## 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. Volumetric flow Q Suitable for hydraulic applications. (I/min) Gal/min\* 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). 400 80 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"). 300 For suction hose, follow the same procedure except use recommended velocity 60 range for intake lines in the right-hand column. 50 where: Q flow in gallons per minute (gal/min & l/min) 200 ٧ velocity in feet per second (f/s & m/s) 40 hose inside diameter (mm & dash size) d 150 30 Hose inner diameter d dash mm Flow velocity v 100 sizes (m/s)feet/s 20 90 80 50.8 -- -32 70 0,6 15 60 38,1 -50 10 31.8 -20 40 Recommended 25.4 -16 maximum velocity 1.2 for suction lines 30 5 19,1 -12 -10 2 20 7 12,7 15 Recommended 10 3 maximum velocity 9,5 for return lines 7.9 10 15 9 6.3 5 8 7 -20 Recommended 6 7,6 25 maximum velocity for pressure lines 5 9 30 \* gallons are UK gallons

Conversion factors: gal/min x 4.546 = I/min



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 $feet/s \times 0.3948 = m/s$ 

<sup>\*</sup> 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.