

The perfect fit.
For fitting production
ENGEL victory and e-victory





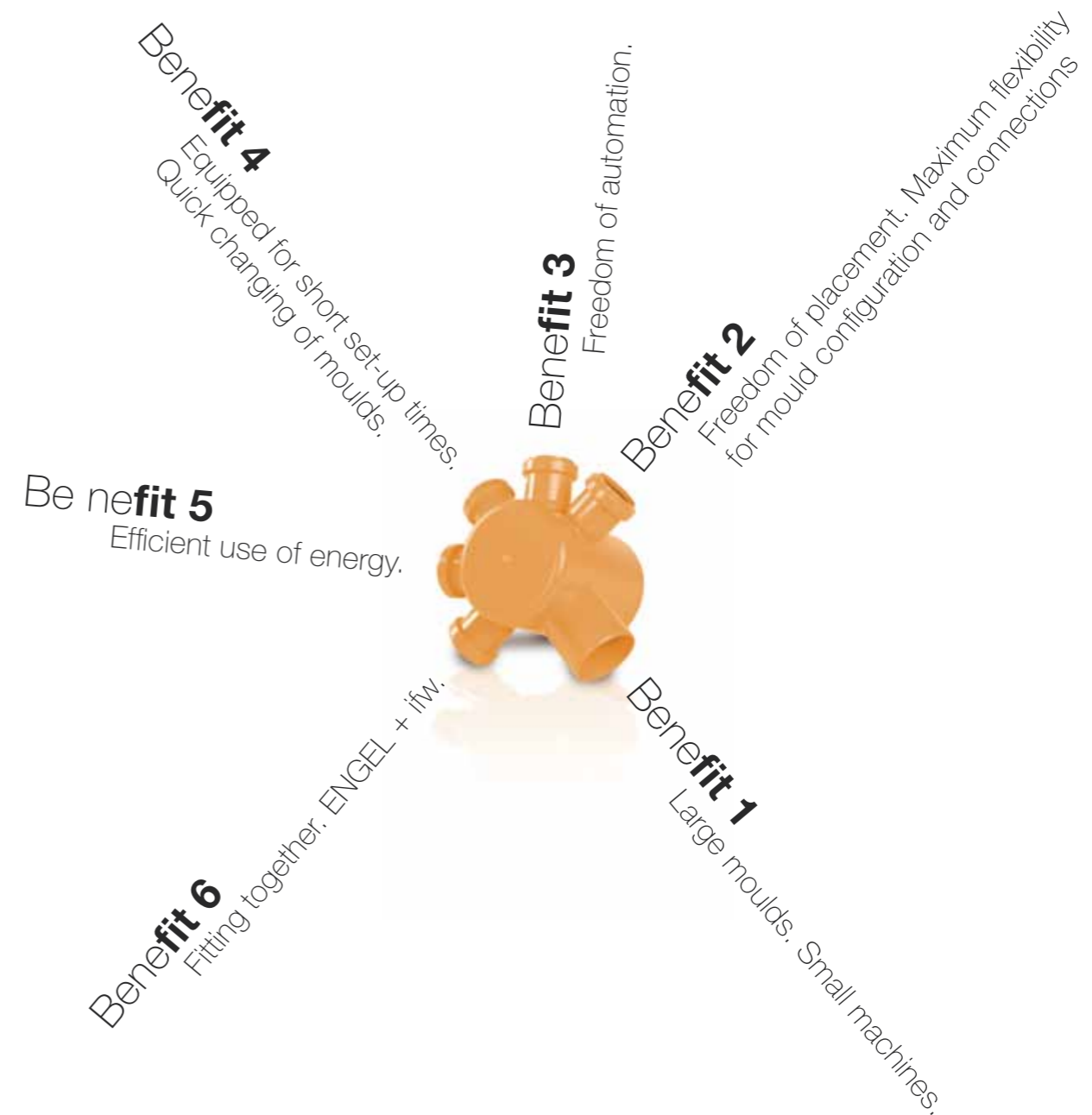
ENGEL victory. The *benefitting* solution.

The fitting answer.

No tie-bars. No barriers. **Just numerous benefits for your fitting production operations.** With a clear focus on productivity and cost effectiveness. That's what you can expect from ENGEL victory – which already has 55,000 users – and ENGEL e-victory, the electric version.

With plenty of room in the closing area, the machine guarantees maximum space for your large fitting moulds. In comparison to machines with tie-bars, in many cases a smaller machine size is sufficient. **Thereby you save significantly on investment costs and energy.**

Intelligent, tie-bar-less technology promises you all of these benefits and many more. **In short, ENGEL victory is the fitting answer.**



Large moulds. Small machines.

Fitting production calls for large moulds that take up a lot of space. Not to mention complex mould technology and protruding cores. However, the clamping force required by an injection moulding machine is relatively low.

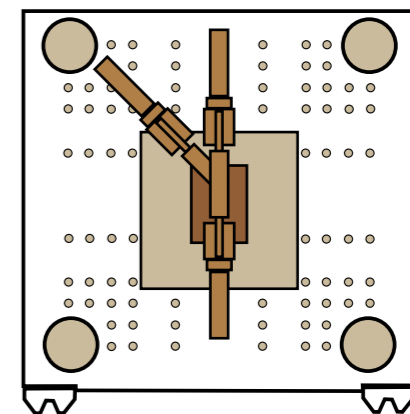
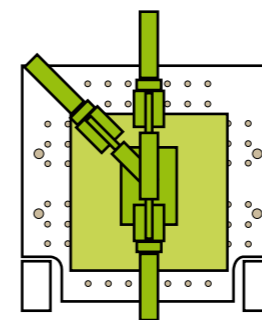
Virtually no other machine in the world meets this exacting requirements specification as closely as the ENGEL victory – and e-victory, the electric version. That's because its clamping unit has a critical advantage: **it operates without tie-bars.** Which means it offers full utilisation of mould fixing platens and maximum space for moulds.

As a result, a relatively small machine can accommodate your large fitting moulds. **Which means you make significant savings on machine investment costs and save space** in your production hall. What's more, you reduce your energy costs over the long term because a small machine uses less energy than a large one.



Ample space for moulds.
Therefore smaller machines are possible.

- reduced investment costs
- much lower energy costs, shot for shot
- less storage space needed, lower ceiling heights possible



Benefit 2

Maximum **flexibility**.
Freedom of placement for mould configuration and connections.

In the case of conventional machines, mould manufacturers often find themselves severely limited by the design options. In many cases, it is the tie-bars that dictate where to accommodate the necessary cores as well as the media, hot runner and core-pull connections. From both a technical and a cost viewpoint, however, this will rarely be the ideal posi-

tion. The ENGEL victory eliminates these restrictions: because the machine has no tie-bars, you can position the necessary cores and connections at the most viable technical location.

Benefit 4

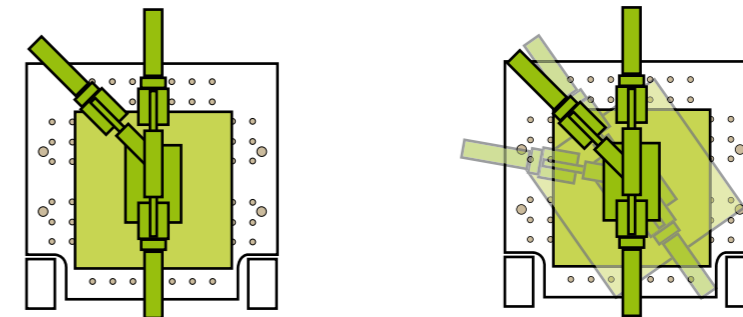
Quick changing of moulds.
Equipped for **short set-up times**.

The absence of tie-bars also enables you to change large and bulky moulds in a very short time: there is no need to disassemble cores when installing and removing moulds. **This guarantees fast set-up times and thus raises machine capacity and maximises productivity.**

Benefit 3

Freedom of automation.

Freedom of access to the mould area gives you the choice: your robots and handling equipment can intervene both horizontally and vertically to insert and remove parts. Fast and with no obstacles. **The result is easier automation and greater efficiency.**



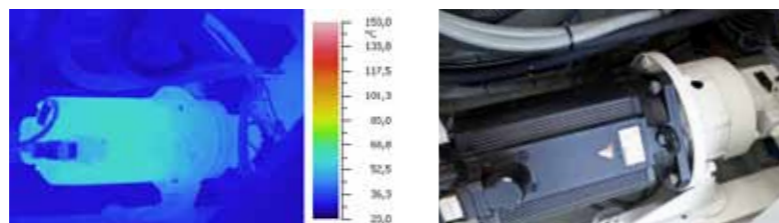
Efficient use of energy. The ENGEL ecodrive.

With its intelligent servo hydraulics, the ENGEL ecodrive is particularly energy efficient: Because the drive is only active during movements. **This means that energy consumption is virtually zero when the machine is idle (e.g. during the cooling time).** You can therefore cut your energy costs significantly in fitting production with relatively long cooling times.

One of the key advantages of the ENGEL ecodrive is the fact that **the hydraulics are on-board.** This makes the ecodrive ideal for moulds with hydraulic components, such as core-pulls. In addition, the machine runs very quietly thanks to the servo hydraulics. You also need much less cooling water – in fact, none at all in many cases.

The ENGEL ecodrive: unbeatable at saving energy.

- extremely energy efficient, especially with long cooling times
- on-board hydraulics ideal for operating hydraulic core-pulls
- saves cooling water
- much less heat loss in the production hall
- very quiet operation

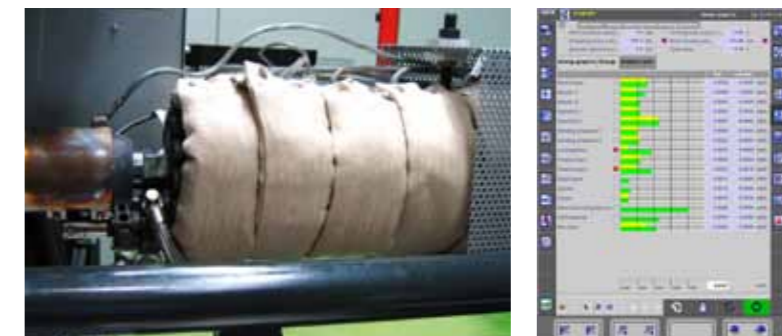


✓ ecodrive inside

Tip for energy saving:

ENGEL ecodrive + barrel insulation + ecograph

Take advantage of low energy consumption: combine an ENGEL ecodrive with barrel insulation. You can also maintain a constant overview of energy consumption levels with sophisticated ENGEL ecograph software, which enables you to optimise your machine settings. **The intelligent way to conserve energy!**



Save energy.
Cut costs.

Benefit 6

reduced by up to
-20%
Cycle times

Fitting together.
ENGEL and ifw.

ENGEL + ifw:
Geballte Fitting-Kompetenz.

ENGEL

ifw

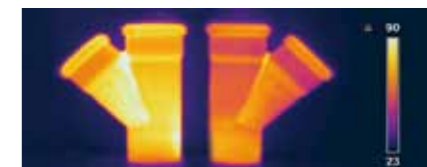


Fittings are all about a good match - and what goes for the technical field also applies to ENGEL and ifw. Uncompromising customer focus, optimised quality, innovative flair and technological superiority are the core values that make these two companies a perfect fit.

ENGEL's tie-bar-less machine technology combined with the innovative mould technology of ifw is your guarantee of greater **productivity and shorter cycle times**.

Tie-bar-less benefits of ENGEL and the innovative ifw Xpress Cooling System

- Cycle times reduced by up to 20%
- Much higher productivity
- Optimised production process
- Improved component properties: reduced stress, less distortion



ENGEL

ENGEL leads the global market for injection moulding machines. With eight production plants in Europe, North America and Asia as well as subsidiaries and representatives in over 85 countries, ENGEL offers innovative package solutions to the automotive, medical, packaging, technical moulding and teletronics sectors around the world.

ifw

ifw, the corporate group based in Upper Austria, is the global market leader in high-tech mould manufacture for plastic pipe fittings. ifw mould tec GmbH, a company belonging to the ifw group, specialises in the high quality production of moulds for plastic fittings that are designed to minimise set-up and production cycles.
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