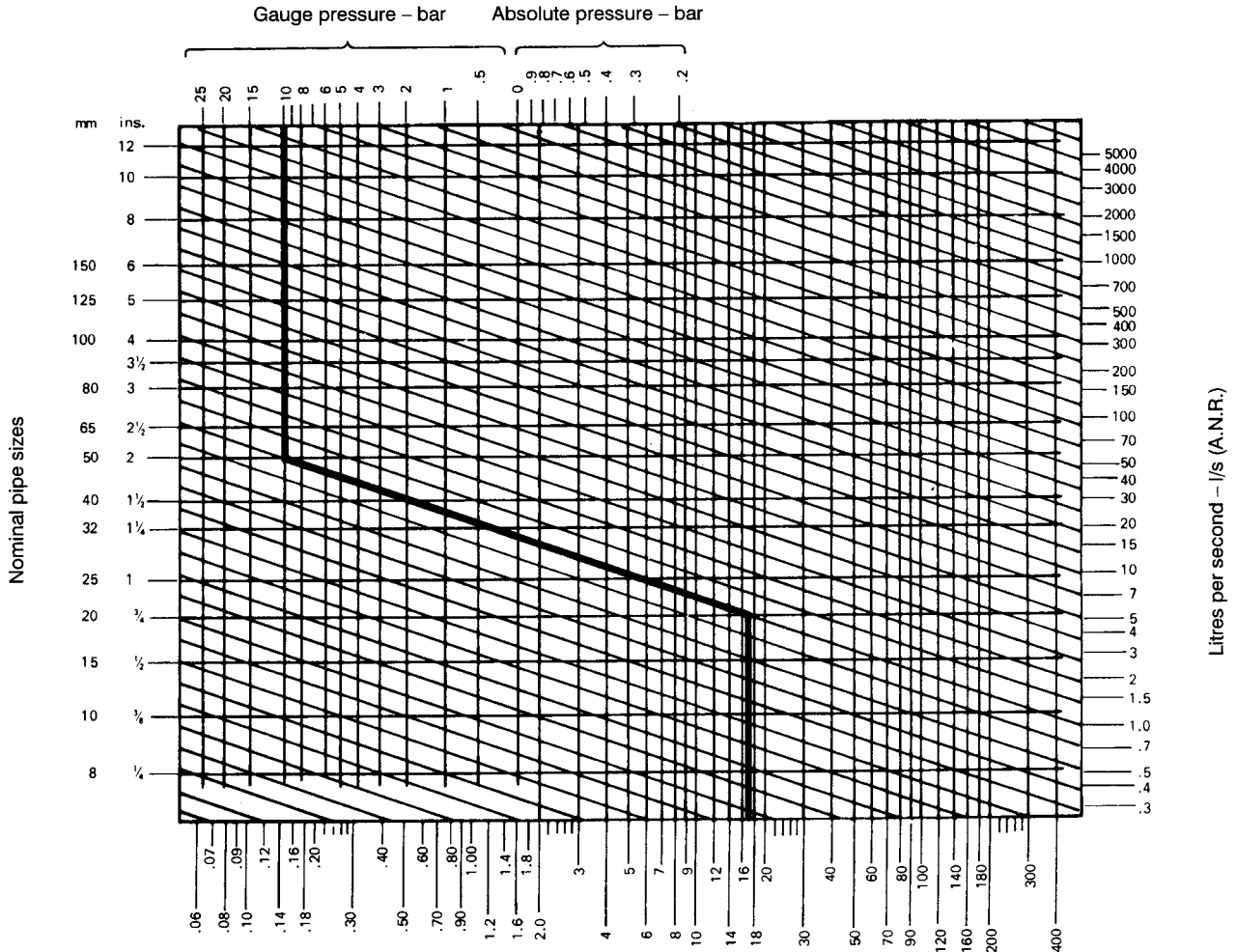


HOW TO USE THE COMPRESSED AIR FLOW CHART

Four quantities are involved in the use of this chart, these being air pressure, rate of flow, pipe size and pressure drop. Any one of these can be determined providing the remaining three are known.



PROBLEM 1:

Air initially at 10 bar is being transmitted at a rate of 60 l/s free air through 20mm pipe. What will be the pressure drop due to friction through 30 metres of pipe?

SOLUTION:

(This example is plotted on the chart) From the point representing 10 bar at the top of the chart proceed down vertically to intersect with the horizontal line representing 60 l/s on the right hand scale.

Proceed diagonally downwards, parallel to the guide lines to intersect the horizontal line representing 20mm on the left hand side scale.

From this point proceed vertically to the pressure drop scale on the bottom of the chart and take the reading.

The pressure drop is found to be approximately 17 mbar per metre of pipe or 510 mbar (0.5 bar) per 30 metres of pipe.

PROBLEM 2:

10 l/s of free air is required at a pressure of 4 bar with a maximum allowable pressure drop of 140 mbar per 30 metres of pipe. What would be the recommended pipe size for this application?

SOLUTION:

From the point representing 4 bar on the top axis of the chart proceed down vertically to intersect the horizontal line representing 10 l/s on the right hand scale.

Proceed diagonally, parallel to the guide lines to intersect the vertical line from the bottom scale representing the allowable pressure drop of 140 mbar per 30 metres of pipe (Read $140/30 = 4.5$).

From this intersection point proceed horizontally to the left hand side of the chart. The point falls between 10mm and 15mm pipe sizes. The correct selection herefore, is 15mm pipe.

SUPPORT SPACING

Horizontal support spacing in mm

Size	Up to 25°C	Up to 50°C
20	700	600
25	900	750
32	1200	900
40	1400	1100
50	1700	1300
63	2000	1550
90	2300	1800
110	2600	2000

OTHER USES

Products in this section are also suitable for High pressure Fluid to 25 bar, Inert Gasses, Chemical Piping, Vacuum Piping.

Please refer to Technical Department for details.

TECHNICAL SPECIFICATIONS FOR MAXAIR®

- 1.1 The Compressed Air Reticulation Pipe shall be of non-metallic, blue in colour, corrosion free, High Density Polyethylene (HDPE) PE100 conforming to AS/NZS 4130/4131 and be made to PN 25 under an accredited AS 3902 Quality Control System and commercially known as Maxair®.
- 1.2 The pipe shall be PN 25 rated at 16 Bar / 20degC / 50 year design life and 8.8 Bar / 60degC / 50 year with applied safety factor of 2:1.
- 2.1 All fittings shall be Socket Fusion, Electrofusion or Compression style fittings which comply with Australian Standards as listed below and commercially known as Maxair®.
- 2.2 Socket Fusion fittings shall be Blue PE100 type made to DIN 16963 which shall be welded to AS 2033.
- 2.3 Electrofusion fittings shall comply with AS/NZS 4129 and carry a Standards Mark Licence under Quality Assurance System in accordance with ISO 9002.
- 2.4 Compression fittings shall be either 'O' Ring or tapered seal to comply with AS/NZS 4129 and carry a Standards Mark Licence No. 26038 in accordance with ISO 9002.
- 3.1 Fixing of pipe shall be of a type and spacing approved for use on HDPE PE100 as per Maxair® Technical Manual.