KAYEX®

KX120

SILICON CRYSTAL GROWING FURNACE

The high-productivity, low-cost solution for single crystal PV silicon.

HAMCO®

SEMICONDUCTOR MATERIALS PROCESSING EQUIPMENT

KAYEX®

CZ Crystal Growers

KX120 OVERVIEW

PERFORMANCE:

Typical Ingot Diameter		8" (200 mm)
Throat Diameter		12” (305 mm)
Seed Lift Rate		0-20 in/hr (0-508 mm/hr)
Seed Jog Speed (Nominal)		20 in/min (508 mm/min)
Total Crucible Travel		18" (457 mm)
Crucible Lift Rate		0-10 in/hr (0-254 mm/hr)
Crucible Jog Speed (Nominal)		2.0 in/min (50.8 mm/min)
Seed Rotation (Reversible)		0-50 rpm
Crucible Rotation (Reversible)		0-20 rpm
Vacuum Pumps-	Main	300 cfm (8500 l/min)
(Recommended)	Aux	60 cfm (1700 l/min)

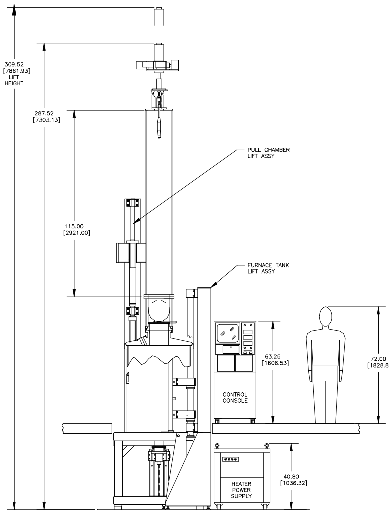
SILICON CHARGE CAPACITY:

Standard Hot Zones for the KX120 are available to fit the following crucible sizes:

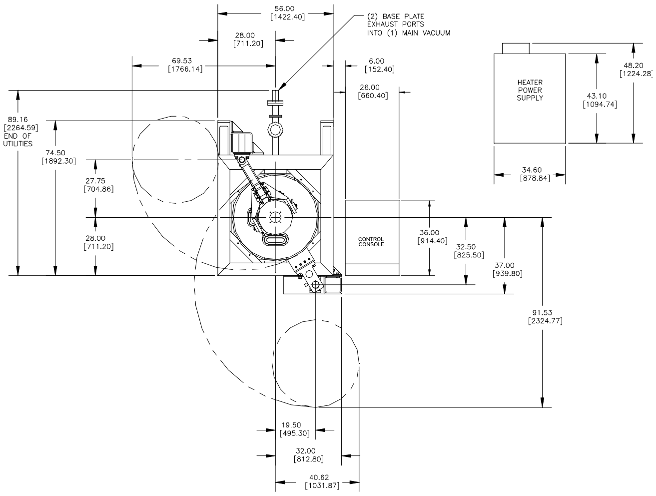
CRUCIBLE DIAMETER	CRUCIBLE HEIGHT	CHARGE SIZE COLD PACK
18.0 in	14.0 in	60 kg
20.0 in	15.0 in	90 kg
22.0 in	15.0 in	120 kg

UTILITY REQUIREMENTS:

ELECTRICAL:	
FURNACE	190 kVA, 380 / 400 / 440 / 460 ±10% VAC. 3 PHASE 50/60 Hz, FUSED FOR 375 / 350 / 325 / 300 amps
COOLANT WATER:	
Maximum Inlet Temperature	77^{o} F (25^{o}C)
Minimum Flow Rate	60 gpm (227.0 l/min) total
Diff. Supply Pressure	38 psi (2.7 kg/cm^{2})
ARGON:	
Mass Flow Control (Max.)	100 slpm
Purge Flow	75 slpm
Facility Total	175 slpm
Recommended Supply Pressure	75 psi (5.3 kg/cm^{2})
AIR:	
Recommended Supply Pressure	90 psi (6.3 kg/cm^{2})



DRAWING 364–0730–1
REV:A



DRAWING 364–0731–1
REV: A

PLAN VIEW CHAMBERS OPEN

DIMENSIONS (APPROXIMATES):

	Furnace Overall	Control Console	Power Supply
HEIGHT	310 in (7.87 m)	63 in (1.60 m)	39 in (0.98 m)
WIDTH	110 in (2.79 m)	26 in (0.66 m)	31 in (0.77 m)
DEPTH	153 in (3.88 m)	36 in (0.91 m)	44 in (1.12 m)
WEIGHT (APPROX.)	12,000 lbs (5,455 kg)		

03/04

KAYEX CORPORATION
1000 MILLSTEAD WAY ⌖ ROCHESTER, NY 14624
Ph: 585-235-2524 ⌖ Fax: 585-436-2396