



The new Courtoy **PERFORMA™** tablet press focuses on:



- 1) *Increased machine output*
- 2) *Increased process yield*
- 3) *Faster product change-over*
- 4) *Reduced tooling cost*

Thanks to 2 innovative technologies:

- **EDD: Exchangeable Die Disc**
(patent pending)
- **DS: Die Shells**
(patent pending)

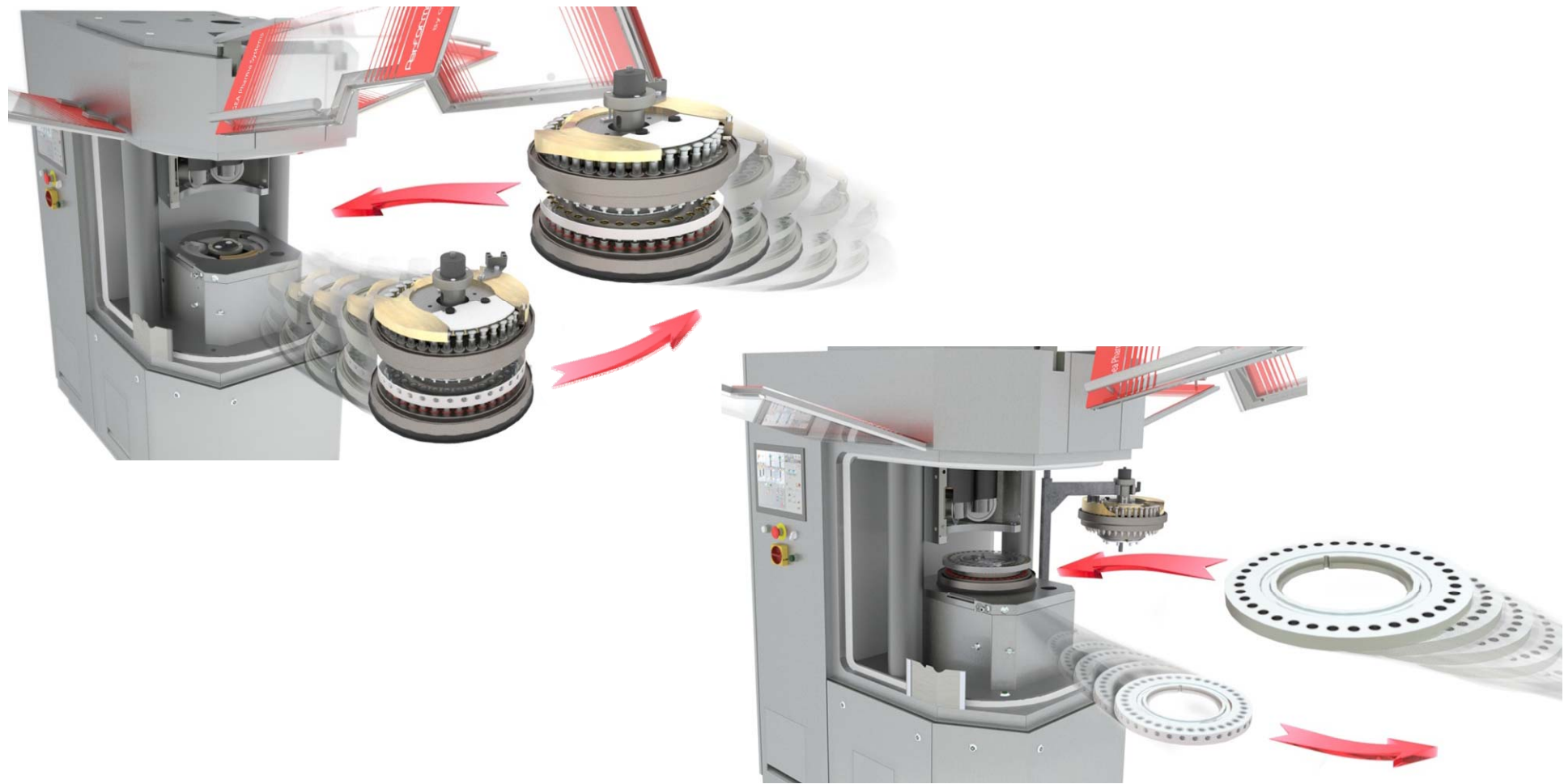


Exchangeable Die Disc (EDD): turret can easily be separated into 3 parts



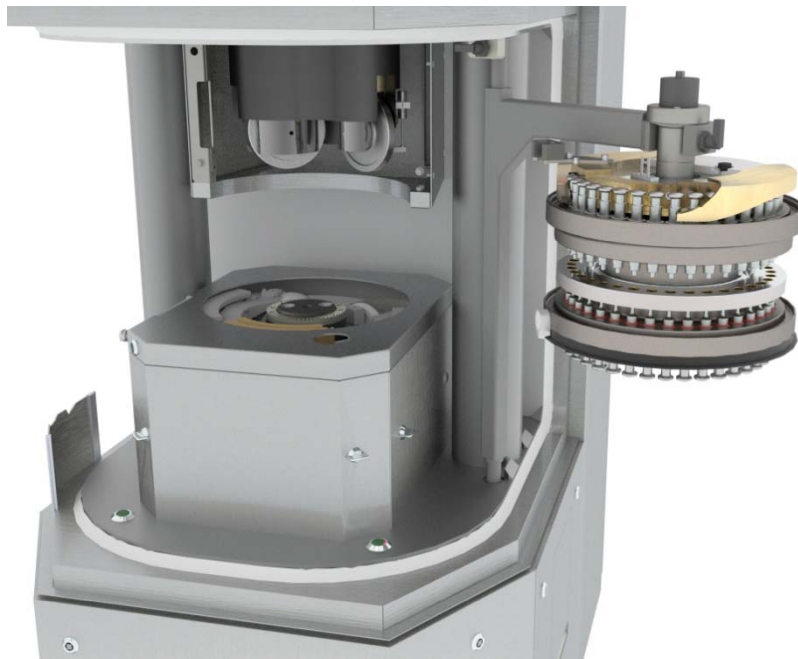


Exchangeable Die Disc (EDD): exchange the complete turret or exchange only the Die Disc



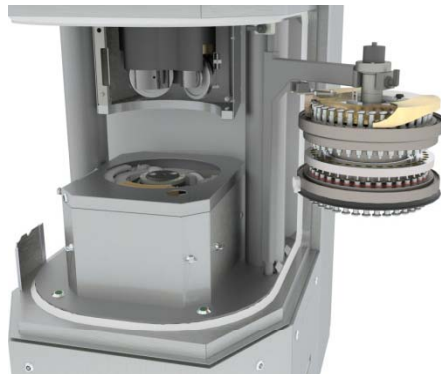


Exchangeable Die Disc (**EDD**): the same arm can remove the complete turret, or just the upper punch guide to allow for manual exchange of the Die Disc

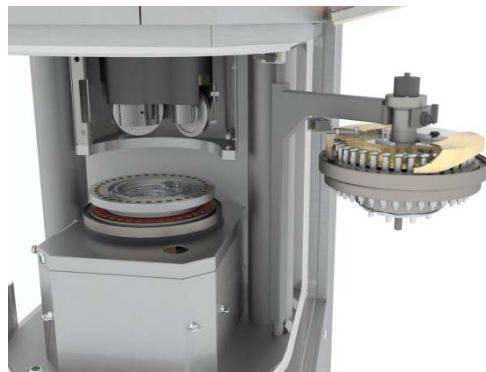




Benefits and Advantages



- **Exchangeable Turret:**
 - 1) Easy change-over between tooling standards (EU and TSM) and tooling types (D, B, BB, and BBS).
 - 2) Easy access for inspection and maintenance of the turret, cam tracks, compression rollers etc.
 - 3) Thorough cleaning of the compression zone and turret.



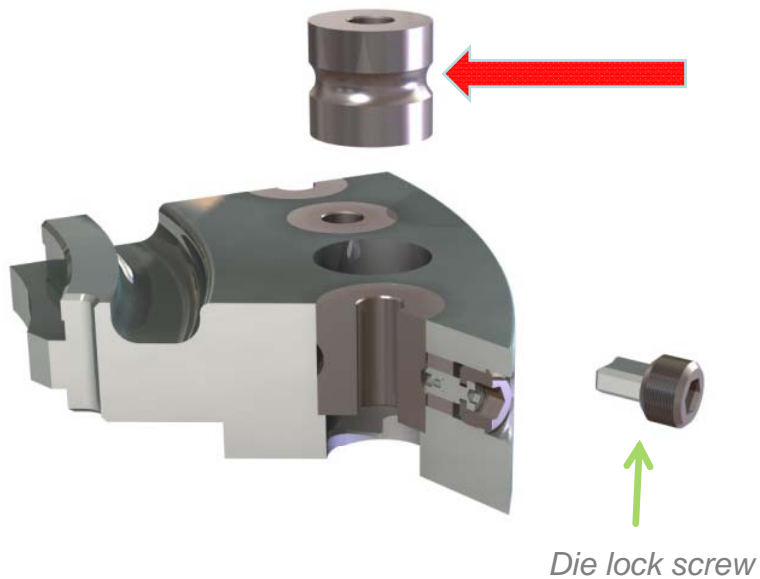
- **Exchangeable Die Disc:**
 - 1) Fast and easy product change-over: replace just one disc instead of many dies or multiple die segments. Duplicate **EDD** allows off-line fitting and locking of the dies in the Die Disc.
 - 2) More economical alternative to the exchangeable turret: only the Die Disc needs to be duplicated, instead of the entire turret.
 - 3) No risk of positioning the disc wrongly: no risk of damage or accelerated wear of the punches or die holes (as is the case with die segments).



Die Shells (DS): a profitable alternative to conventional dies

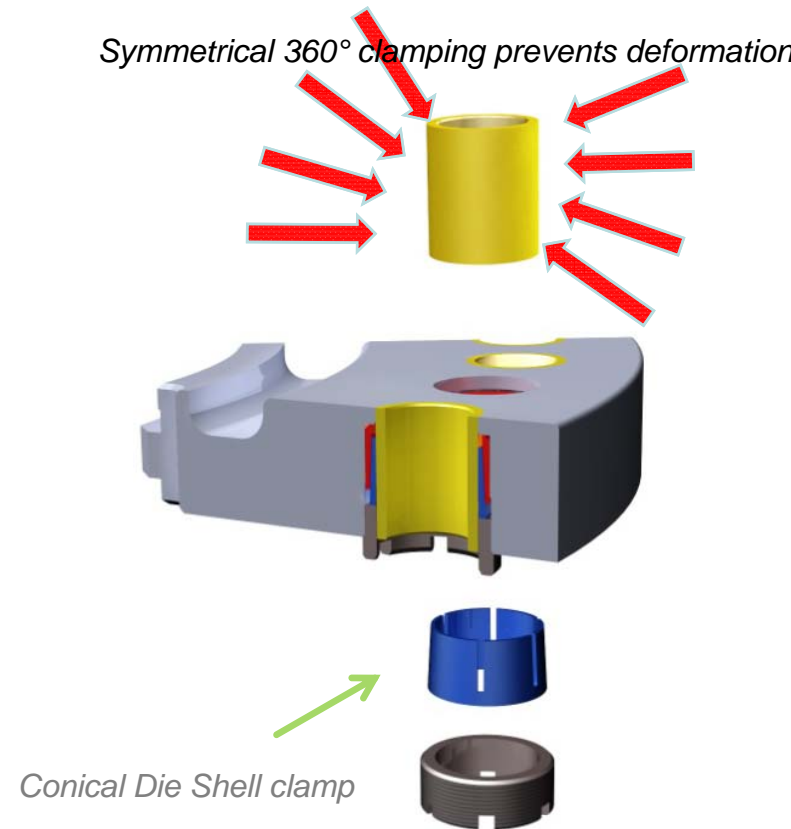
EDD with conventional dies

Clamping at one point deforms the die



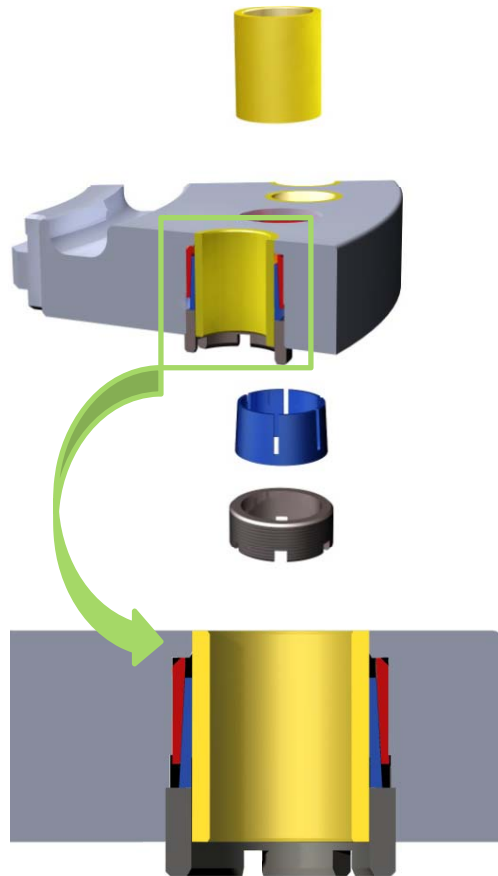
EDD with Die Shells

Symmetrical 360° clamping prevents deformation





Die Shells (DS): INCREASED machine output



The conical die clamping system allows for more punches on the turret:

no risk of deforming the Die Shells



the Die Shells can have a “thin wall” and consequently small external diameter



more punch positions can be fitted on the turret



increased machine output



Die Shells (DS): INCREASED machine output

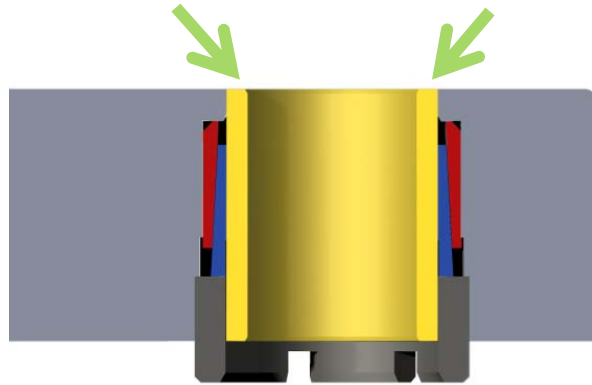
Maximum pre-compression force Maximum main compression force	10 kN (under extended dwell time) 80 kN (60 kN in case of Equal Force Compression)				
	D		B		BBS
PUNCH TYPE (EUR OR TSM)	D		B		BBS
Top punch penetration [mm]	1 to 4		1 to 4		1 to 4
Punch body diameter [mm]	25,4		19		16
Maximum fill depth [mm]	20		19		16
EDD WITH CONVENTIONAL DIES					
Number of punch positions	24		30	36	40
Die type	D		B	BB	BBS
Maximum tablet diameter / length [mm]	25		16 (L=19)	13 (L=14,3)	8
Output capacity [tab/h]	157 000		220 000	264 000	320 000
Die outside diameter [mm]	38,1		30,16	24	22
Die height [mm]	23,81		22,22	22,22	22,22
EDD WITH DIE SHELLS					
Number of punch positions	29	30	36	38*	42
Maximum tablet diameter / length [mm]	25	22	18 (L=19)	16	12
Output capacity [tab/h]	190 000	196 000	264 000	278 700	336 000
Die Shell outside diameter [mm]	30	26	22	20	16
Die Shell height [mm]	23,81	23,81	22,22	22,22	22,22
MACHINE SPECIFICATIONS					
Electrical requirements	3phase+PE – 380 V / 400 V / 415 V / 460 V – 50 Hz / 60 Hz – 7 kVA				
Compressed air requirements	6-8 bar / 100 l/m				
Dust extraction requirements	150 m ³ /h at 15 mbar				
Machine dimensions & weight	W = 1030 mm x D = 1555 mm x H = 2170 m – 2500 kg				



* Only possible if no upper punch sleeves are selected. This is only possible in case no keys are required on the upper punches (i.e. no shaped tablets and no round tablets with double break-line).

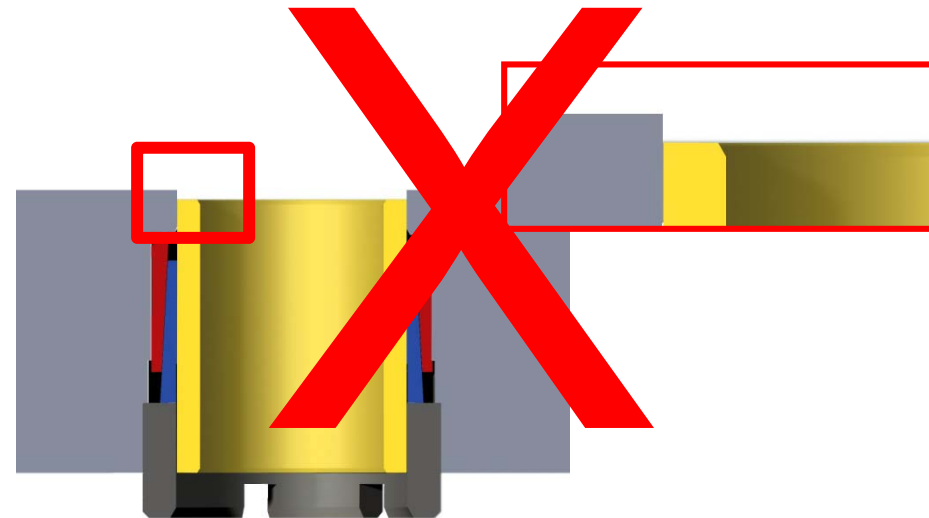
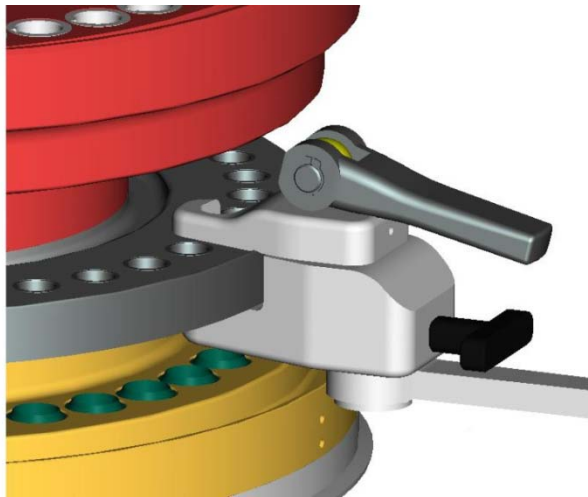


Die Shells (DS): INCREASED process yield



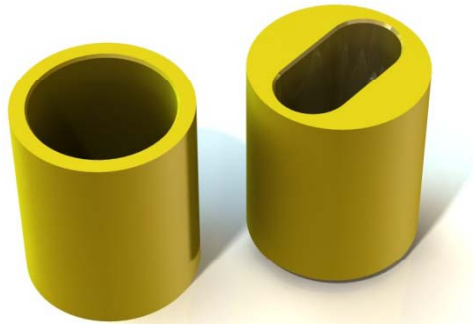
The Die Shell is mounted flush with the Die Disc surface, using a specific tool

- ➔ No powder loss due to a powder layer forming on the die





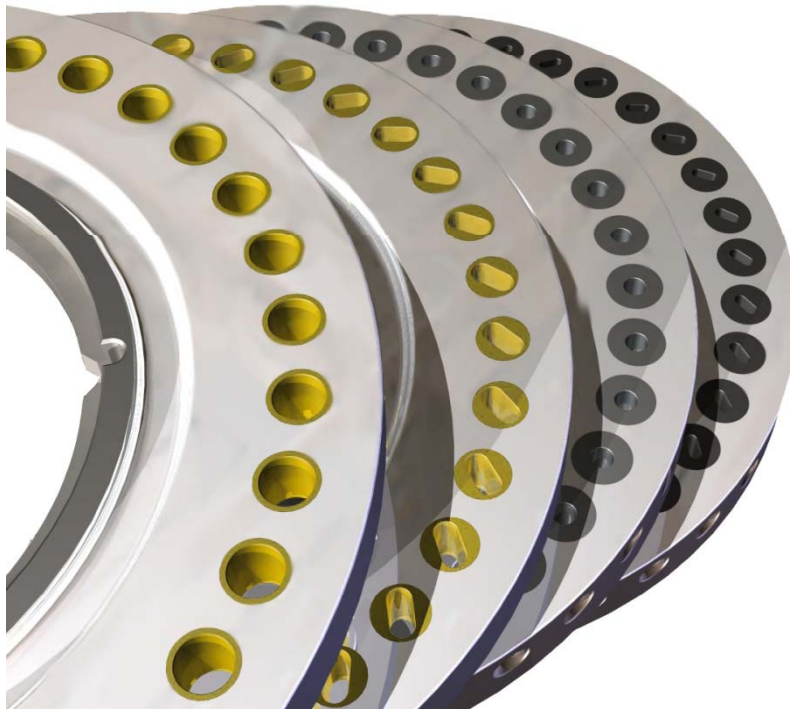
Die Shells (DS): low investment & maintenance cost



- ➔ The Die Shell has a very simple design and shape.
- ➔ Die Shell are cheap and easy to manufacture and can be supplied by your regular tooling supplier.
- ➔ If one die opening is worn or damaged, only one cheap Die Shell needs to be replaced (no complete and expensive die segment).



EDD: with conventional dies or Die Shells



Flexibility:

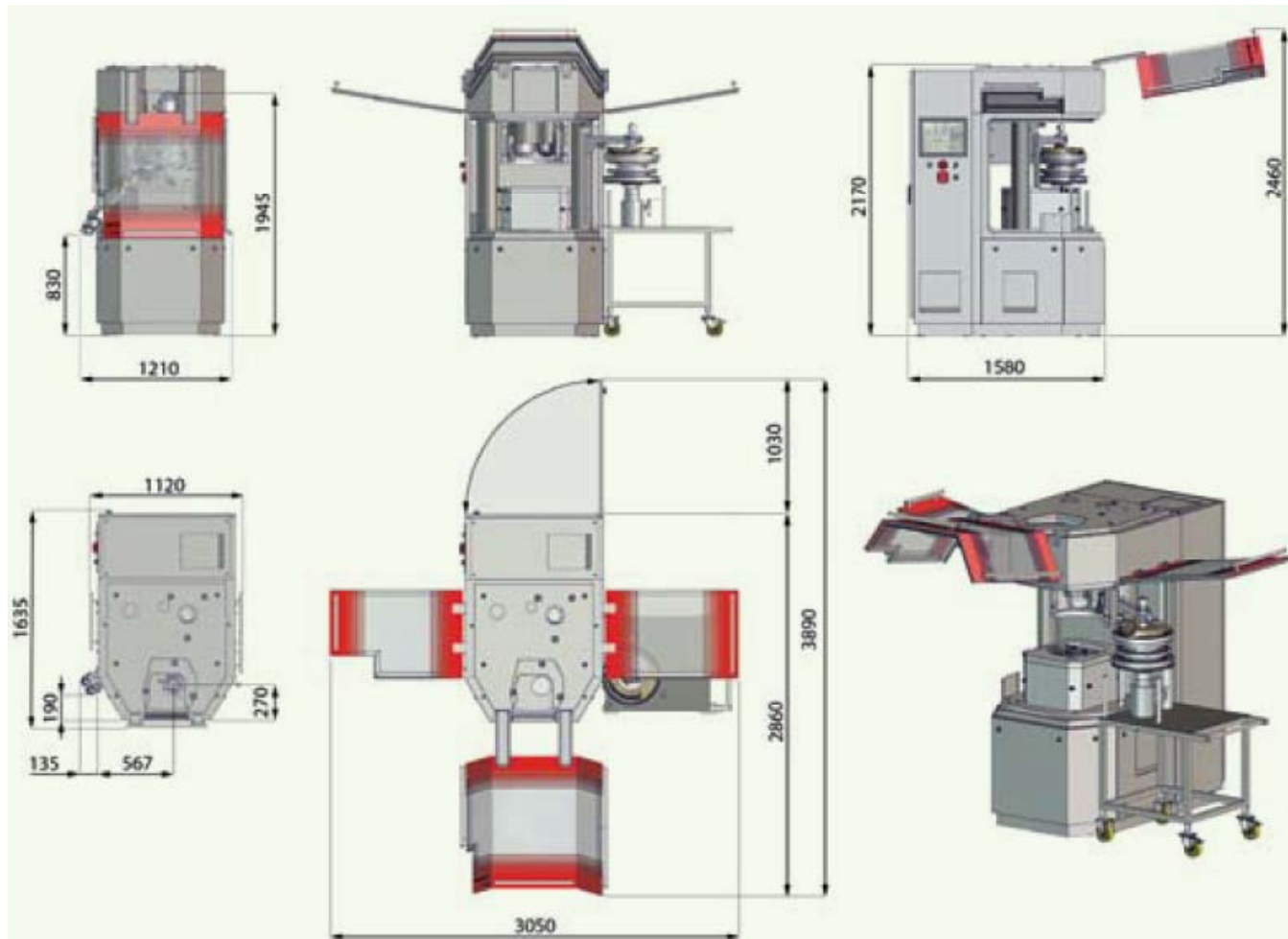
- ➔ the same machine turret can be equipped with both types of Exchangeable Die Disc:
 - EDD with conventional dies
 - EDD with Die Shells

Optimization:

- ➔ Additional benefits offered by DS:
 - DS can be made of different materials: steel, TuCa, coated steel, ceramics etc.
 - the DS material is optimized to give minimal ejection forces: longer life-time of Die Shells and punch heads

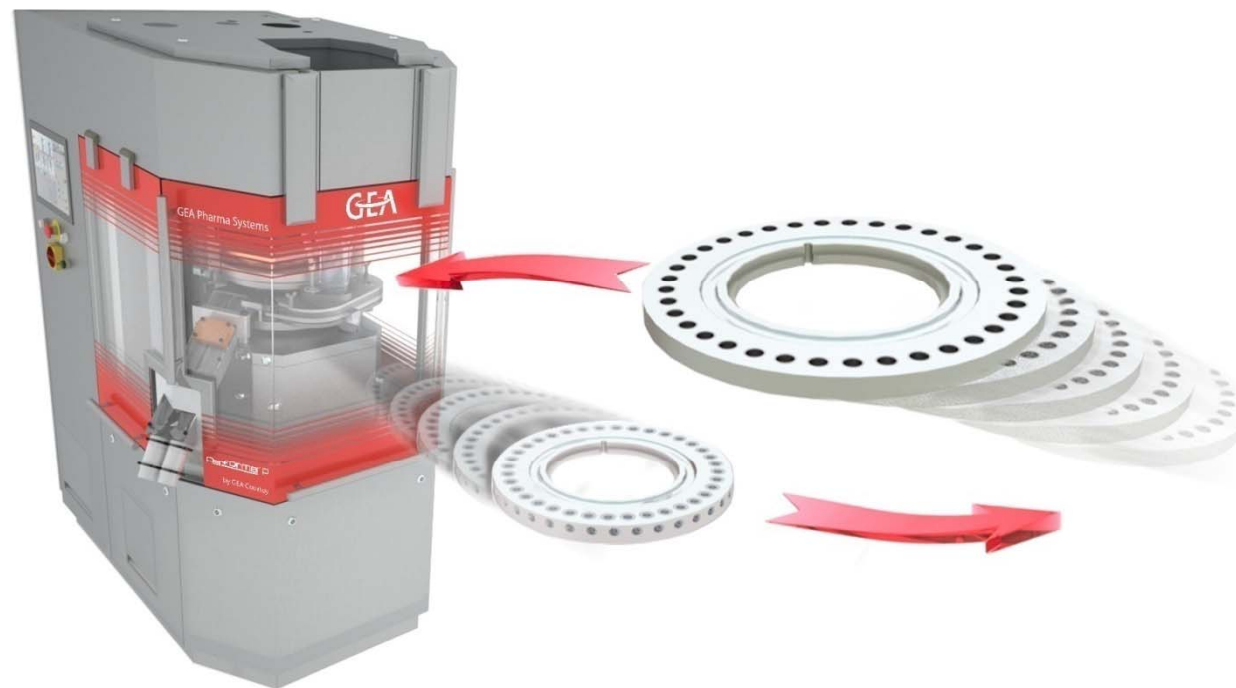


PERFORMA™ P: a very compact machine at a compact price!





- PERFORMA™ P:**
- ☑ exceptional productivity
 - ☑ maximal yield
 - ☑ incomparable savings



*Come
and see
it at
Courtoy!*