

For Teaching and Education

Piping and plant design to try out – in the browser, no Plant 3D license



Task & goal

- Understand piping and plant design – not just copy formulas.
- You want to connect formulas with design practice.
- You want to offer exercises with freely accessible tools.



Our solution

- Free plant design infobase and calculators in the browser.
- Formulas, values and governing criterion visible; exercises with solutions.



Your advantage

- **Time saved:** Understand faster by trying.
- **Competitive edge:** Practice-oriented education.
- **Simpler:** No installation.
- **Added value:** Terms, experiments and exercises for each calculator.

Piping and plant design to try out. For universities, vocational schools and apprenticeships: the Plant Engineering Infobase is freely accessible, the calculators show formulas, parameters and the governing criterion, and each calculator comes with terms, experiments and an exercise with solution. Everything runs in the browser – no installation and no Plant 3D license.

Pressure drop

Thermal expansion

Support spans



free

Infobase without login



6

exercises with solutions



free

calculators – Piping Spec Calculator with account



in class

pages may be shown

WHAT IS FREE TO USE

Plant Engineering Infobase

15 chapters from standards and flow diagrams to Plant 3D – with sources

Learning base for the calculators

terms in plain language, experiments, typical mistakes and an exercise

Work aids

quick references and checklists from practice

Calculators

support span, pressure drop, weight, thermal expansion free; course access on request

EXERCISES WITH SOLUTIONS

1 Pipe size and pressure drop

velocity, Reynolds number and pressure drop of a DN 100 water line

2 Thermal expansion

length change of a steel line and length of the expansion leg

3 Pipe weight

load per support of a filled line

4 Converter DN · Class · material

reading an American specification in European terms

5 Support spans

why DN 200 spans further than DN 50

6 Wall thickness and spec

calculated value vs. standard wall thickness in the catalog

FOR TEACHERS

- **Tools in class:** calculator access for your course
- **Guest lecture or workshop:** "From flow diagram to piping spec" – live online or on site
- **Theses with practical relevance:** piping specs, catalog data, as-built capture
- **Show and link pages:** Infobase, learning base and exercises

Note: The exercise figures have been checked; parameters are guide values. The calculators provide preliminary sizing – not a piping design calculation or support design.



Teaching enquiries: vertrieb@seitz-ingenieure.de • +49 69 9450725-0 • www.seitz-ingenieure.de/lehre/