



Expoziția Internațională Specializată
INFOINVENT

Ediția a XVII-a, 17-20 Noiembrie 2021



IMPELLER OF THE HYDRAULIC CENTRIFUGAL PUMP

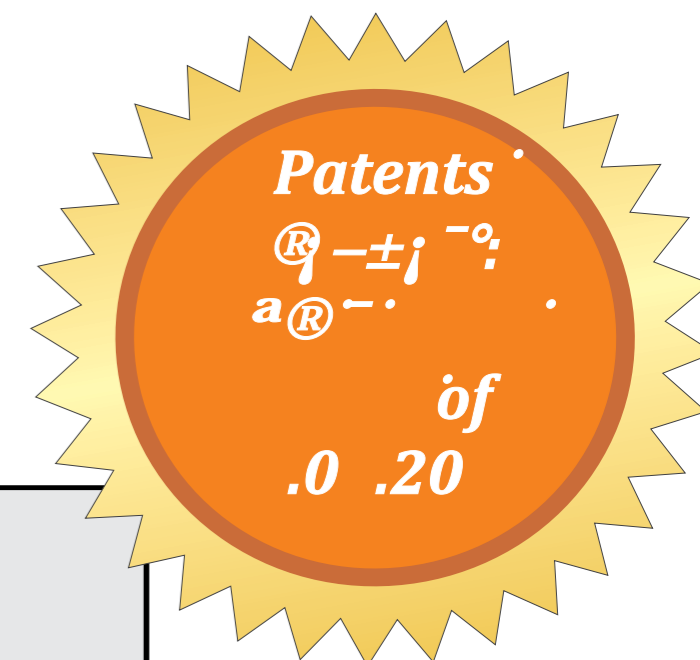
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Goal:

Increasing the efficiency of the centrifugal canned CH 6,3/20 1,1-2 model pump.

Solution:

- ✓ Centrifugal pump impeller optimization, by applying CFD simulations and stochastic optimization algorithms, namely the Evolutionary Algorithm;
- ✓ The obtained geometric model is going to be tested on CH type serial pump.



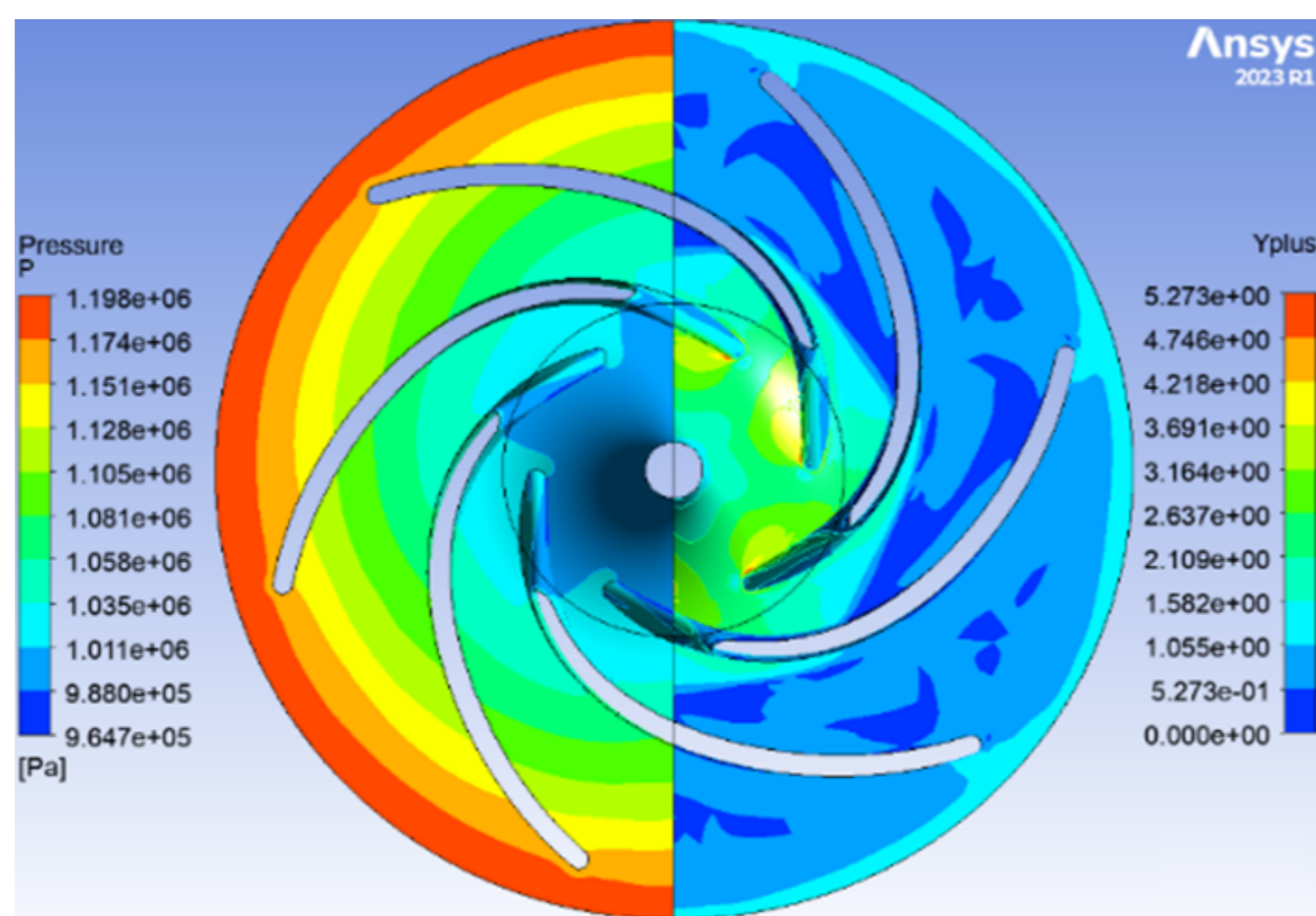
Advantages:

- ✓ Increase centrifugal pump efficiency and reduction of hydraulic losses at the interaction of fluids with the blades;
- ✓ Size reduction;
- ✓ Reduction of material consumption 'UbX manufacturing cost"

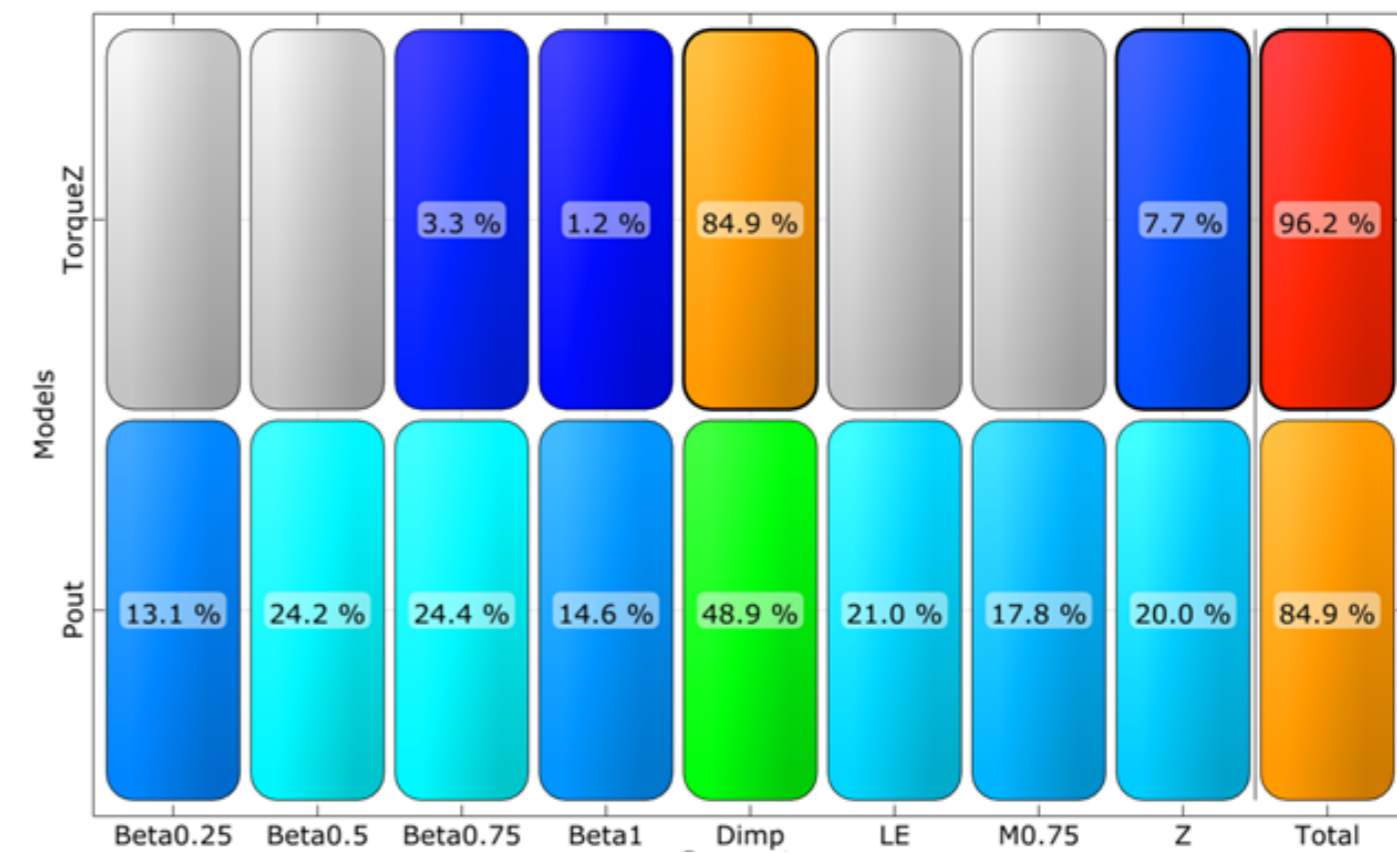
Stage:

DFYdUfUjcb Zcf dfchchmY'a Ubi ZUMi fY"

Application of CFD stimulations to obtain flow parameters

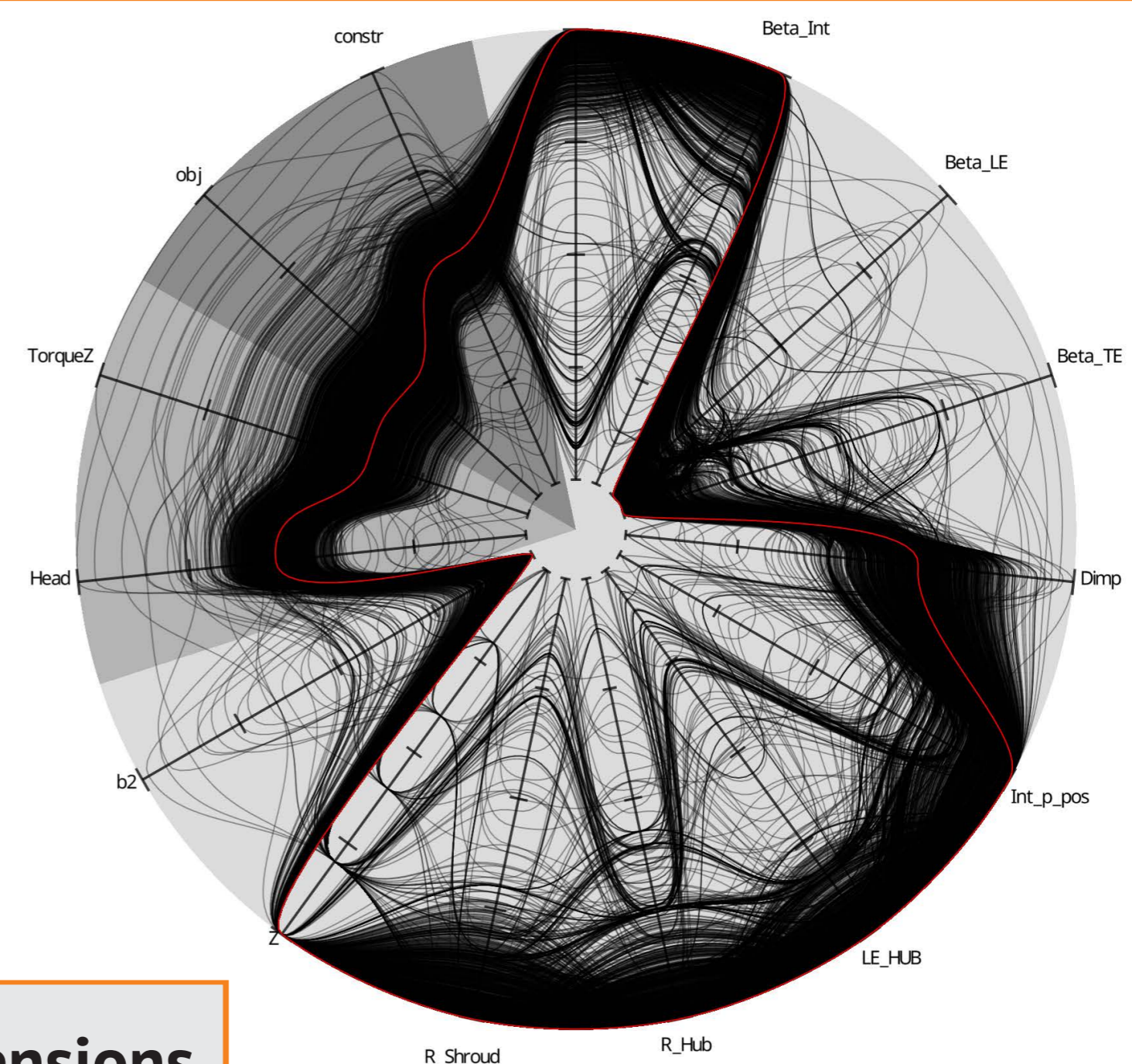
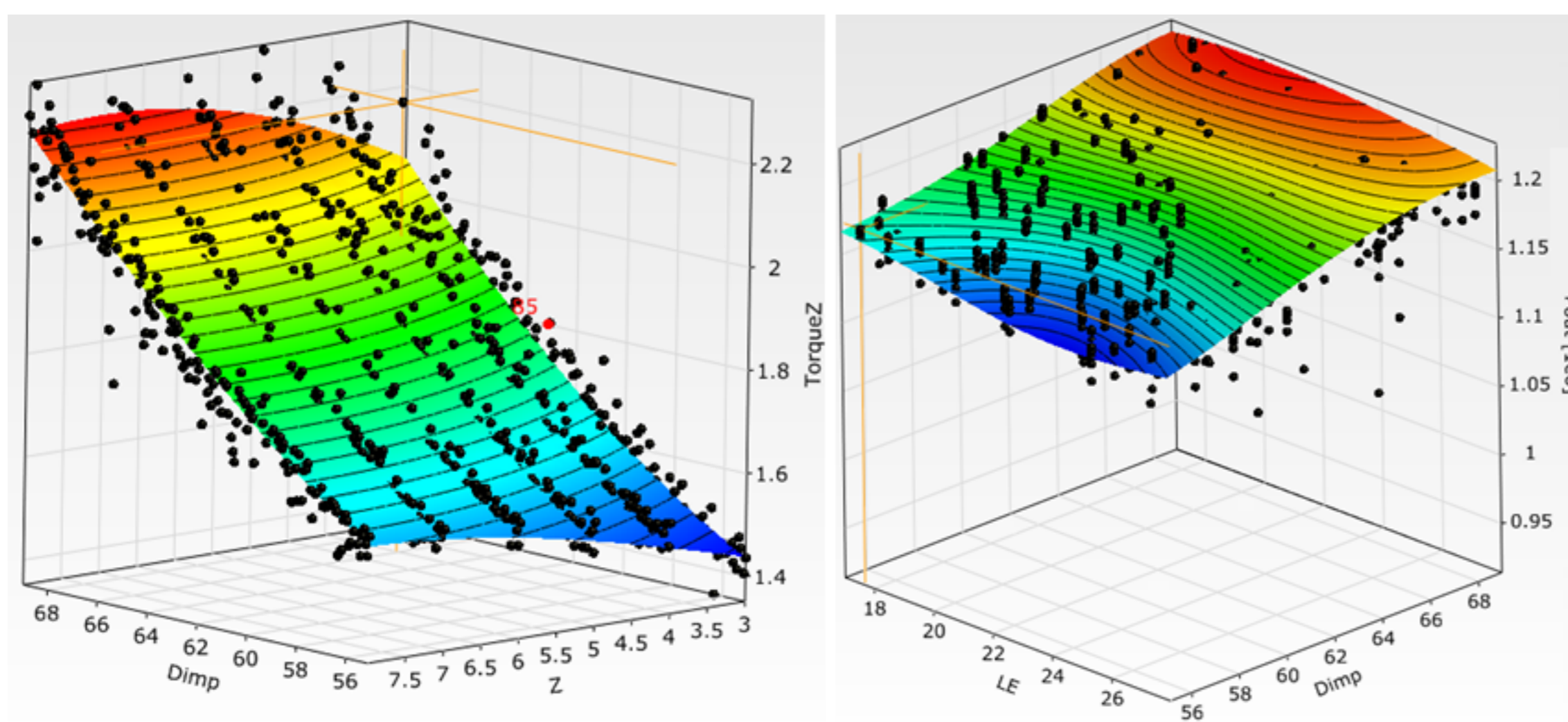


Obtaining the Coefficient of Performance Matrix



Application of the Evolutionary Algorithm in order to obtain the optimal impeller geometry

Response surface obtained from CFD simulation results



Optimized impeller dimensions

