



Worksheet HV09 & Training Record Pressure Reducing Valves

Hydraulic Components

Email:

Course:

Provider:

Learning Objectives/Expected Outcomes: (30-60 mins)

1. To understand what functions hydraulic pressure reducing valves perform.
2. To know where pressure reducing valves are used.
3. To understand how pressure reducing valves work.
4. To appreciate the different types of pressure reducing valve.
5. Able to recognise typical components and their symbols.

Previous Knowledge Required:

Students should have completed worksheet HV05 'Hydraulics pressure relief valve basics' and HV07 'Flow control valve basics'.

Terminology:

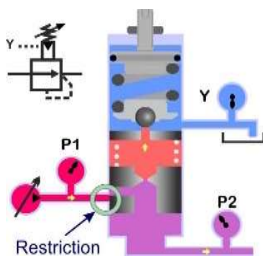
Pressure reducing valve, load limiting valve, direct acting reducing, pilot operated (PO) reducing.

Record of Achievement:



Click the email button (that will appear within each app) to post your results, once training is complete. Enter your training provider or your own email address. Also record progress, times, scores etc. on this training record sheet and keep together with any additional written work or sample calculations.

Coursework investigations

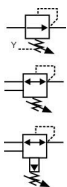


Study the detailed information and watch the instructional videos at www.e4training.com/hydraulic_valves/reducing1.php & [reducing2.php](http://www.e4training.com/hydraulic_valves/reducing2.php) Key points include:

- Limiting downstream pressure.
- Reducing relieving versions.
- Pilot drain requirements.
- Different types available.

Dates & durations:

Complete



Recognise the reducing valve symbols and appreciate what the different features do:

www.e4training.com/hyd_princip/hydraulic_symbols5.php

Dates & durations:

Complete



Virtual test rig experiment



Experiment with the valve fundamentals simulation at www.e4training.com/hydraulic_valves/reducing3.php:

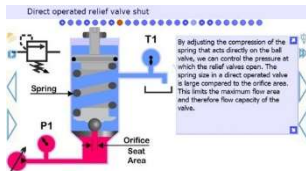
- Follow the suggested exercises and observations list below the simulation.
- Run the experiments, answer the questions, and click the buttons to see the answers.

Explore how a reducing valve works and what happens when you change the settings, and load pressures.

Date, score & time:

Tick when posted

Further work



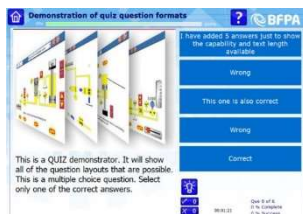
Complete the 'pressure reducing valve training' tutorial at www.e4training.com/hydraulic_courses/microtutor1.php?wtvalvesrelief

Complete quick quiz at end and post results.

Date, score & time:

Tick when posted

Interactive quiz to check and reinforce learning



Complete the 'hydraulic valve questions' at [www.e4training.com/hydraulic_test2.php? Quiz - Hydraulics part 1](http://www.e4training.com/hydraulic_test2.php?Quiz-Hydraulics%20part%201)

Post result when complete.

Quiz name, date, score:

Tick when posted

Key questions / Plenary

- Can you explain what pressure reducing valves do?
- Can you describe why a pressure reducing/relieving valves might be required?
- Can you describe an application where a pressure reducing valve might be needed?
- Can you draw a pressure reducing valve symbol?

Repeat above if the answer is no



And Finally:

Complete this worksheet and keep for your records. Submit any written coursework etc. to your training course provider.

Follow-on Course Worksheets:

Potential follow-on worksheets include:

HV011 – Sequence valve operation, use, types (Introductory)

or HV10 – Pressure reducing valve features, tips, specification (Advanced).

For specialist course worksheets visit www.e4training.com/hydraulic_courses/worksheets1.php and courses1.php

Notes