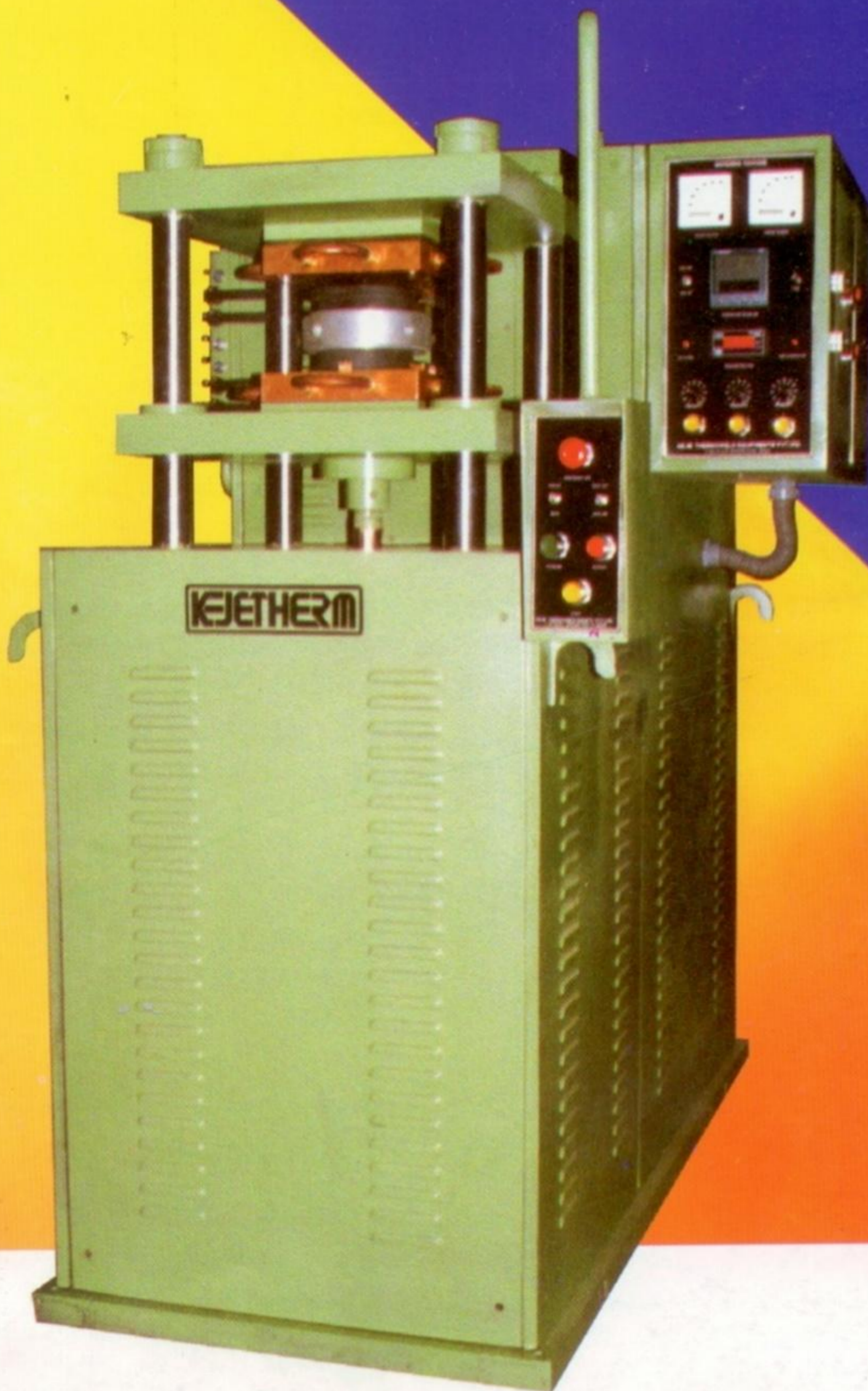


HOT SINTERING PRESS

25 TO 75 KVA AND CUSTOM BUILT



KEJETHERM

TECHNOLOGY FOR DIAMOND TOOLS

HOT SINTERING PRESS

RANGE : 25 TO 75 KVA

Application: Sintering presses for single piece and volume production of diamond tools like dressing tools, hollow drills, honing tools, saw segments and bit segments, etc.

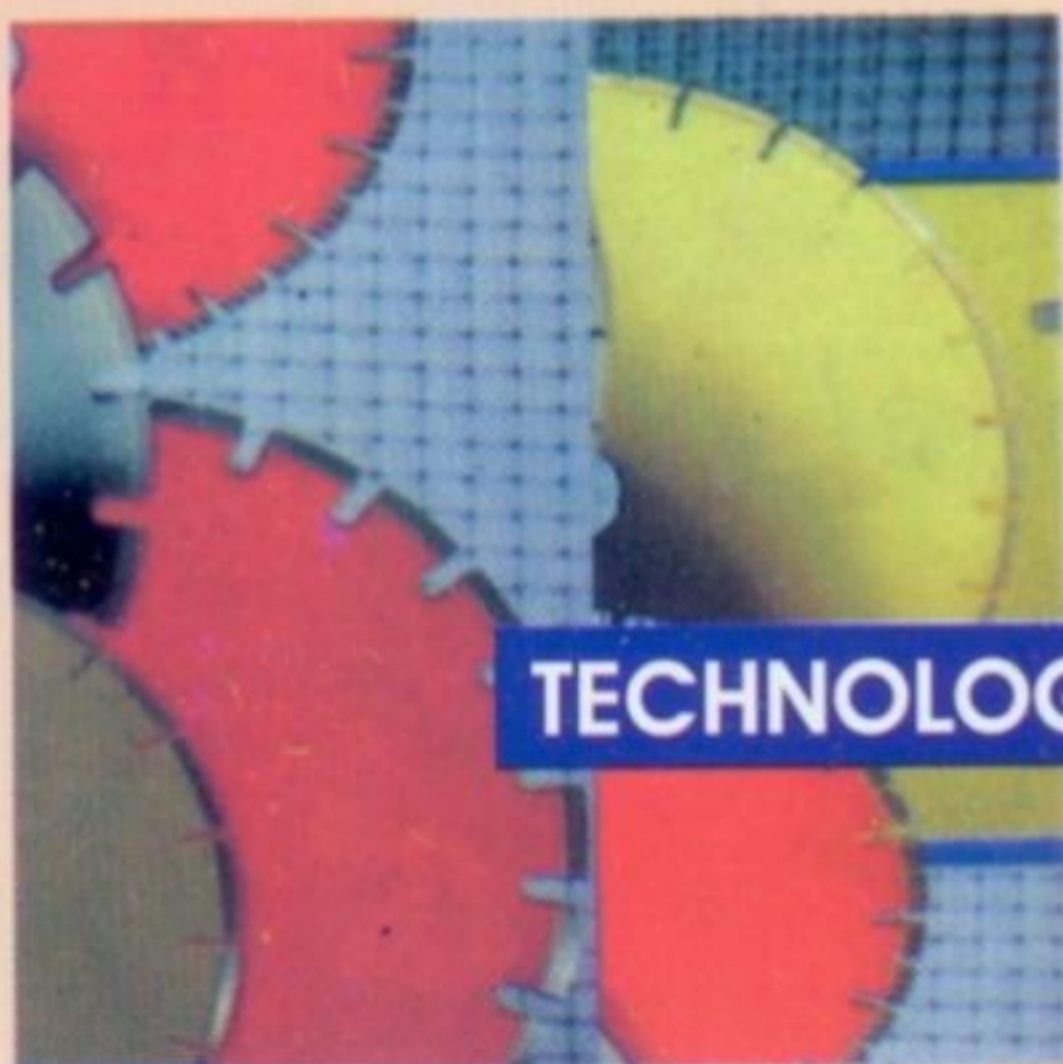
SALIENT FEATURES

- Rugged design and robust construction.
- The entire cycle is automatic except for loading the job.
- Consistent product quality.
- Least maintenance cost.
- Precise temperature control.
- IMPORT SUBSTITUTE MACHINE.

TYPICAL SINTERING PROCESS

Sintering process changes as per the composition of sintering material as well as the end result required. One of the typical sintering process can be of following nature.

- Mould is kept on a lower graphite electrode duly filled in with requisite composite powder or cold compacting segments / wire saws.
- Initiation of cycle brings lower graphite assembly to move up and get clamped with upper graphite assembly at lower system pressure preset to level - 1
- Heat cycle gets ON till predetermined temperature set on blind controller is achieved wherein a ' solenoid valve gets operated and higher compacting force is generated' at preset level- 2. Similar cycle is repeated through another preset temperature blind controller wherein preset level of pressure 3 is achieved.
- Pre-set temperature is achieved automatically. At the predetermined temperature setting, synchronous timer gets ON. PID controller now maintains the temperature within $\pm 1^{\circ}\text{C}$ of set temperature for the required preset time.
- After end of the heat / soaking cycle, cooling time through second synchronous timer starts.
- End of this cycle brings lower graphite assembly back to original position to take the mould / sintered components out and the press is ready to take on the next charge .



TECHNOLOGY FOR DIAMOND TOOLS

TECHNICAL DATA

Model	TSN 25	TSN 50	TSN 75
Electrical Power (KVA)	25	50	75
Electrical Supply (A.C.) 50Hz	415 V	415 V	415 V
Switch Fuse (Amps)	63	125	175
Temperature regulating and reading Range	Thermocouple 20 - 1200°C pyrosopes 300 - 14000°C	Thermocouple 20 - 1200°C pyrosopes 300 - 14000°C	Thermocouple 20 - 1200°C pyrosopes 300 - 14000°C
Hydraulic Pressing Kgs. Force Range	100 - 8,000	100 - 10,000	150 - 12,000
Area of pressing Body dia. In mm	125	150	175
Adjustable sintering time in Multiple range (min.)	0-3/30/180	0-3/30/180	0-3/30/180
Adjustable Cooling time (min.)	0-3/30/180	0-3/30/180	0-3/30/180
Cooling water required@2.1 kg/cm ² (litr/min)	16	30	40
Temperature Controller	Standard PID Controller with two Alarms		
Number of pressure levels :	3	3	3
Pressure 1 :	Pre- Pressure	Pre- Pressure	Pre- Pressure
Pressure 2 :	Intermediate pressure / Main pressure		
Pressure 3 :	Main pressure / Cooling pressure		
Stroke (mm)	150	200	250
Weight (kg)	1000 Approx	1600 Approx.	2000 Approx

Special Operations:

Programme Controller		
Types	Type KJ04	Type KJ16
Number of programmes	4	16
No profiles max.	3 profiles	16 profiles
Number of programme	50 Programmes Max.	
Number of Segments	500 time to target segment (max.) or 400 ramp rate segments (max.)	

OUR OTHER PRODUCTS FOR DIAMOND TOOLS INDUSTRIES :

Cold Compacting Press : Model : TCP, Range - 20 to 120
Tons.

Application - This is used to compact mixed powder including diamond grits in dies/ plungers to get segment/wire saws to be Hot Sintered thereafter.

Mixing Machine : Model : TMMA, Standard Range: 1 H.P.

Application : Various powders and diamond grits are put in stainless steel cans and rotated co-axially for uniform amalgamation.

Weighing Machines : Model : TWM-125 & TWM-3000,
Range : 125 Grams & 3 kgs.

Application - TWM - 125 is to weigh mix powders and diamond grits in the accuracy of 0.01 Gram. Diamond grit can be weighed in carats directly. The bigger weighing machine TWM-3000 is required to measure various ingredients/powders in large proportions.

Cooling Tower : Model TCT-22, Standard Range : 22.5
Kcal/Hr. to 1 Lac Kcal/Hr.

Application - Required for cooling Copper Electrodes, Transformer Secondary, Thyristor stack, Hydraulic Oil etc.

Hardness Tester : Model : TRAS,
Standard Range : BHN/RAC

Application - It is required to check the hardness of segments, wire saws and other components after Hot Sintering Process.

Dies and Moulds :

Standard Range : From Size 350mm
to 2200mm for circular saws and wire saws.

Dies : Manufactured from die steel duly hardened and tempered for cold compacting press.

Moulds : Manufactured from best imported graphite blocks duly machined and ground to the required size

**FOR DETAILED PROJECT REPORT ON MANUFACTURING
DIAMOND TOOLS PLEASE WRITE TO US :**



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