

P3224 FLOW IN PIPES APPARATUS

INTRODUCTION

Cussons P3224 Flow In Pipes Apparatus is an additional experiment to the basic P3200 Air Flow Bench which enables the student to gain a practical appreciation of various topics related to air flow in pipes.

EXPERIMENTAL TOPICS

- ◆ Duct entry pressure profile with 65 mm diameter sharp, bluff and bellmouth entries.
- ◆ Study of sudden enlargement losses from 65 to 95 mm diameter.
- ◆ Friction losses in a 95 mm diameter pipe.
- ◆ Velocity profile development in a 95 mm diameter pipe.

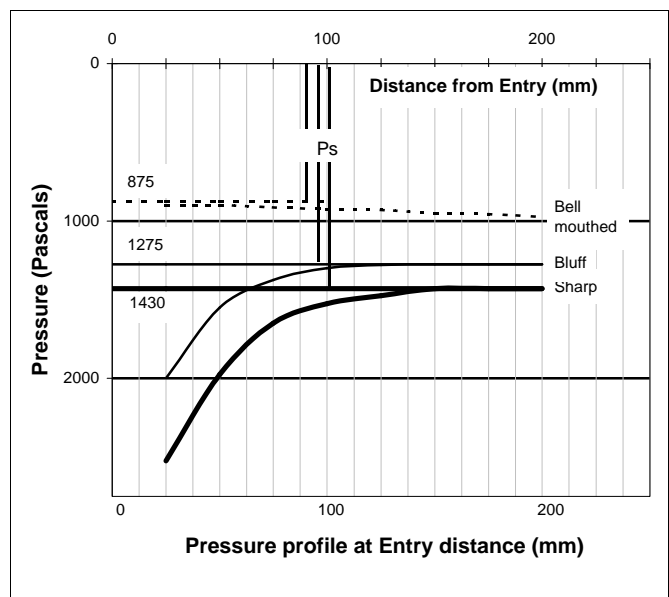
DESCRIPTION

The equipment comprises additional sets of ductwork manufactured in aluminium containing both pressure tappings and pitot static tube points together with a set of inlet adaptors which can be connected to the intake of the fan by means of deep spigoted sockets with 'O' ring seals and over-centre toggle latches.

Two duct support stands are provided (only one is shown in the picture) and the experiments require the use of a necessary accessory, the P3202 Multitube Manometer. Items of ductwork comprise:

- 95 mm dia. by 1400 mm long section with six static pressure tappings, together with a pitot static mounting pad.

TYPICAL RESULTS



- 95 mm dia. by 1400 mm long section with a static pressure tapping and a pitot static mounting pad.
- 65 mm dia. inlet duct with sudden transition to 95 mm dia. incorporating six static pressure tappings.
- 65 mm dia. bellmouth intake adaptor.
- 65 mm dia. bluff intake adaptor.

The graph shows typical results which can be obtained when measuring duct entry pressure.