

An introduction to your Training Needs Taster Assessment

Thank you for requesting your Training Needs Taster Assessment. The purpose of this document is to give you a quick insight into your level of knowledge around Pneumatics.

Why pneumatics? Pneumatics has a direct link to maintaining productivity. Pneumatic technology is consistently present in today's manufacturing environments, and the use of compressed air is vital to maintaining uptime of machinery.

When working with numerous manufacturers and engineering firms we have found that there is little awareness about the level of skills that currently exist and often no formal training on new technology. Recent research highlighted that 55% of manufacturers recognise the need to develop their technical capability.

Equally, when teams are being scheduled for shift duties, skill levels are not always taken into account. This means people with the skills required to maintain or fix machinery might not be available when required. All this contributes to additional downtime, additional costs and lost productivity.

A professional skills assessment highlights current knowledge and reveals gaps in relation to the specific technologies in use in your organisation. This allows you to focus on developing relevant capabilities.

This taster assessment includes some sample questions that test your knowledge and potentially the knowledge of your team. Complete the form and send it back to us and we'll be happy to review it for you and let you know how you got on. Our email is training.gb@festo.com.

We have included information on additional Training Assessments at the end of this document.

Kind regards
Gary Fuller
Programme Manager
Festo Training & Consulting
Tel: 01604 667068



Before starting, please complete the following:

Name of person completing the assessment: _____

Company: _____

Email / phone: _____

Return this Quick Assessment to – training.gb@festo.com

Pneumatic Knowledge Appraisal

Principles

1) The 3 most widely used units of pressure are BAR, PSI and Mega PASCAL (MPa).
Complete the following:



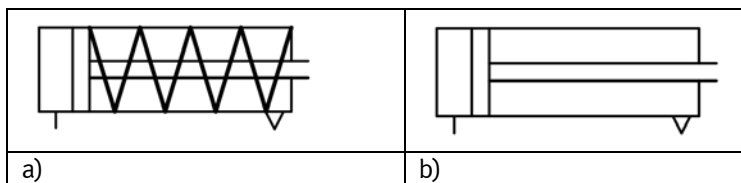
1 BAR = PSI = MPa

2) What units are used to determine FLOW RATE in pneumatic systems?

3) Which components are included in a SERVICE UNIT and in what order are they installed?



4) What are the 2 basic types of pneumatic cylinder?



5) Complete the formula

FORCE = PRESSURE x _____

- 6) a) What is meant by the term 'cushioning'
b) Which pneumatic components have it built in?
c) Why is it necessary?

a) _____

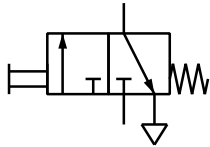
b) _____

c) _____

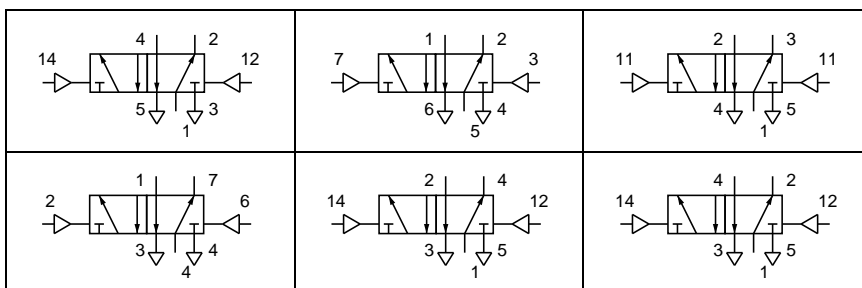
7) What effect would increasing the pressure to the system have on the speed of a cylinder?

8) A solenoid operated pneumatic valve can be either internally or externally piloted. What does this mean?

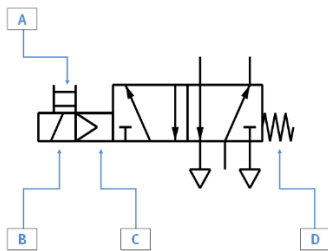
9) Describe the valve that this symbol represents



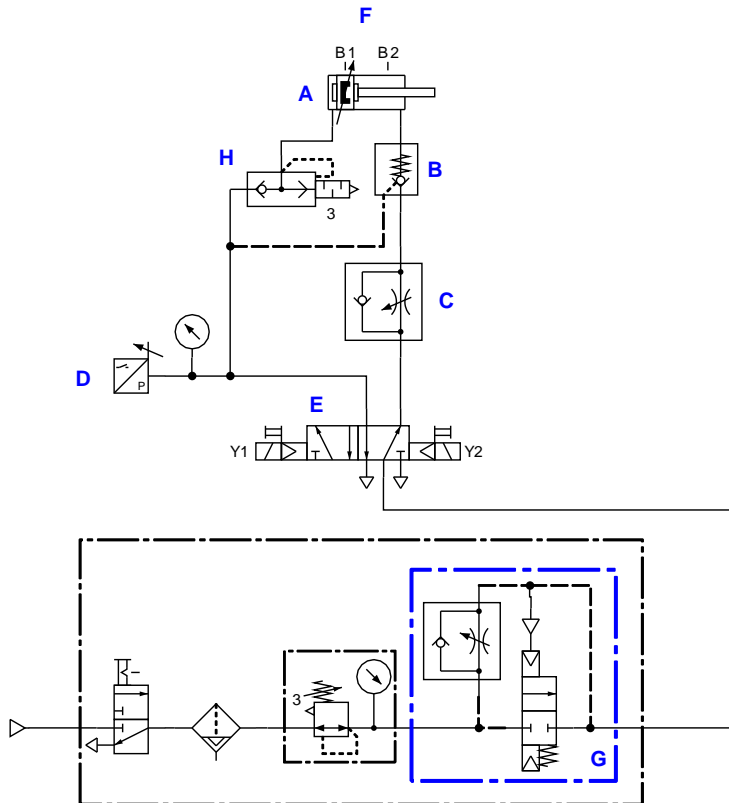
10) Which of the valves below have the correct port labelling? (please circle)



11) Give a complete description of the valve that this symbol represents and identify the 4 parts of the symbol indicated.



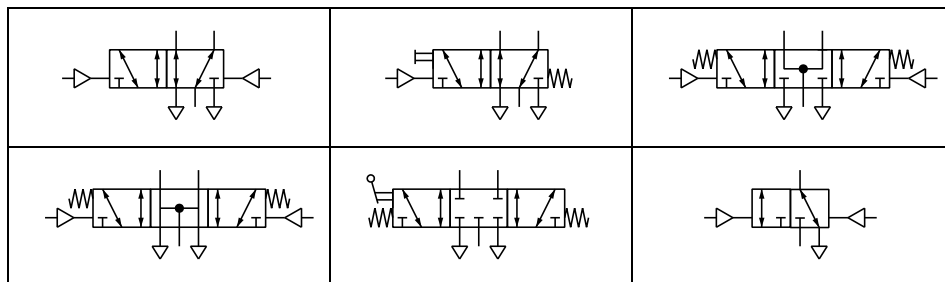
12) What do the following symbols in the circuit represent?



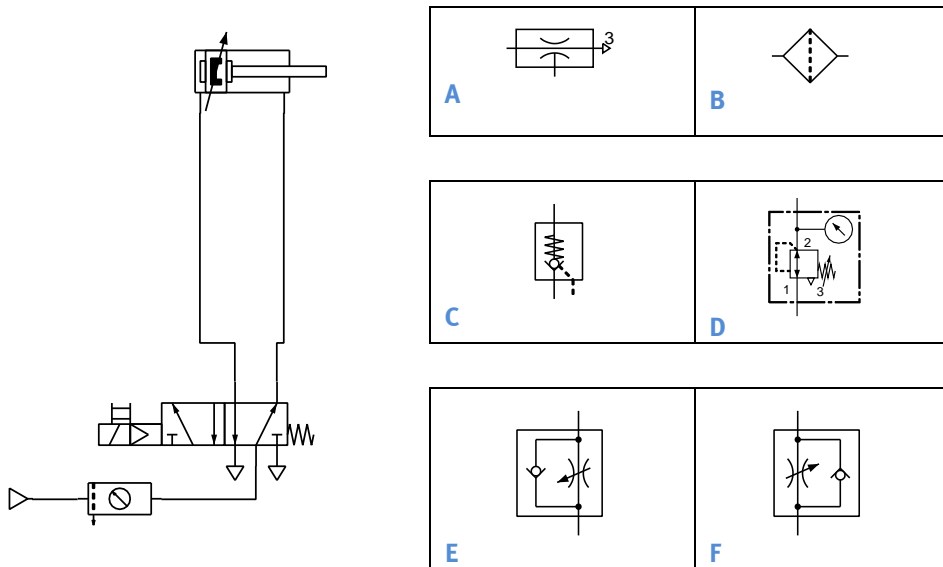
A	
B	
C	
D	
E	

F	
G	
H	

13) Choose the symbol for a 5/3 way valve, double pilot operated, spring centred with working lines pressurised in the neutral position. (please circle)



14) Choose the component(s) needed on this circuit to give separate speed.
Adjustments for both the forward stroke and return stroke



Forward stroke =
Return stroke =

That's it

Thank you for completing your Training Needs Taster Assessment. Do remember to send in your completed form for our review. Just email it to training.gb@festo.com. We'll send your results back with the opportunity for you or one of your team to have a full Training Needs Assessment undertaken **free of charge**.

Your free Training Needs Taster Assessment can be on any of the following areas of technical training:

- Hydraulics
- Electrical
- Mechanical
- PLC
- Pneumatics
- Safety in pneumatic systems
- Energy efficiency in compressed air systems

As an engineering and manufacturing organisation ourselves, we understand more than most the pressure on skills. Whether this is fault-finding or root-cause analysis, improving productivity or hitting those KPIs, recruiting or training up existing employees, our training consultants bring their years of experience as engineers to their technical training.

Alongside technical training, we run a full range of courses (both open courses and bespoke courses) on management and leadership skills. These include topics such as:

- Project Management
- Production
- Team Work
- Sales
- Employee Engagement

All designed with one single aim. To increase the productivity of your people.

To find out more – and request our course catalogue – do drop us an email at training.gb@festo.com.