HYDROSTATICS, HYDRODYNAMICS, TEMPERATURE

QUANTITY	SYMBOL	UNIT(S)	SYMBOL	DEFINITION/NOTE	EQUATION	APLICATION MEASURING DEVICE
mass	m	kilogram	kg	property of an object	$m=V\rho$	hydrostatics, hydrodynamics
(cross/sectional) area	A	metre squared	m^2	used for pipes, a bottom of a container	$A=\frac{F}{p}$	Pascal`s law hydraulic machines
density	ρ	kilogram per metre cubed	kgm^{-3} (gcm^{-3})	mass of m^3	$\rho=\frac{m}{V}$	hydrostatics
-force -weight -applied f. - upthrust (buoyancy)	F W F F_u	newton	N	-force causes acceleration *a* of objects -force acting on all objects in gravitational field with *a=g* - f. which does work *W*and causes motion of a body along distance *s* - force acting on a body immersed in liquid of density *ρ* in height *h*	F=ma W=mg $F=\frac{W}{s}=pA$ $F_U=h\rho g$	 -hydrostatics -hydrodynamics-Pascal`s law -Archimedes`s principle
speed	v	meter per second	ms^{-1}	distance travelled in taken time	$v=\frac{s-s_0}{t-t_0}=\frac{\Delta s}{\Delta t}$	Hydrodynamics Bernoulli`s equation
-pressure -hydrostatic pressure - atmos-phericic p.	p p_h p_A	pascal	Pa (Nm^{-2})	-force acting on area - weight of liquid acting on each surface immersed in liquid with area *A* in height *h*	$p=\frac{F}{A}$ p = hρg it depends on height above sea level	-hydraulic machines - measuring pressure by manometers barometer
temperature	t	degrees Celsius	^0C	-measure of average kinetic energy per particle in an object	$t[^0C]= T[K] - 273$	clinical/ thermistor/ thermo-couple thermometer
Thermodyna-mic temp.	T	kelvin	K		$T[K]=t[^0C] + 273$	constant volume hydro gen thermometer