

AGK Mindsheet

General

$$\begin{aligned} P(\text{ower}) &= F(\text{orce}) / A(\text{rea}) \\ W(\text{ork}) &= F(\text{orce}) \times D(\text{istance}) \\ V(\text{olume}) &= A(\text{rea}) \times D(\text{istance}) \end{aligned}$$

$$\begin{aligned} P &= F / A \\ W &= F \times D \\ V &= A \times D \end{aligned}$$

Gas Turbine Engines

R(otor) vs. S(tator)

	Compressor Stage		Turbine Stage			
R:	P +	V +	S:	P -	V +	C: R ++ S +-
S:	P +	V -	R:	P -	V -	T: S - + R --

Nozzle vs. Rotor

	Nozzle	Rotor	
I:	D(ecrease)	C(ontant)	IDC
R:	C(ontant)	D(ecrease)	RCD

Piston Engines

Oil Pumps

W(et)	P(ressure pump)	I(negrated reservoir)	WPI
D(ry)	S(cavanger pump)	S(eparate reservoir)	DSS

Linear Piston Rotary LPR

Hydraulics

Demand Pump	Pressure: Constant	Volume: Variable	DCV
Constant delivery	Pressure: Variable	Volume: Fixed	CVF

Fluid leaving = leak

Electrics

P(ower)	=	V(oltage) x C(urrent)	P = V x C
P(ower)	=	Electrical Work (W) / time	P = E / t
V(oltage)	=	C(urrent) x R(esistance)	V = C x R

AC/DC

AC to DC:	Rectifier	AC DC: Rocks
DC to AC:	Inverter	DC AC: Inverted

AC in parallel

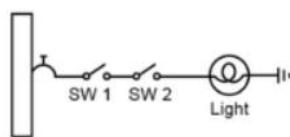
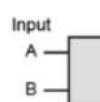
Voltage, Frequency and Phase AC = VFR (R=P)

Pole Pairs

Frequency x 60 / RPM = Number of Pole Pairs Freq. X 60 / RPM = PP
- If 'individual': 8, if 'required': 4.

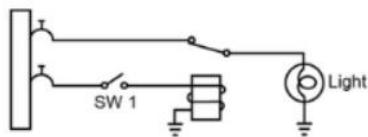
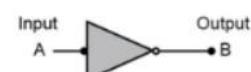
Logic Gates

AND



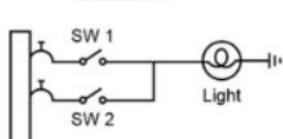
A	B	C
0	0	0
0	1	0
1	0	0
1	1	1

NOT



Inputs	Output
A (SW 1)	B (Light)
0	1
1	0

OR

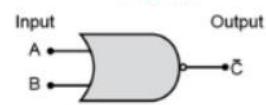


Inputs	Output
SW1	Light
SW2	
0	0
0	1
1	0
1	1

NAND



Inputs	Output	
A	B	C
0	0	1
0	1	1
1	0	1
1	1	0



Inputs	Output	
A	B	C
0	0	1
0	1	0
1	0	0
1	1	0