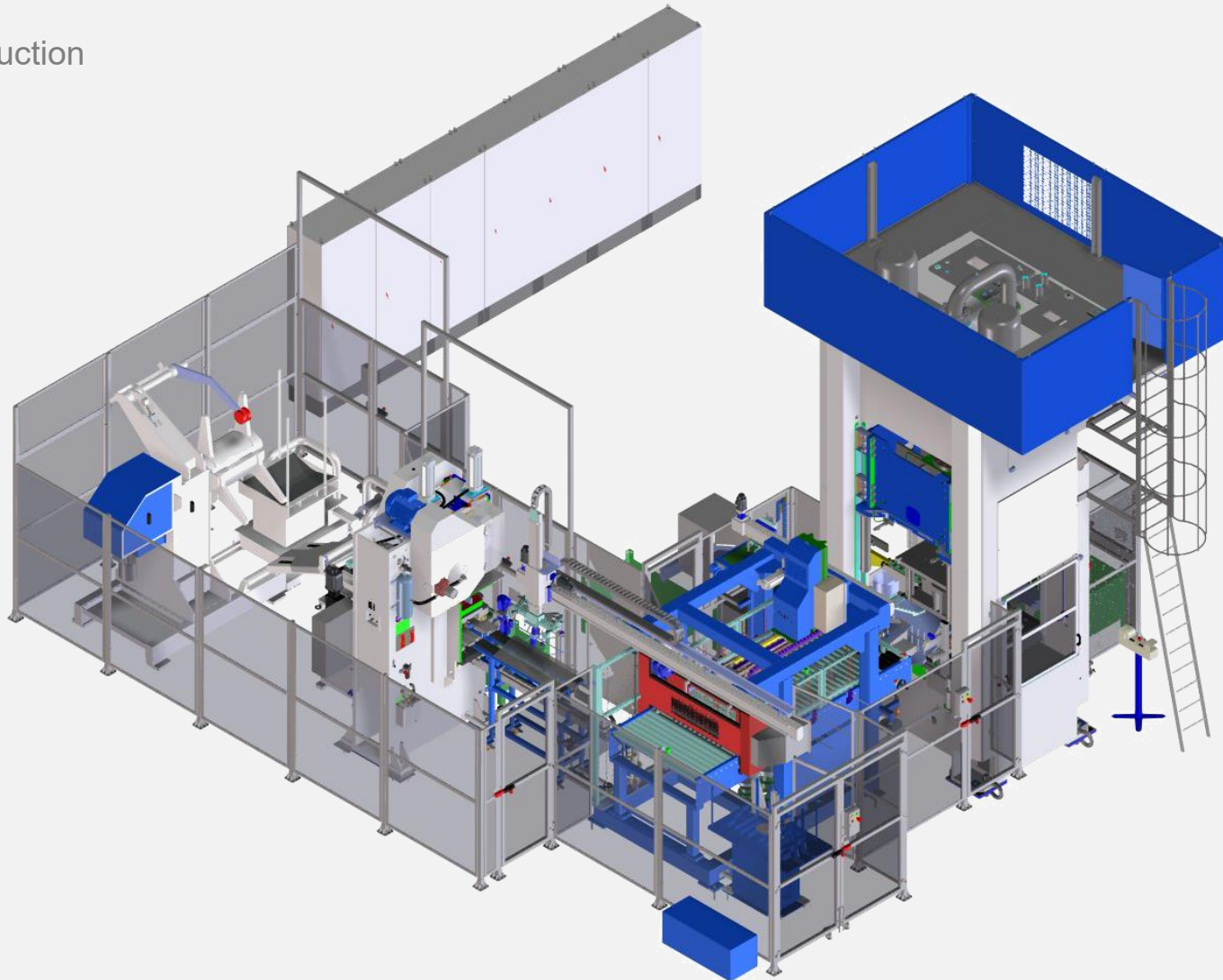
## Hydroforming presses.



Hydraulic Presses



Air duck production



Hydraulic Presses

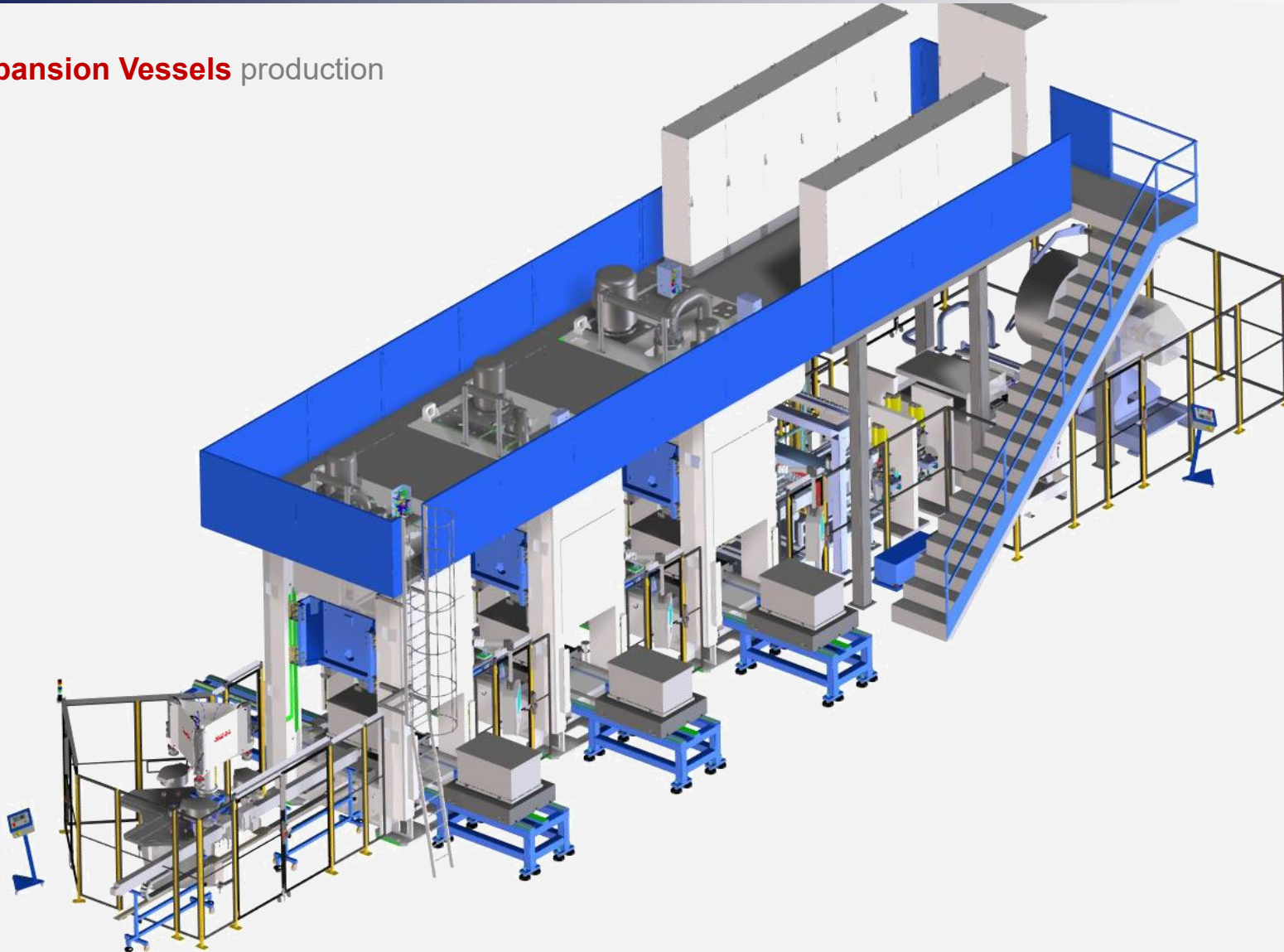


## Gas Bottle production



Hydraulic Presses

Expansion Vessels production



Hydraulic Presses