



FULLY ELECTRIC MACHINES FOR PET BOTTLES PRODUCTION

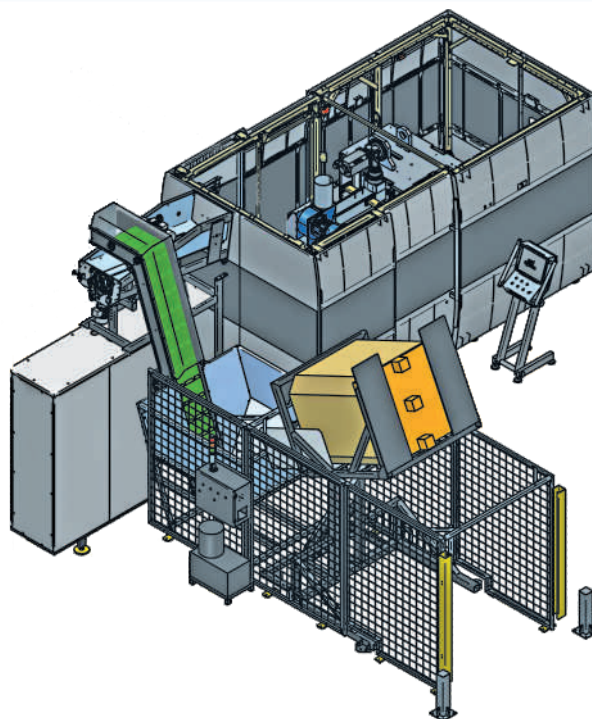
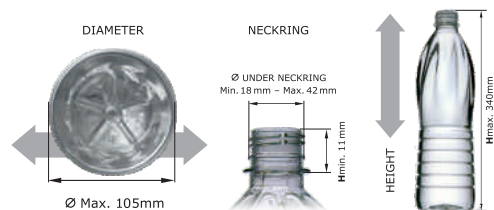
# optimaX turbo SERIES



## optimaX 4 turbo

Blowing pressure	up to 40 bar
Bottle size	0,25 - 2.0 L
Output*	up to 7 200 bph (0,5L)
	up to 7 100 bph (1,0L)
	up to 6 500 bph (1,5L)
	up to 5 800 bph (2,0L)
Power installed	110 kW
Effective power (1,0L bottle)	34 kW
Working air quantity (10 bar)**	1,0 m <sup>3</sup> /min
Working air quantity (40 bar)**	6,0 m <sup>3</sup> /min
Number of cavities	4
Steering voltage	24V / DC
Mould material	FORTAL

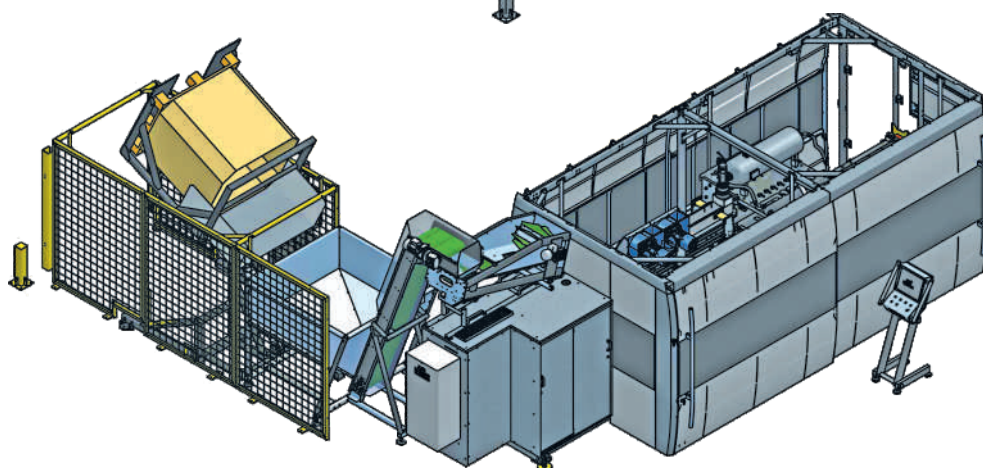
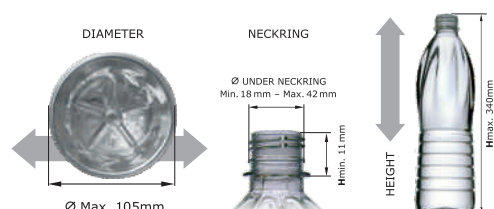
\*depends on bottle design  
\*\*bottle 1L



## optimaX 8 turbo

Blowing pressure	up to 40 bar
Bottle size	0,25 - 2.0 L
Output*	up to 14 000 bph (0,5L)
	up to 13 000 bph (1,0L)
	up to 12 000 bph (1,5L)
Power installed	160 kW
Effective power (1,0L bottle)	65 kW
Working air quantity (10 bar)**	3,0 m <sup>3</sup> /min
Working air quantity (40 bar)**	19,8 m <sup>3</sup> /min
Number of cavities	8
Steering voltage	24V / DC
Mould material	FORTAL

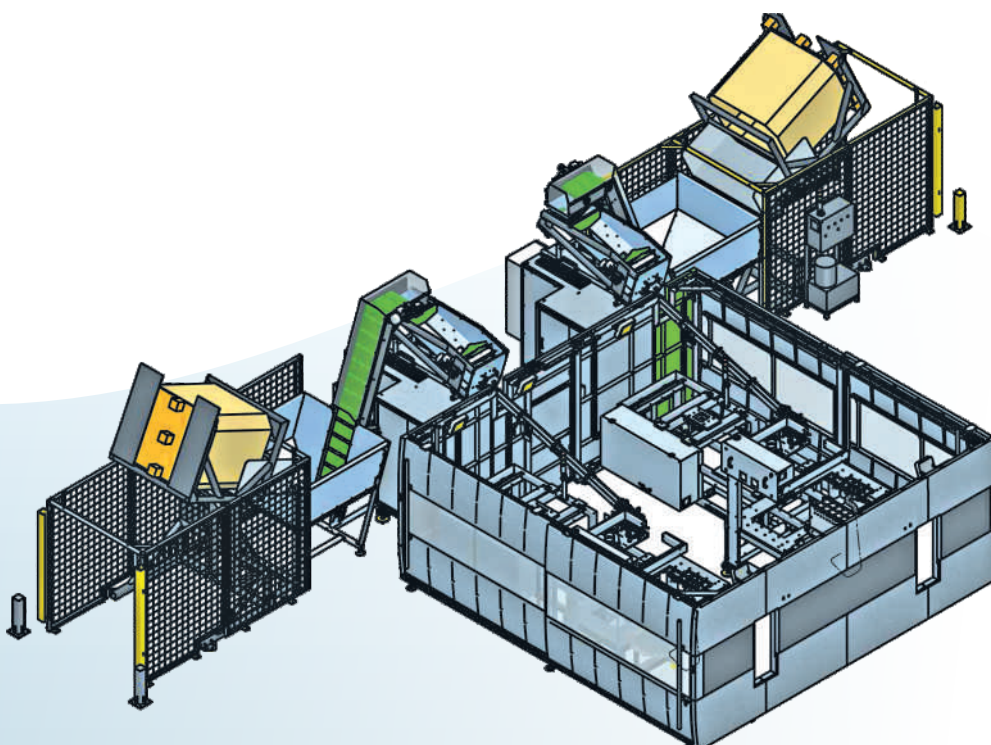
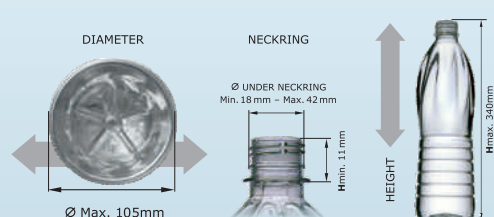
\*depends on bottle design  
\*\*bottle 1L



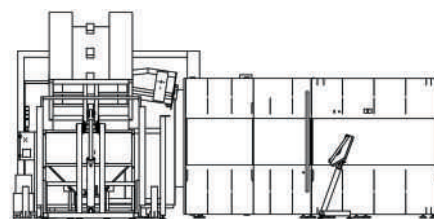
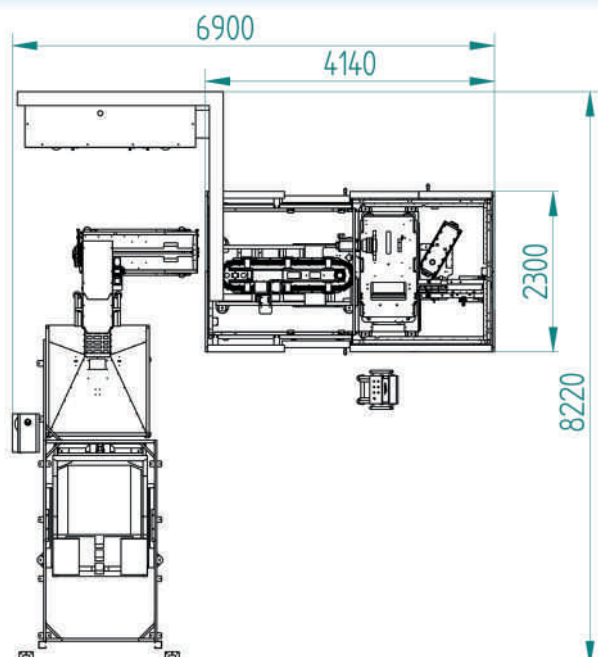
## optimaX 16 turbo

Blowing pressure	up to 40 bar
Bottle size	0,25 - 2.0 L
Output*	up to 28 000 bph (0,5L)
	up to 26 000 bph (1,0L)
	up to 24 000 bph (1,5L)
Power installed	320 kW
Effective power (1,0L bottle)	130 kW
Working air quantity (10 bar)**	6,0 m <sup>3</sup> /min
Working air quantity (40 bar)**	39,6 m <sup>3</sup> /min
Number of cavities	16
Steering voltage	24V / DC
Mould material	FORTAL

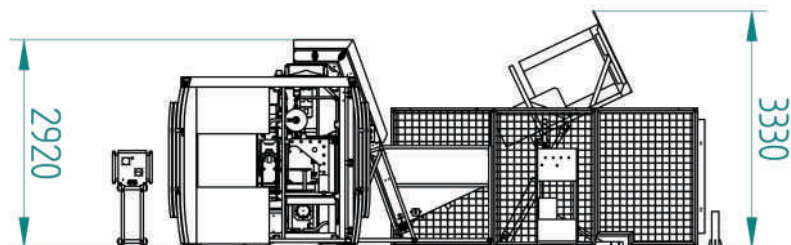
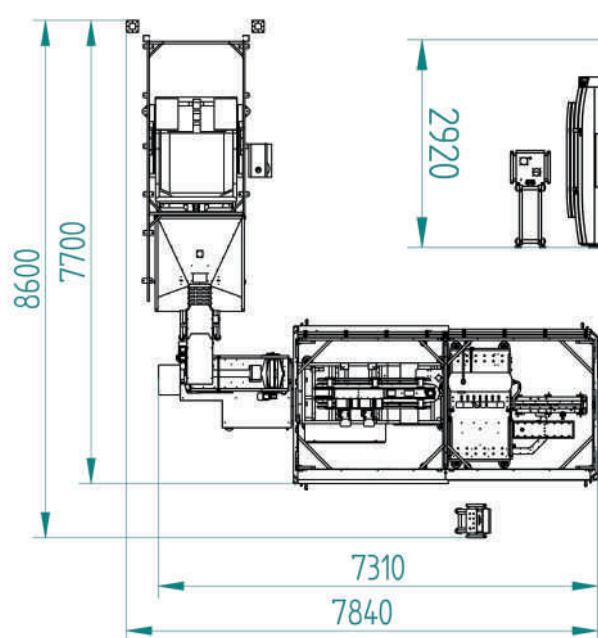
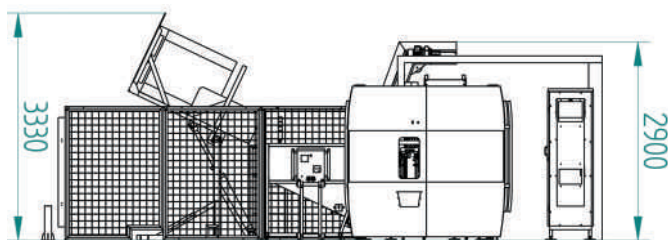
\*depends on bottle design  
\*\*bottle 1L



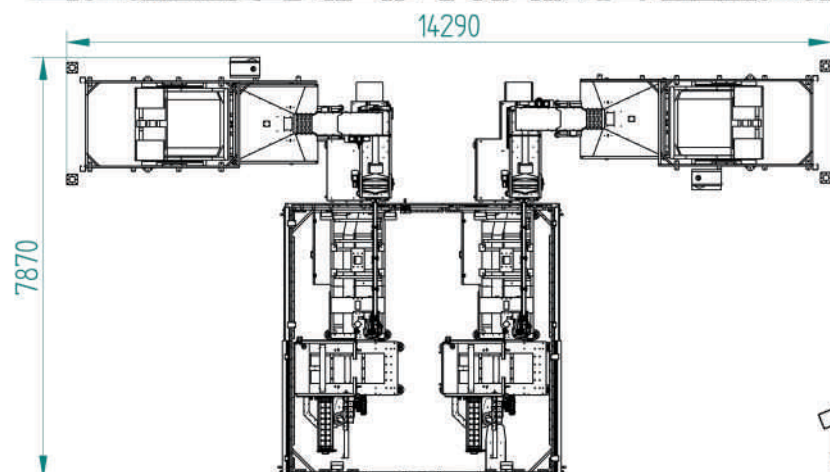
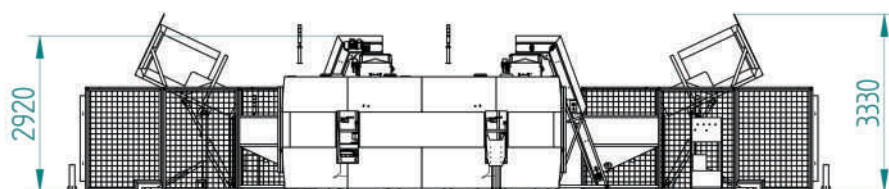
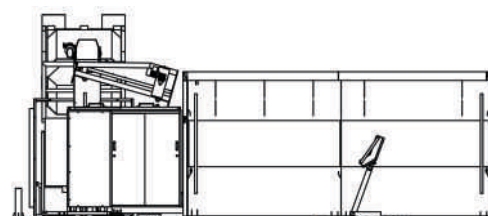




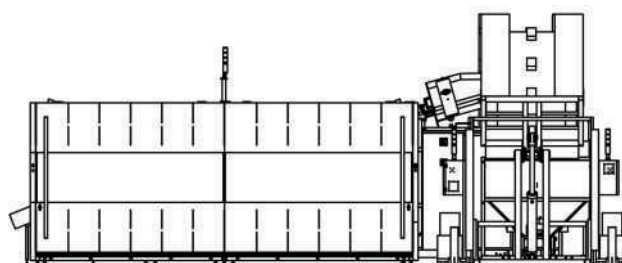
optimaX 4 turbo



optimaX 8 turbo



optimaX 16 turbo



## VARIABLE NUMBER OF CAVITIES

### OptimaX Turbo NT

2 – 4 – 8 – 10 cavities  
speed up to **18 000** bph (500ml)



### OptimaX Jar

2 – 4 cavities  
speed up to **4 500** jars per hour



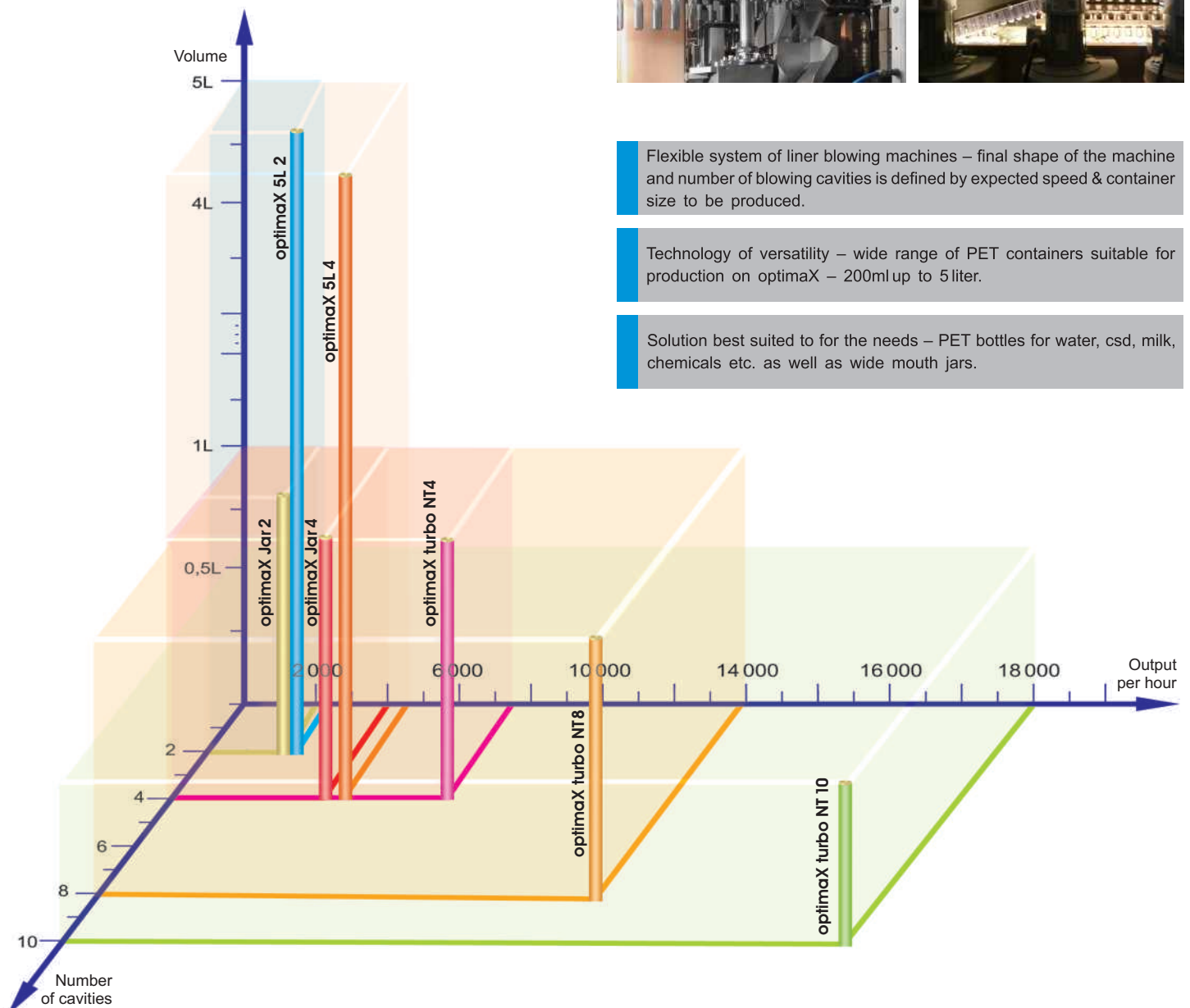
### OptimaX 5L

2 – 4 cavities  
speed up to **4 200** bph



### OptimaX turbo advantages:

- Compact size with maximal output – small footprint gives a possibility to fit a complete line in very limited space.
- Discharging ready bottles from Optima directly on air conveyor.
- Energy efficient heating process – NIR lamps instead of traditional IR radiation – electromagnetic radiation allows to reduce size of the heating units, total number of lamps, energy consumption and reaction time needed to start production after stop.
- Reduced air dead volume – low air consumption thanks to air collectors and special valves designed for linear.
- Continuous production of perfect bottles – 40 bar blowing pressure & system of clearance compensation on the closing unit & using servomotors.
- Useful equipment for easy operation: Central lubrication system & quick mould change system & Power Wizard based on pyrometers for self-adjustment process of heating.



Flexible system of liner blowing machines – final shape of the machine and number of blowing cavities is defined by expected speed & container size to be produced.

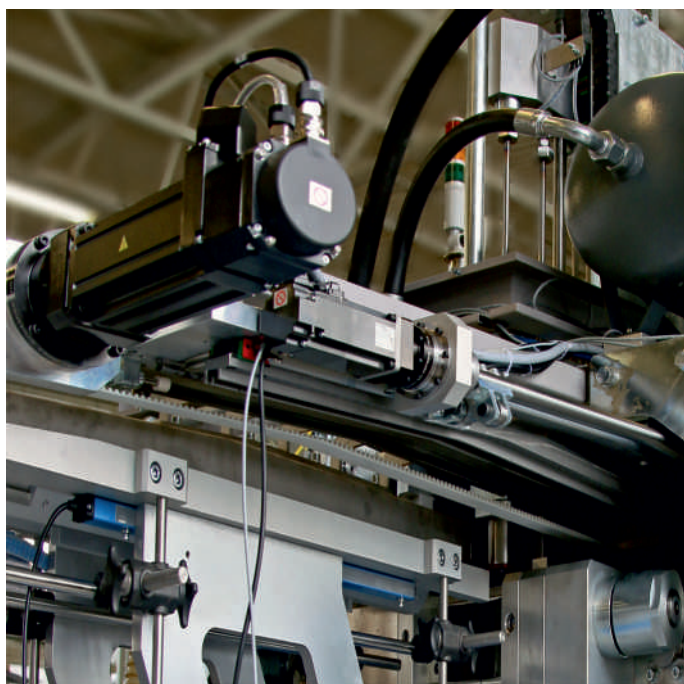
Technology of versatility – wide range of PET containers suitable for production on optimaX – 200ml up to 5 liter.

Solution best suited to for the needs – PET bottles for water, csd, milk, chemicals etc. as well as wide mouth jars.



## Innovative & efficient

**OptimaX Turbo** is a family of 4/8/16 cavities linear blow moulding machines which can produce bottles with continuous output of 7 000 /14 000 /28 000 BPH a 500ml bottles. **OptimaX Turbo** is **fully electric** blower where **all vital units** for bottles production process, such as closing unit, stretching rods, transmission of preforms between oven & moulds and oven itself are controlled and steered by **servo drives for each section**. The usage of servomotors guarantees precision, shorter operation cycles and maximal efficiency of bottles production process.



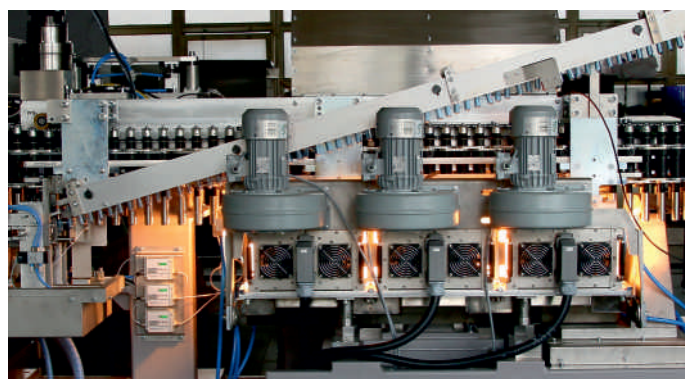
## Compact size with maximal output

Innovative solutions applied in **OptimaX** machines allow to create machines with **high output and small footprint** of the complete installation. Ergonomic shape of **OptimaX** and discharge of bottles in upright position (ready **bottles are transported directly on air conveyor** to the filling machine) give a possibility to fit a complete line in very limited space.



## Cost-effective solutions for PET bottles production

Electromagnetic radiation with NIR lamps instead of traditional IR radiation is applied for **energy efficient heating process** of preforms. Thanks to NIR radiation in **OptimaX** it was possible to reduce size of the heating units & total number of lamps and energy consumption but also reaction time needed to start production after stop (thermal inertia). NIR radiation allows to heat preforms faster and more precise.



**OptimaX** machines ensure also **low air consumption** thanks to air collectors and with **reduced dead volume** which additionally reduce cost of production. **Special valves in its new blowing block concept** (pre-blown, main blow, recuperation and decompression) specially designed for linear machines and for economic bottle production and offering many benefits like minimal blowing air consumption, compact & slim size, few wear parts & friendly maintenance.





## Useful equipment for easy operation & continuous production of perfect bottles

**OptimaX** machines were designed to meet customer expectations for efficient bottle production. In standard version we offer **central lubrication system** which allows easy, fast and precise application of lubricant and also **quick mould change system** (only 15 min to change a mould). Stops of the machine and service time are reduced to minimum. Moreover, **OptimaX** has also **system of detecting & rejecting cracked bottles** (damaged bottle are rejected automatically) and **Power Wizard** system which is based on pyrometers (self-adjustment process of heating). **40 bar blowing pressure & system of clearance compensation** on the closing unit - also SMF standard - eliminates problems with stitches on bottles walls and ensure the best quality.

**OptimaX Turbo** is designed for customers interested in high advanced and reliable blower for round, square, oval, asymmetric, trigger, flask or flat bottles - for water, CSD, beer, spirits, detergents, dairy drinks or edible oil.

