IMPACT OF JET

5.0 RESULT

Given:

$\rho H2O$ = 1000 kg / m^3

D = 8mm (diameter of the nozzle)

Table 1 Flat Impact Surface (α = 90°)

Volume =_____ **ho=_____**

Mass (g)	Time (s)	Flow Rate, Q (m^3/s)	Exit Velocity, u (m/s)	Height of target plane from nozzle exit, h, (mm)	Impact Velocity, v (m/s)	Experimental Force, F_y (N)	Theoretical Force, F_a= ma (N)

Table 2 Curved Impact Surface (α = 120°)

Volume =_____ **ho=_____**

Mass (g)	Time (s)	Flow Rate, Q (m^3/s)	Exit Velocity, u (m/s)	Height of target plane from nozzle exit, h, (mm)	Impact Velocity, v (m/s)	Experimental Force, F_y (N)	Theoretical Force, F_a= ma (N)

Table 3 Curved Impact Surface (α = 180°)

Volume =_____ **ho=_____**

Mass (g)	Time (s)	Flow Rate, Q (m^3/s)	Exit Velocity, u (m/s)	Height of target plane from nozzle exit, h (mm)	Impact Velocity, v (m/s)	Experimental Force, F_y (N)	Theoretical Force, F_a= ma (N)

CALIBRATION OF A PRESSURE GAUGE

(DEAD WEIGHT PRESSURE)

5.0 RESULT

Cross-sectional area, A = _____ m^2

Weight of piston = _____ kg

Diameter of piston = _____ m

Table 1 True pressures and gauge readings

Total load including piston weight (M)		P_{true} (True Pressure), (kN/m^2)	Gauge Reading (P actual)	
(kg)	(N)		Increasing Pressure, (kN/m^2)	Decreasing Pressure, (kN/m^2)