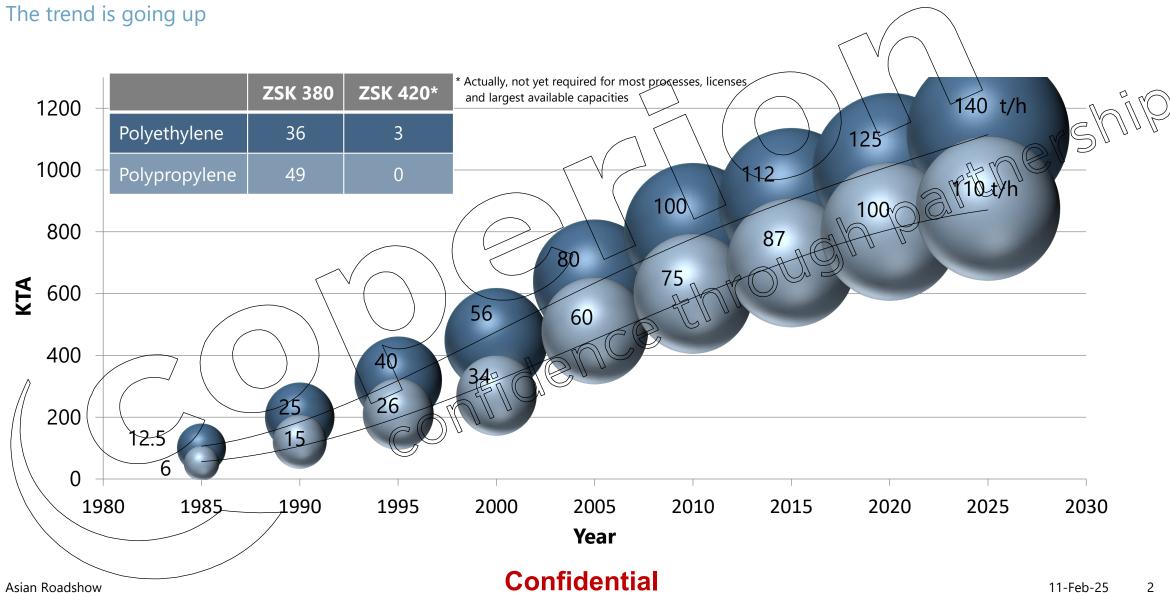


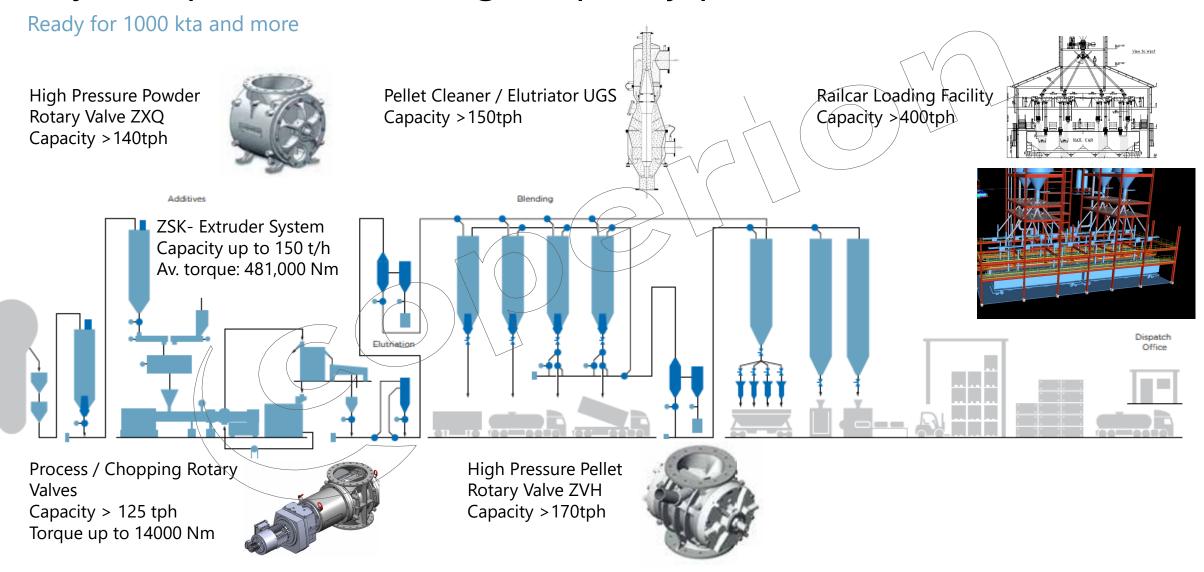
Capacity growth in Polyolefin plants





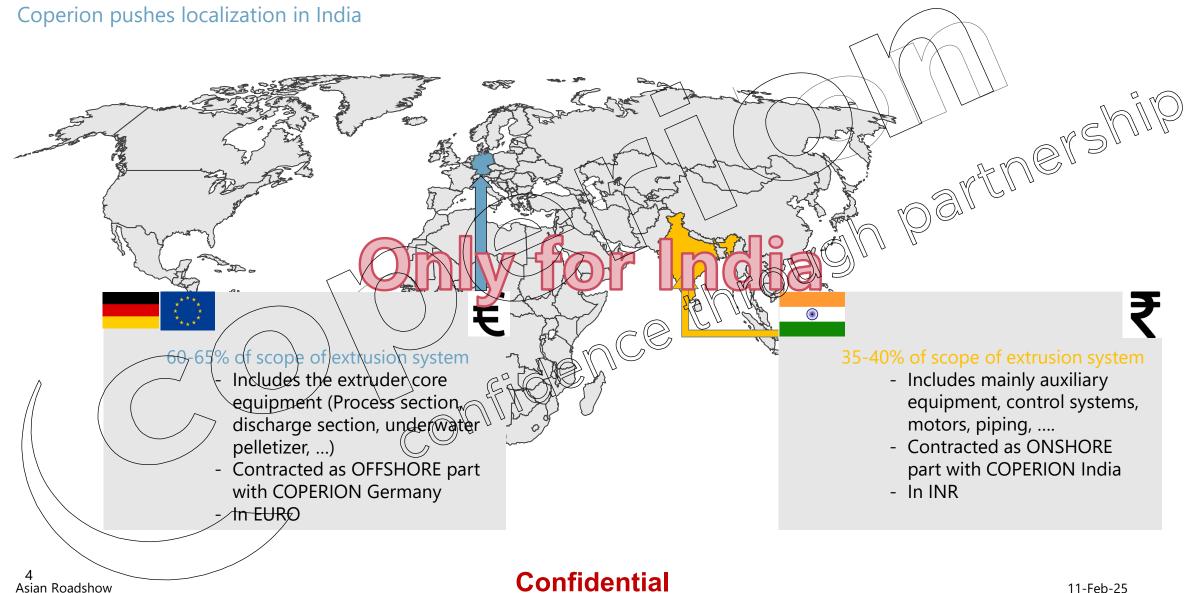
Key components for mega capacity plants





Local content of extrusion package (India)





Product demands steadily increasing



Bimodal HDPE

- Demands for > 100 t/h
- Energy efficient processes and lower operating costs
- No pellet fines generation
- Coloring of pipegrades (driven by infrastructure developments)

HDPE / LLDPE

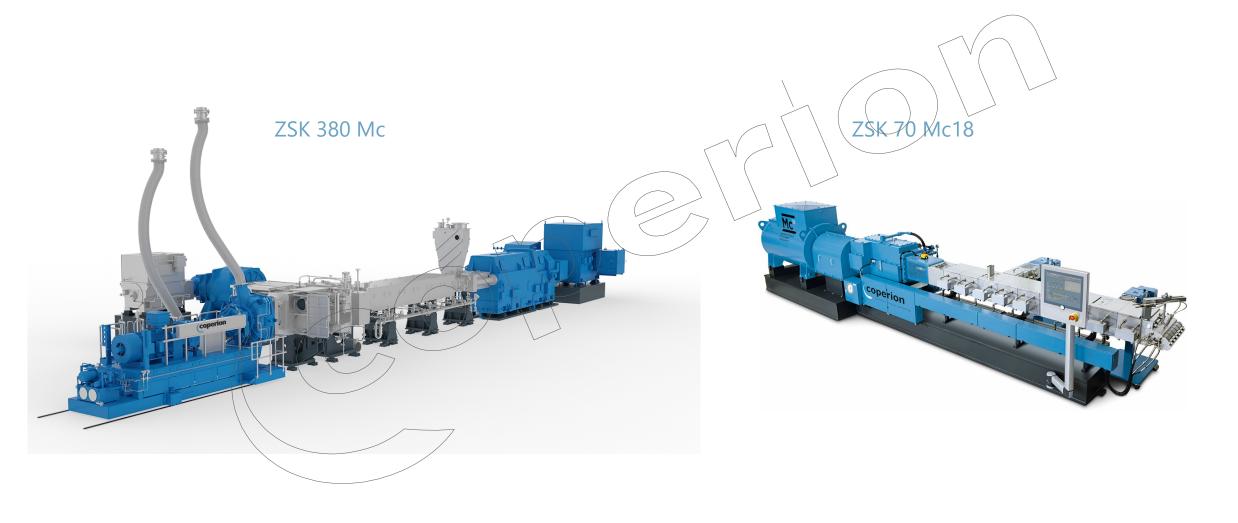
- Demands for 100 t/h 150 t/h
- Energy efficient processes and lower operating costs
- No pellet fines generation

PP

- High peroxide ppm's requirement challenge homogenization in extruder and pelletizer performance
- Request for devolatilization and deodorizing
- Demands for 100 t/h 120 t/h
- Energy efficient processes and lower operating costs
- No pellets fines generations

Extruder Layout





COPERION's differentiators on the market



COPERION could provide unique advantages for the customers

Coperion Lean Concepts:

- Holistic optimizations downstream the reactor
- Saving potentials in space, building, equipment, CAPEX/OPEX,

Energy Savings:

- e.g. pressure reduced discharge
 - Optimited screw profiles
 - Also as retrofit

Color Change:

- Colored pipe grades on one line due to self-cleaning
 - With process guarantee
 - No waste, all prime-product

Quality / Reliability:

- Increase of overhaul cycles through techn. Features
 - >98% onstream
 - Monitoring systems
 - Emergency spares stock

Highest capacities:

- actually: 1000 kta for PE, 750 kta for PP
- Equipment for even high capacities available
 - "Economy of scale"

Unique technical features:

- e.g. non-distructive clutch
 - on-line filter screen
- Superpositioning gearboxes,



