

# **GX and ifw: Fast and efficient fitting elbow production**

Götz Scheibe, Competence Forum 2018



## "Smart ejection," space-saving mold concept with low clamping force

GX 400-2000



Clamping force	4.000 kN
Screw diameter	70 mm HPS
Application	Fitting – DN 50/45° pipe bends
Material	PP (Borealis BA204E)
Mold	10-cavity
Shot weight	365 g
Cycle time	25 sec
Special features	Plastics 4.0 - <b>New</b> Euromap 78 Robot/machine interface - BluePower, APC+

## "Smart demolding system," space-saving mold concept with low clamping force

GX 400-2000



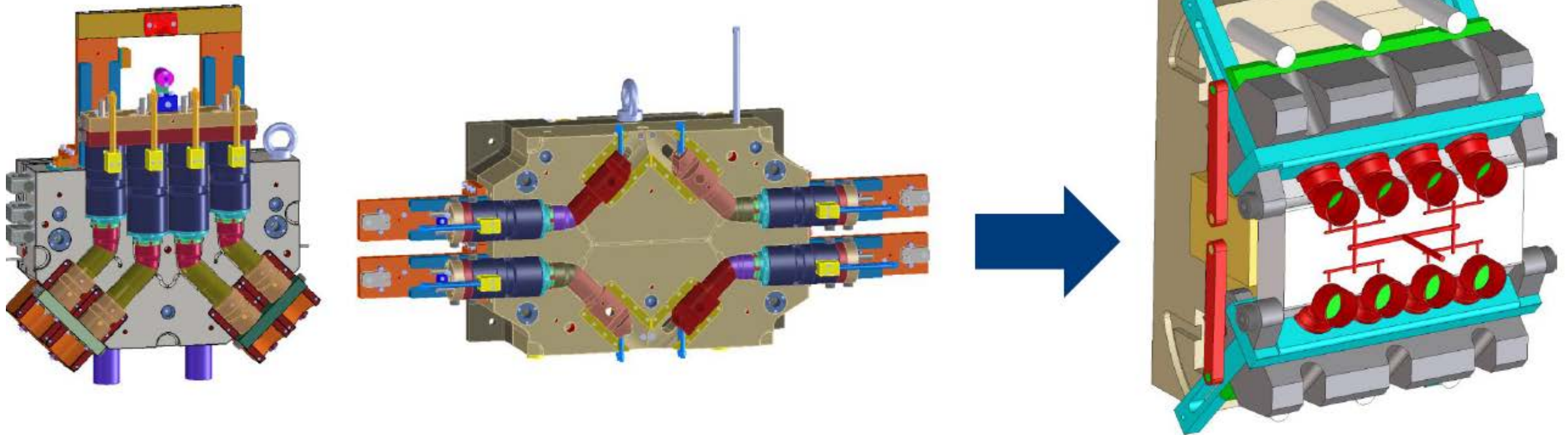
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## Unique ifw SE mold system – Clever shaping

- Revolutionary, patented mold system from ifw
- SE "Smart Ejection"
- Molded parts (especially bends) are now shaped in vertically instead of horizontally

Technical Partner

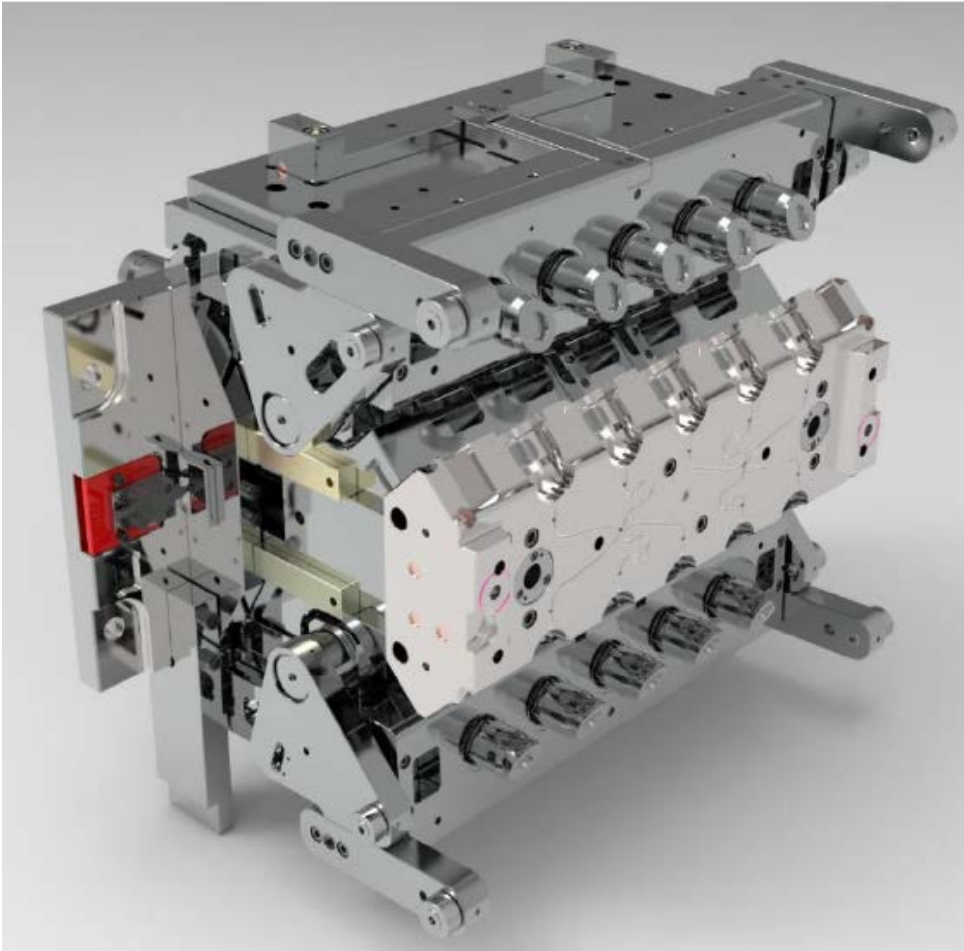
**ifw** mould tec GmbH



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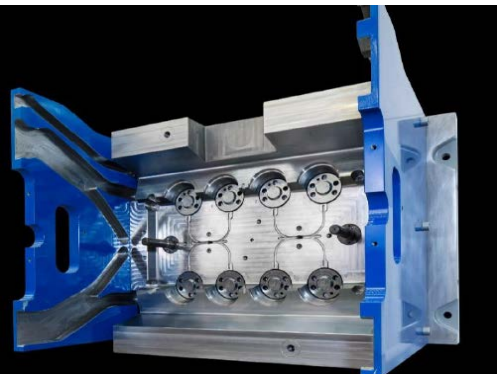


- **Double cavities** with the same size thanks to vertical shaping
- **Half the clamping force** by lowering the projected surface in the mold opening direction. Approx. 50% at 15° bend
- **Material-independent** Suitable for PVC and PP

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- **No hydraulic system required + simple handling** thanks to mechanical collapsible core actuation + take-out automation
- **Shorter cycle time** thanks to mechanical design

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- **Shorter cycle time** thanks to mechanical design
- No separation lines in relevant areas
- HK sprue system is possible (not mandatory with PVC)
- Variable number of cavities from 2 to 12

## Complex demolding made easy

Core competence of gripper design

### Gripper interface module

- Energy supply of the gripper and secure signal transmission
- Near-gripper integration of functional components

### EPS plug connector

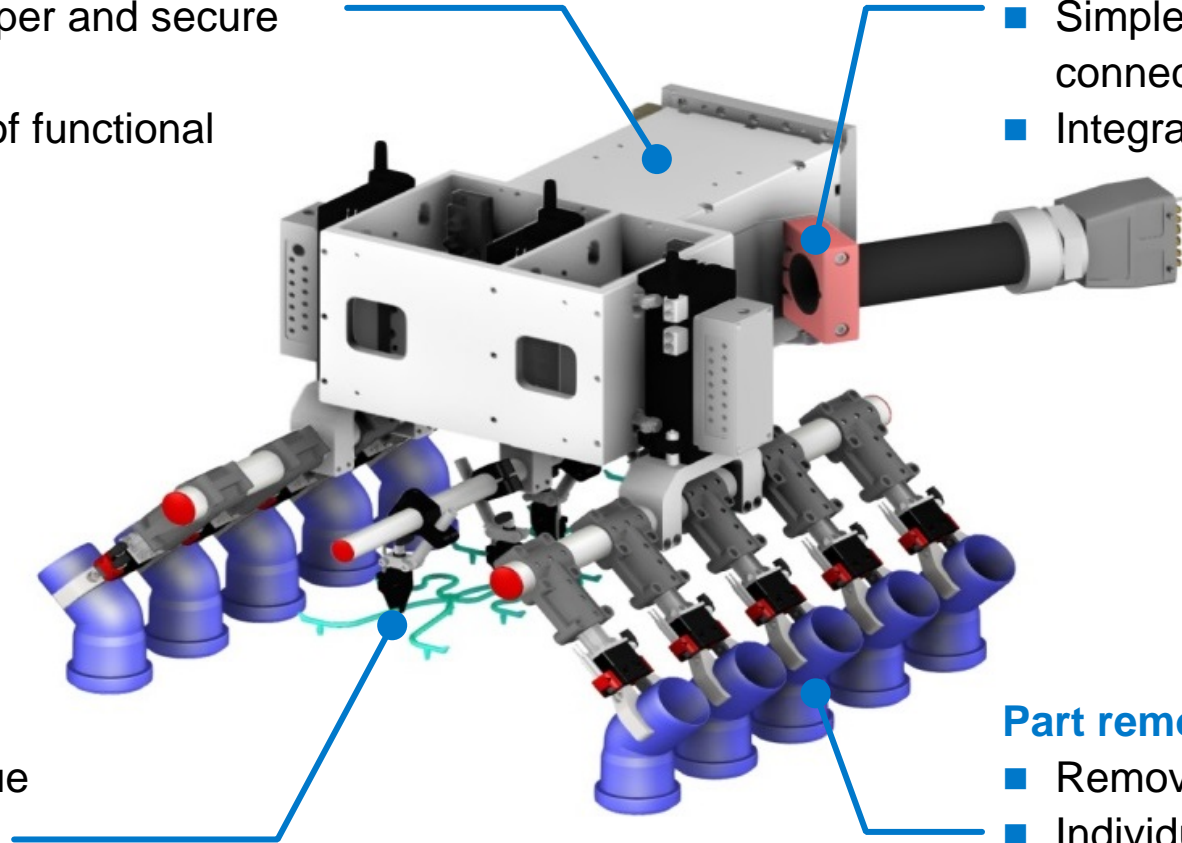
- Simple gripper change with anti-rotating plug connector
- Integration of electr. and pneum. signals

### Sprue removal

- Separate isolation of sprue
- Controlled demolding

### Part removal

- Removal grippers for separate cavities
- Individually adjustable depending on cavity length

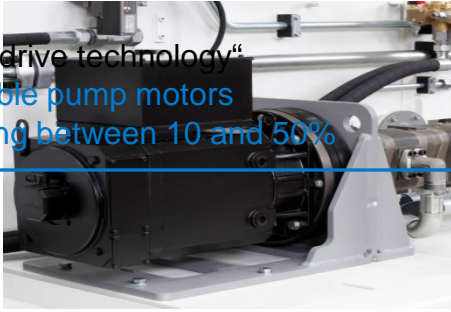




## GX400 demonstrates BluePower full equipment

BluePower modules increase production and energie efficiency

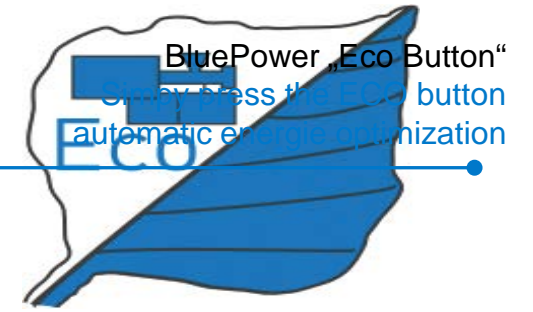
BluePower „drive technology“  
Speed variable pump motors  
Energy saving between 10 and 50%



BluePower „Energy analysis“  
Analysis of the actual situation  
Easy retrofit

Energy balance - individual evaluation					
Heaters	26,7 %				
Barrel heating zones		42,49 kW	20,80 kW	280,7 kWh	0,125 kWh/kg
Mold heating	2,7 %	0,00 kW	2,30 kW	31,0 kWh	0,013 kWh/kg
Peripherals / automation	6,7 %	11,21 kW	7,93 kW	107,1 kWh	0,047 kWh/kg
Complete system	100,0 %	81,99 kW	85,68 kW	1156,5 kWh	0,517 kWh/kg

BluePower „Heating band insulation pads“  
20 to 30% shorter heating time  
20 to 40% lower heating energy consumption



Active Accumulator-Management“  
Switch of the accumulator



**TODAY (from 2015 onward)** BluePower „weekly timer“  
Intelligent and accurate production planning  
New function of the Weekly Timer: Setting the desired start of production



## Unbeatable combination of machine properties

Machine technology with a GX

**„Smart Ejection“**  
Space saving by  
lower clamp force

**BluePower**  
Full equipment of  
energy efficiency

**Plastics 4.0**  
Integration in the  
world of  
Plastics 4.0

