CHILLER SIZING FORMULAS

INJECTION MOLDING

HDPE	30 lbs/hour/ton
LDPE	35 lbs/hour/ton
PP	35 lbs/hour/ton
ACRYLIC	35 lbs/hour/ton
PPO	40 lbs/hour/ton
NYLON	40 lbs/hour/ton
DERLIN	40 lbs/hour/ton
POLYUREATHANE	40 lbs/hour/ton
PET	40 lbs/hour/ton
PS	50 lbs/hour/ton
ABS	50 lbs/hour/ton
PC	50 lbs/hour/ton
ACETAL	50 lbs/hour/ton
CELCON	50 lbs/hour/ton
PVC	70 lbs/hour/ton

FEED THROAT INJ. MOLDING

1/2 ton up to 400 ton machine
1 ton over 400 ton machine

BLOW MOLDING

POLYOLFINS	40 lbs/hour/ton
PET	40 lbs/ton/hour
PVC	70 lbs/hour/ton

COOLING TOWER SIZING

Hyd. Cooling	.11 hp / ton
Vacuum Pump	.2 hp / ton
Rubber Mills	.1 hp / ton
Gear Drives	.1 hp / ton
Water Pumps	.2 hp / ton
Air Comp. intern.	.16 hp / ton
Air Comp. after.	.2 hp / ton
Spot Welders	100 kw / ton
Chiller Condenser	1 ton = 1 ton
Hot Runner Molds	kw x 3414 x .5

To run any of the above equipment on a chiller multiply the tower cooling load by 1.25.

EXTRUSION

SHEET CALENDERING

PE	35 lbs/hour/ton
ABS	60 lbs/hour/ton
PS	60 lbs/hour/ton

PROFILE & PIPE

HDPE	50 lbs/hour/ton
LDPE	50 lbs/hour/ton
PP	50 lbs/hour/ton
PET	50 lbs/hour/ton
ABS	60 lbs/hour/ton
PVC	75 lbs/hour/ton
PS	75 lbs/hour/ton

EXTRUDER COOLING

Barrel	1 ton/inch screw dia.
Screw	2 tons
Throat	1 ton up to 3"
Throat	2 ton 4" to 6"
Gear Box (oil)	100 hp / ton

VACUUM FORMING

HDPE	70 lbs/hour/ton
LDPE	70 lbs/hour/ton
PP	70 lbs/hour/ton
PS	200 lbs/hour/ton
PVC	250 lbs/hour/ton

GENERAL FORMULAE

Chiller Ton	12,000 btu
Chiller Flow	2.4 gpm / ton
Chiller Tons	gpm x TD div. 24
Chiller With Water	Range 42 F to 70 F
Chiller With Glycol	Range 15 F to 42 F
Tower Ton	15,000 btu
Tower Flow	3 gpm / /ton
Tower Tons	gpm x TD div. 30

TD - Temperature Difference (between water in & out)

BLOWN FILM LOAD SIZING

100 CFM	40 F (4.4 C) Air Off	1.14 tons	Ent. Glycol 33 F
100 CFM	45 F (7.2 C) Air Off	1.05 tons	Ent. Glycol 35 F
100 CFM	50 F (10 C) Air Off	0.85 tons	Ent. Water 40 F
Entering Air Condition		90 F dry bulb / 78 F wet bulb Includes blower motor heat	

DIE CFM	3 cfm / lb.
(guide only)	150 to 170 cfm / die inch