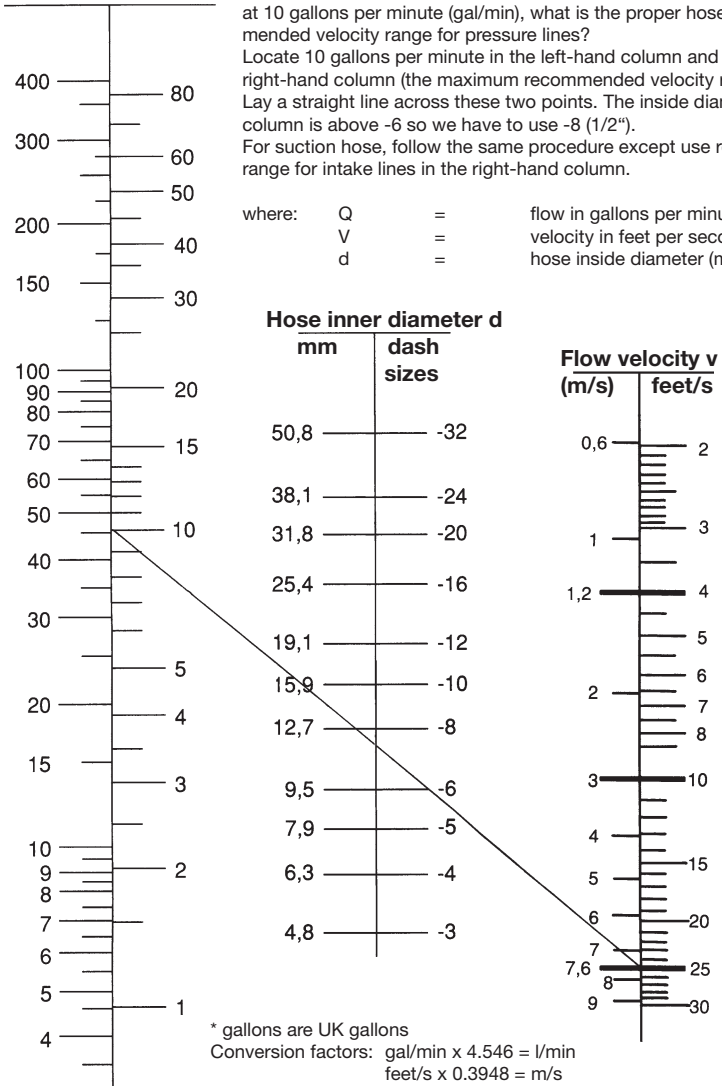
Selection of hose diameter from flow rate and velocity

Flow capacities of Parker hose at recommended flow velocities
The chart below is provided as an aid in the determination of the correct hose size. Suitable for hydraulic applications.
Example:
at 10 gallons per minute (gal/min), what is the proper hose size within the recommended velocity range for pressure lines?
Locate 10 gallons per minute in the left-hand column and 25 feet per second in the right-hand column (the maximum recommended velocity range for pressure lines). Lay a straight line across these two points. The inside diameter shown in the centre column is above -6 so we have to use -8 (1/2“).
For suction hose, follow the same procedure except use recommended velocity range for intake lines in the right-hand column.

where: Q = flow in gallons per minute (gal/min & l/min)
V = velocity in feet per second (f/s & m/s)
d = hose inside diameter (mm & dash size)



* gallons are UK gallons
Conversion factors: gal/min x 4.546 = l/min
feet/s x 0.3948 = m/s

* Recommended velocities are according to hydraulic fluids of maximum viscosity 315 S.S.U. at 38 °C working at roomtemperature within 18 ° and 68 °C.