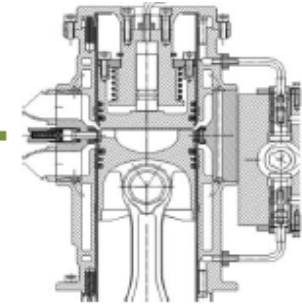
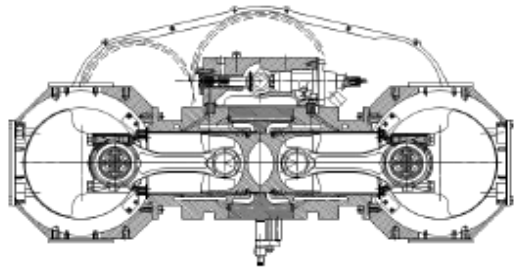


# The Elsbett gas-exchange-system

Potential for efficiency improvement  
of combustion engines  
by the ELSBETT load changing system

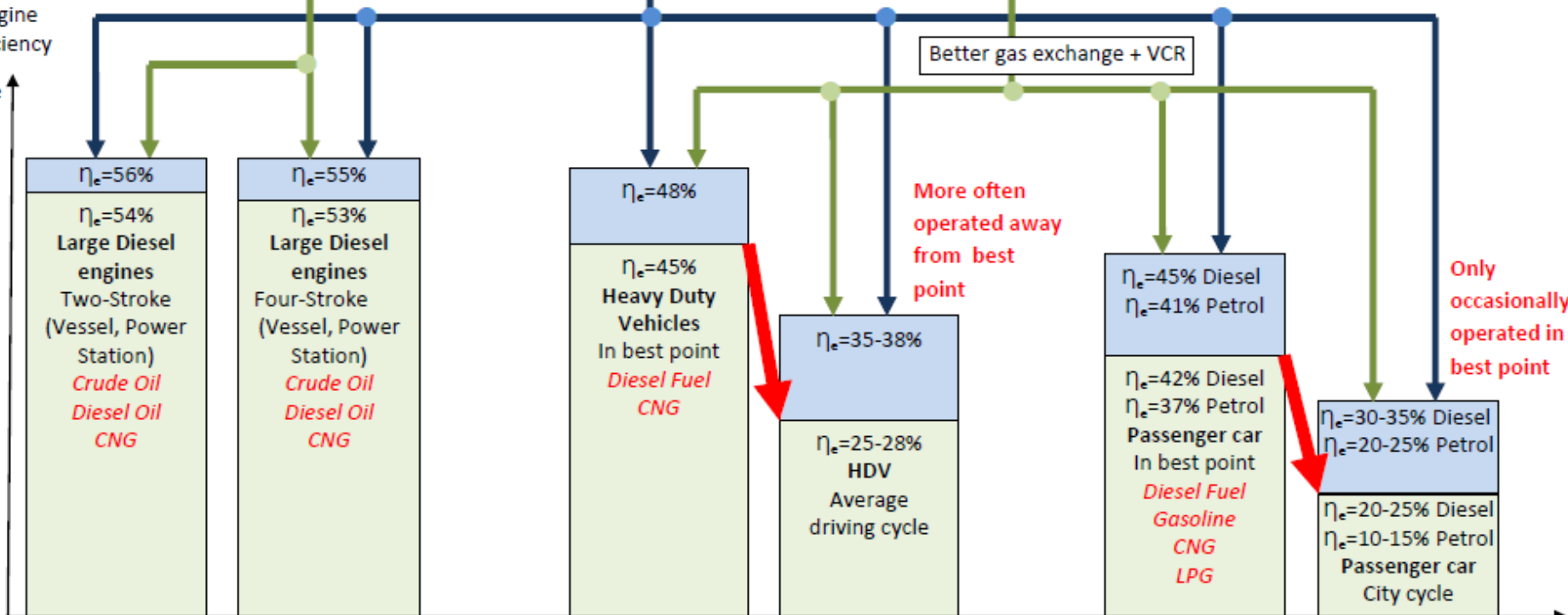


Two- and Four-Stroke OPE

Two- and Four-Stroke MaxE-Line

Engine efficiency

$\eta_e$



More often  
operated away  
from best  
point

Only  
occasionally  
operated in  
best point

a) Installation space and weight  
nearly no limitation

Limited design  
flexibility

Strong weight and  
space limitation

b) Stationary operation mainly in best  
point; means: mechanical and  
thermodynamic optimization of engine

Design and layout also  
for different operation-  
conditions

Design and layout for wide  
range of speed and load  
operation conditions