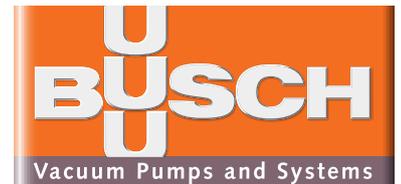


# High Efficiency

## R5 Rotary Vane Vacuum Pumps Leading Technology



R5 vacuum pumps are the most successful industrial vacuum pumps in the world with over 3 million R5 vacuum pumps in operation worldwide. Their best-in-class performance and lowest energy consumption have now been confirmed by a renowned independent testing organization.



### Low energy consumption

- Up to 57% lower than the tested oil-sealed screw vacuum pump



### Extra fast packaging cycles

- Up to 10% more packaging cycles than the tested oil-sealed screw vacuum pump



### High reliability

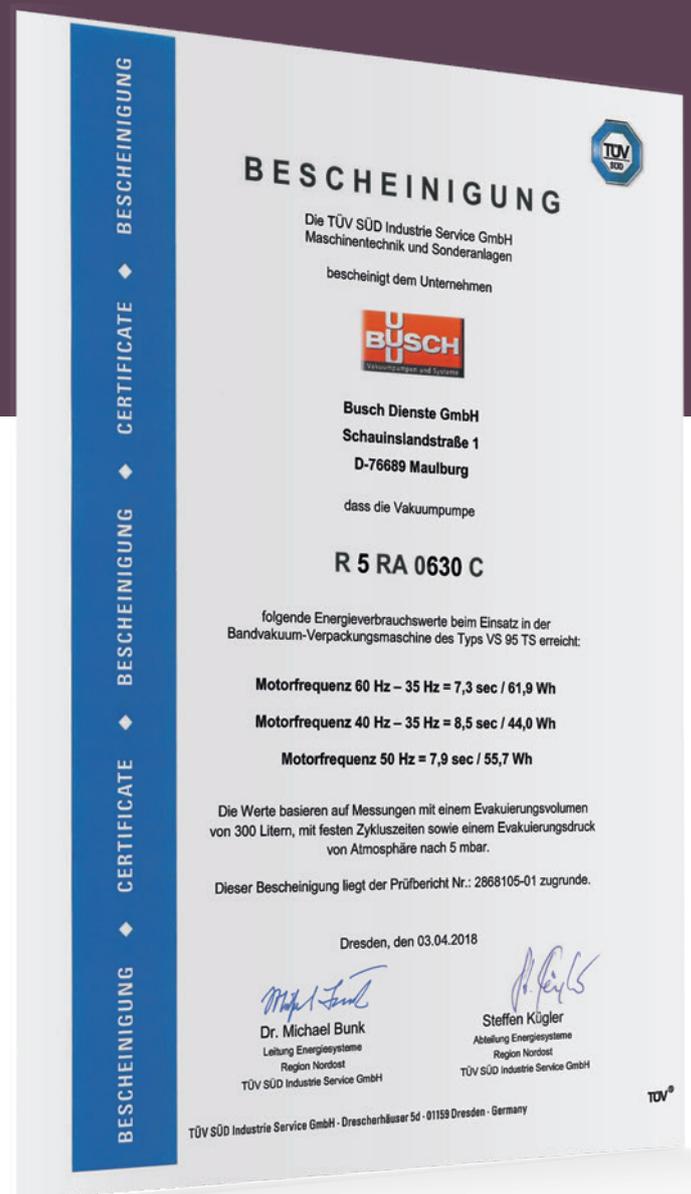


### Significant cost savings



## Two Technologies in Comparison

Our R5 rotary vane vacuum pump and a conventional oil-sealed screw vacuum pump have been tested by TÜV SÜD in terms of pumping speed, power consumption and evacuation time. The result documents in the form of a certificate that the R5 ranks first in all three disciplines.



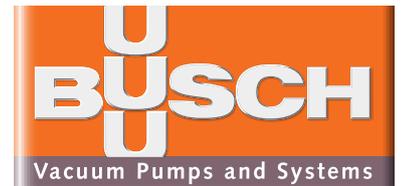
## Independent Testing Authority

TÜV SÜD is the leading independent technical testing organization worldwide. Its accredited laboratories and experienced technicians test and certify products, services and processes according to international and national benchmarks. The proven TÜV quality seal is a worldwide symbol for safety, reliability and sustainability.

**Profit from the best solution on the market!**

# Results

## R5 Rotary Vane Vacuum Pumps Leading Technology



### Test Setup

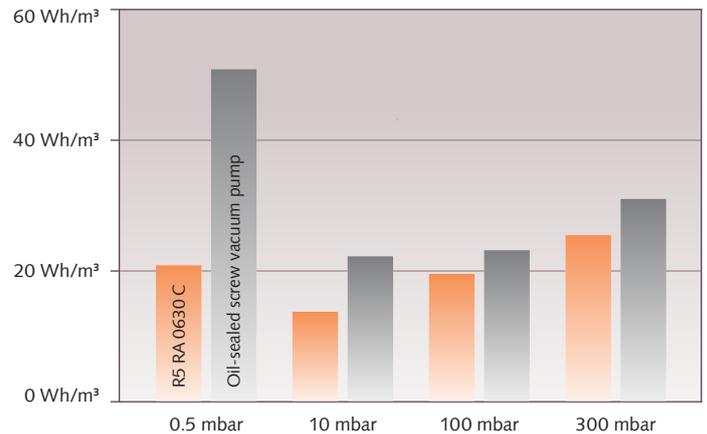
#### Specific energy consumption (SEC)

- › Flow and electric power measurement
- › 15 measurements at different fixed pressures from 0.5 mbar to atmospheric pressure
- › Comparative value: specific energy consumption (SEC)

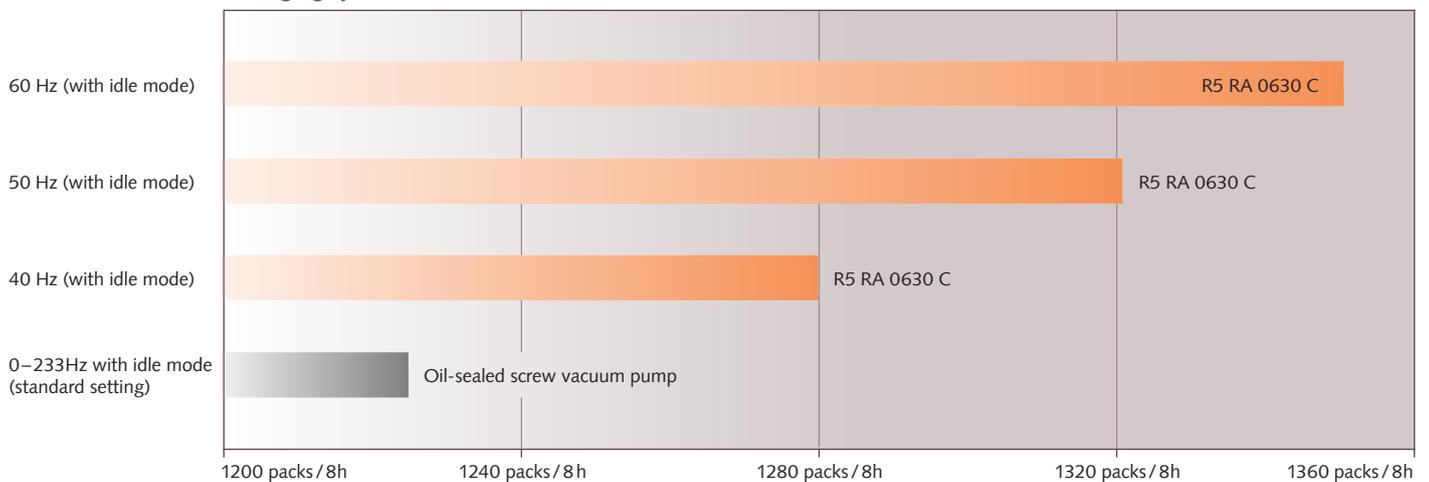
#### Packaging cycles

- › Simulation of thermoforming packaging machine
- › Measurements with different motor speeds and open and closed gas-ballast valve
- › Ten repetitions with the same test setup
- › Comparative value: evacuation time

Specific energy consumption (SEC) at given inlet pressure



Packaging cycles



### R5 – Leading worldwide

**A** **Low energy consumption:** The specific energy consumption (SEC) of the R5 rotary vane vacuum pump is lower at all inlet pressures, making it an extremely energy-efficient solution for a wide range of industrial applications.

**B** **Fast evacuation times:** At all motor speeds, the evacuation time with the R5 vacuum pump is lower than the one of the tested conventional oil-sealed screw vacuum pump, resulting in faster cycle times and thus in an increased output.

**C** **High reliability:** The R5 vacuum pump is the most successful industrial vacuum pump in the world and has long established itself as the industry standard. Over 3 million R5 vacuum pumps are in operation worldwide.