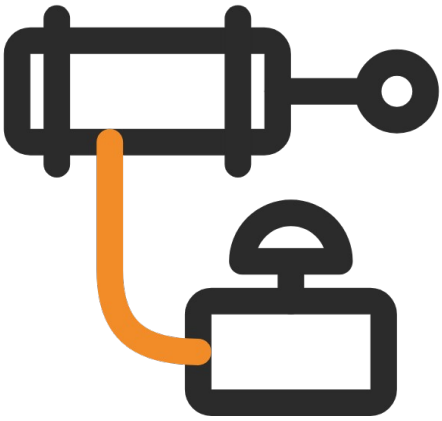
Lesson Pn3 Review Questions

The Double-Acting Cylinder, the 5/2 Valve and Pilot Air



Answer every question in your jotter. Show your working. Tap a question below to go to it. Tap **Show answer** under a question to mark it.

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Answers	Review Questions: marking instructions	4

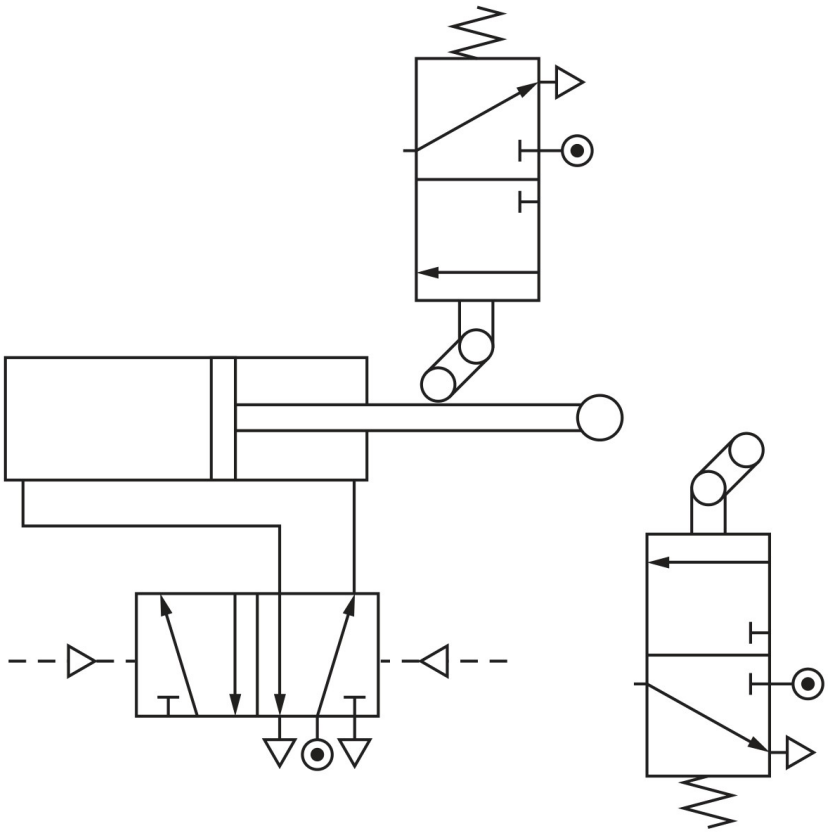
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Questions

2015 Section 1 Question 6

1. An incomplete pneumatic circuit to produce reciprocating motion is shown in the diagram below.

Complete the diagram by inserting the missing piping. **2**



Show answer ›

2024 Section 2 Question 15 (d)

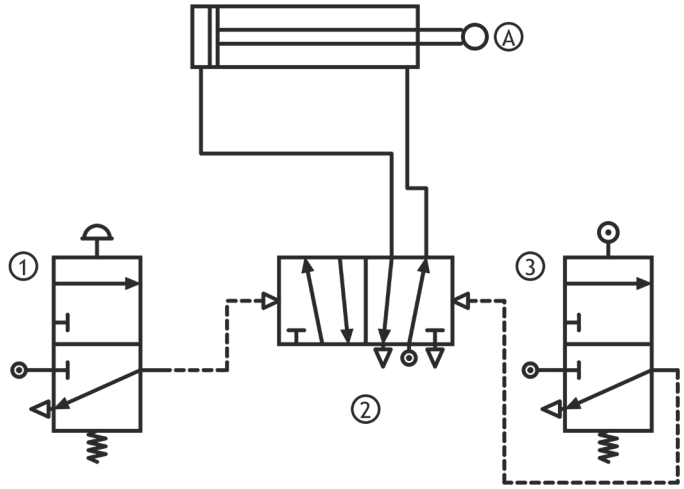
2. State the type of **motion** a pneumatic piston produces when it outstrokes and then instrokes. **1**

_____

Show answer ›

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3. The circuit below is designed to outstroke and instroke piston A automatically. **3**



Describe the operation of the circuit. When valve 1 is actuated . . .

Show answer ›

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Answers

Check your understanding (booklet)

1 5 ports and 2 states.

2 A single-acting cylinder uses air to outstroke and a spring to instroke. A double-acting cylinder uses air in both directions.

3 Pilot air reaching one end.

4 It stays in the same state until pilot air reaches the other end.

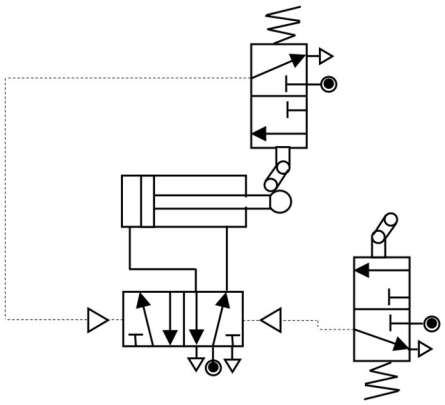
5 Reciprocating.

6 The moving piston.

Answer to question 1

2015 Section 1 Question 6

Marking instructions

Question			Expected Answer(s)	Max Mark	Additional Guidance
6.			 1 mark for piping (Port to port) x2	2	Do not penalise for no pilot lines or extra pipes. 1 mark where 3/2 valves are piped to the incorrect 5/2 pilot ports.

‹ Back to question 1

Answer to question 2

2024 Section 2 Question 15 (d)

Marking instructions

Question			Expected response	Max mark	Additional guidance
	(d)		Reciprocating	1	Accept reciprocal.

‹ Back to question 2

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Answer to question 3

Exam-style question (not from a past paper)

Marking (MI style)

Expected answer(s)	Max mark	Additional guidance
Pilot air changes the state of valve 2, so piston A outstrokes. (1)	3	1 mark for each step. A step must name the valve and say what piston A does.
At the end of its outstroke, piston A actuates valve 3. (1)		
Pilot air from valve 3 changes the state of valve 2 back, so piston A instrokes. (1)		"It moves" gets no mark: say outstrokes or instrokes.

‹ Back to question 3

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