Poonam Designs

COMPANY CATALOGUE

INDEX

INTRODUCTION

To,

Kind Attention :

Respected Sir,

Sub: Manufacturers & supply of Special Purpose Machines & Furnace.

We have the pleasure to take this opportunity to introduce ourselves as the leading suppliers of Special purpose machines & Furnace. Range of our supplies include machines such as Tilting GDC, Degassing m/c, Core Shooter, Auto Pourer, Ingot Charging Trolley, Wheel Grippers, LTM, RCM, Degassing Lance & PressurE Furnace, Melting cum Holding Furnace etc.

Our list of satisfied clients almost reads like a directory of reputed industries .

Over the period of 10 years, we have been steadily growing on the strength of your patronage and on the premises and the strong foundation of our motto of highly competitive rates with fast service, prompt delivery and above all, scrupulous adherence to the exacting requirements to the quality by our customers. We hereby very humbly invite you to make use of our services for your industrial requirements of Special Purpose Machines & Furnace.

We are enclosing herewith our catalogue for your reference.

We request you to call us whenever there are requirements for Special Purpose Machines & Furnace and avail our prompt & efficient services.

Thanking You,

Yours truly,

For POONAM DESIGNS

(Mr.Uttam Singh Ahedi)

SPECIAL PURPOSE MACHINES (SPM'S)

INTAKE MANIFOLD
GDC FRONT VIEW

ROBOT WHEEL
GRIPPER FOR 4W

MAN GDC REAR VIEW

AUTO POURER

IM GDC

2W GDC M/C

4W 2W LEAK TESTING M/C

FURNACE

PRESSURE FURNACE MELTING
CLEANING DOOR

PRESSURE FURNACE
DEGASSING CHAMBER

FAST MELTER IN PROGRESS

MELTING FURNACE CONDITION

CUSTOMISED HYDRAULIC CYLINDERS, POWER PACKS, SEALS & MANIFOLD

SPECIAL HYDRAULIC VALVE FOR REGENERATION PROCESS

CUSTOMISED POWER PACKS FOR ANY HYDRAULIC APPLICATIONS

CUSTOMISED HYDRAULIC CYLINDERS FOR HIGH TEMPERATURE APPLICATIONS

CUSTOMISED MANIFOLD ASSEMBLY

CUSTOMISED POWER PACKS FOR ANY HYDRAULIC APPLICATIONS

CUSTOMISED MANIFOLD

CUSTOMISED HYDRAULIC CYLINDERS, POWER PACKS, SEALS & MANIFOLD

CUSTOMISED SEALS FOR HIGH TEMPERATURE HYDRAULIC CYLINDERS

HIGH TEMPERATURE PISTON SEALS

COMPARISON

	Sand Casting	Shell mould casting	Gravity die casting	Low pressure die casting	Pressure die casting
Pattern/tooling cost	Relatively low	Relate.low/ moderate	Moderate	Moderate	High
Cost of changes	low	Relate.low/ moderate	Moderate	Moderate	High
Flexibility of design	Very high	High	High	Relatively high	Relatively high
Minimum wall thickness mm	4...6	2...4	3...4	3...4	0.8...1.5
Dimension accuracy	Fairly good	Good	Good	Good	Very good
Possible surface roughness	> 6.3	> 3.2	> 3.2(2.5)	> 3.2	> 1.6(0.8)
Delievery time for samples,weeks	3...6	2...4	5...12	8...15	8...20
Special features	Also heat treated	Also with sand cores & heat treated	Also with sand cores & heat treated	Also heat treated	Not heat-tratable

FASTMELTERFURNACE

Aluminium Dry Hearth Three zone Melting and Holding Furnace.

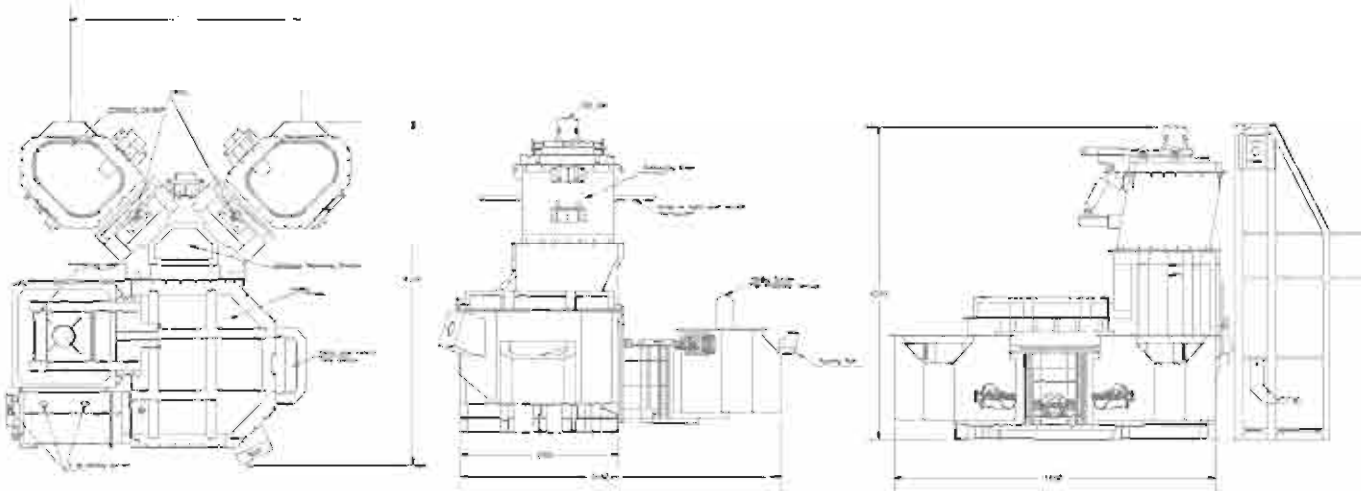
FEATURES :

1) Charging Flue Tower.
2) Separate melting and Holding chambers.
3) Individual chamber temperature control.
4) Melting burner fires only when needed,
5) Air - operated charge and access doors.
6) Lift & charge mechanism.
7) Optional pressure pouring pump.
8) Designed to accept scrap, ingot as needed.

BENEFITS :

1) Fast melting.
2) Energy efficient.
3) Fuel usage as low as 1150BTU/kg.
4) Low melt loss.
5) Reduces charging hazards.
6) Ideal for die, sand or permanent mold casting applications.
7) Easy to clean.

The energy efficient aluminium Fast Melter combines three work zones - the Charge Tower, the Melting Zone and the Holding Zone - in one efficient unit. The Charge Tower preheats and melts scrap or ingot through the flue using exhaust gases. The Melt Zone completes melting the scrap loaded through the Tower and ingot or large sows loaded through the charge door. The Holding Zone keeps the metal at the required temperature for consistent, high quality casting.



The Fast Melter comes in melting ranges from 350 kg per hour upto 2500 kgs. Per hour and has an estimated fuel consumption of approximately 2538 BTU/kg. with large amounts or scrap, limited space or the need to change alloys easily. It also helps reduce metal inventory as well as being easy to clean.

VERSATILITY OF FAST MELTER :

The Fast Melter's versatile design accommodates fast charging as well as allowing for ingot charge to be placed on the dry hearth through a full width charge door. Charging through the door is ideal for those times when large amounts of scrap are not being generated.

CHARGING FLUE TOWER :

The ruggedly constructed tower is designed to accept charges at scrap & ingot. As the exhaust gases exit through the tower, heat is transferred to the metal being pre-heated. The Fast Melter shows this additional benefit of energy efficiency by utilising normality loss heat source.

MELT ZONE :

The melting process begins as changed metal slides into the tower & hearth intersection. Additional changed material in the fast is pre heated until the metal flows in the melt bath. This process continues until all metal in the fast is melted. The melt zone burners shut down via an adjustable timer when melting is complete.

HOLDING ZONE :

As the molten metal flows into the separate holding chamber, as individual lining system ensures a close holding temperature. The combination of last melting and close holding temperature assist the user in reducing costs and achieving minimal melt losses.

LIFT AND CHARGE MECHANISM :

The Fast Melter is supplied with a lift and charge mechanism that is designed to accept scrap or ingot loaded at floor level and lifted to the top of the charging where the hopper is emptied. The hopper automatically elevates as

the furnace control system begins its cycle. The charging door opens just before the hopper is discharged. As the empty hopper descends, the charging door closes, saving energy. The lift and charge mechanism is furnished with personnel guards and electric interlocks to prevents access during operation.

COMBUSTION EQUIPMENT :

Combustion equipment is carefully sized and selected for the most efficient fuel utilization. Complete automatic temperature control is provided, including the necessary air and gas/oil regulating valves, pyrometer, thermocouples, combustion air blower, etc. -all combined in a reliable and safe system. Standard equipment(safety shutoff valves, flame failure, detections, etc) is provided for flame supervision.

PRESSURE FURNACE :

The optional Pressure Furnace is a much safer and convenient way of metal pouring. It is air operated eliminating the moving parts. It is designed as a separate well, which allows for the operator to stand in a safe location while pouring. Pressure furnace is gas fired/ Electric controlled seperate control pannel to adjust the amount of Aluminium for Casting.

Model	Approx Melt Rate	Hold Cap	Hold Cap W/Pump	BTU Input Per Hour	Bath Depth	Burners
62-SM4000	1900KG/HR	3600kg	4600kg	6800000	500mm	4

ELECTRIC RESISTANCE FURNACES

FURNACES FOR NON-FERROUS MELTING HOLDING

Poonam Designs Furnaces offer outstanding efficiencies in conjunction with die, permanent mold and sand casting of aluminium, zinc, magnesium, lead and other lower temperature melting metals. Strip type Kanthal A1 elements are installed in the walls of the furnaces. Heat is radiated to the metal container, which in turn conducts heat to the metal. SCR controls power input through use of a pyrometer and a thermocouple assembly immersed in the bath.

BENEFITS

MINIMAL METAL LOSSES -

Close control of temperature results in fewer oxides and less sludge. No gases produced that might be absorbed in the metal. These features result in low cost operation.

LONGER CRUCIBLE OR POT LIFE -

Placement of heating elements provides uniform distribution of heat, thus prevents localized hot spots on crucible or pot. The use of electric heat minimizes thermal shock.

QUIET, COOL OPERATION -

The furnace emits no sound, also, the molten metal surface radiates minimum heat. The absence of combustion and hot exhaust gases results in comfortable working conditions.

FACTORY INSTALLED REFRACTORIES -

All furnaces are completely lined before shipment. Heavy insulating block is placed against reinforced steel shell. Insulating brick forms the inside walls, resulting in low shell temperature. Lightweight insulated covers reduce radiation losses during non-production. All crucible furnaces are supplied with crucible rest.

INSTALLATION FAST, EASY -

Furnaces comes as a complete package for immediate installation, with control equipment included, so you need only make the electrical connections. Also valuable space is saved through absence of air or fuel lines and exhaust.

EASE OF CLEANING -

Furnace bottoms are easily cleaned through a slag port door. This same is used as a drain in the event of crucible or pot failure.

PANEL

Fast-Melter : Aluminium Dry Hearth Two-Chamber Melting & Holding Reverberatory Furnace

FEATURES:

- Separate melting and holding chambers
- Individual chamber temperature control
- Melting burner fires only when needed
- Metal level detector
- Pressure-sensing mechanical flue damper
- High thermal release burners
- Air-operated charge door

BENEFITS:

- Energy efficient
- Fuel usage as low as 2759 BTU/kg
- Clean filtered metal
- Low melt loss
- Cuts casting costs
- Saves space
- Ideal for die, sand or permanent mold casting applications
- Reduces charging hazards
- Fast melting

SPECIFICATION

Furnace type	Approx Melt Rate kg/Hr	Approx Hold Cap. Kg.	BTU Input per hour	No of Burners	Approx. Net wt. kg.
Fast Melter	340	550	1,700,000	2	9500

MINIMAL MELT LOSS

The burner(s) fire directly at the hearth for fast melting. However, since the melting. However, since the melting burner is not allowed to fire indiscrimminately, cold metal charges are melted quickly and disbursed without being burned up on the hearth.

CLEAN FILTERED METAL

A filter adjacent to the ladling well results in clean metal being cast, reducing hard spots in castings.

LONG REFRACTORY LIFE

Long refractory life is assured through the use of high-alumina low-cement castable refractory in contact with molten aluminium. Selected for its excellent non wetting characterstics, this refractory also has exceptional strength and abrasion resistance. Backup insulation is provided to insure low thermal conductivity and low heat storage essential for fuel savings.

EASE OF INSTALLATION

All furnaces are pre-piped, pre-wired and come with refractory installed. A minimal amount of re-assembly by the customer may be required at the ultimate destination. The services of a field engineer are provided for instruction and supervision of plant personnel in the start-up maintenance and operation of the equipment.

COMBUSTION EQUIPMENT

Combustion equipment is carefully sized and selected for efficient fuel utilization. Complete automatic temperature control equipment is provided, including the necessary air and gas regulating valves, pyrometer, thermocouples, combustion air blower etc, all combined in a reliable and safe system.

Standard equipment safety shut off valves flame failure detectors etc is provided for flame supervision to meet F.M or I.R.I insurance specifications. Additional fuel saving benefits are realizwd with the standard pressure sensing mechanized flue damper.

CHARGE DOOR

Fully insulated and air - operated, the double action charge door has a slanted design which helps seal the door against the frame when close and reduces abrasion when opened. A safety chain is provided to ensure the door stays open in the event air pressure is lost.

CUSTOM CONTROL CABINET

Electrical control cabinet comes assembled and wired with all component tailored to customer requirements. This includes disconnect switch, blower motor starter, temperature controllers, flame relays and alarm.

OPTIONAL DRAIN ASSEMBLY

Assembly is available in the holding chamber for complete draining of the furnace when required.

THE FACILITY SPECIFICATION

Facility Name : The continuous melting and holding furnace for aluminium alloys

Melting capacity : 750kg/hr (MAX) * when it is continuously melting

Holding capacity : 2000kg (MAX)

Fuel : B heavy oil 9,550kcal/L, pressure 50kpa

Melting burner : 367kw, 316,000kcal/hr

Holding burner : 367kw , 316,000 kcal/hr

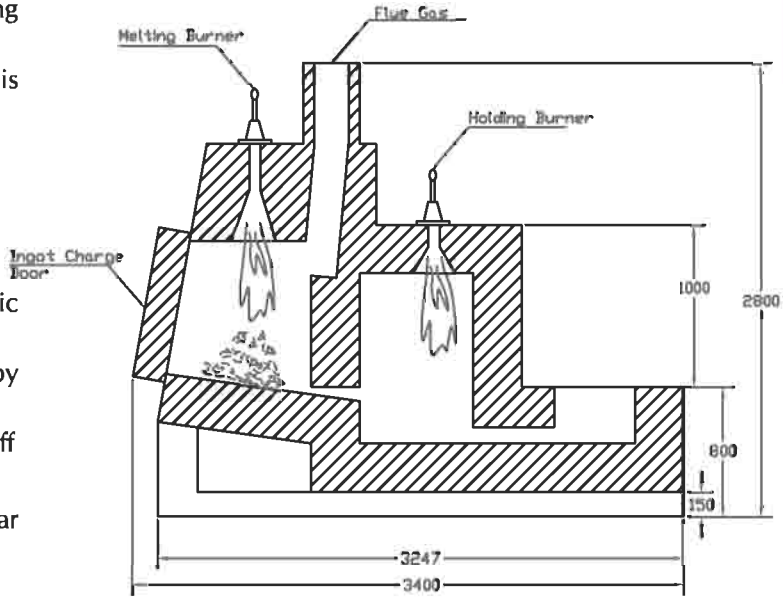
Charging cover : Hinge type door using pneumatic cylinder.

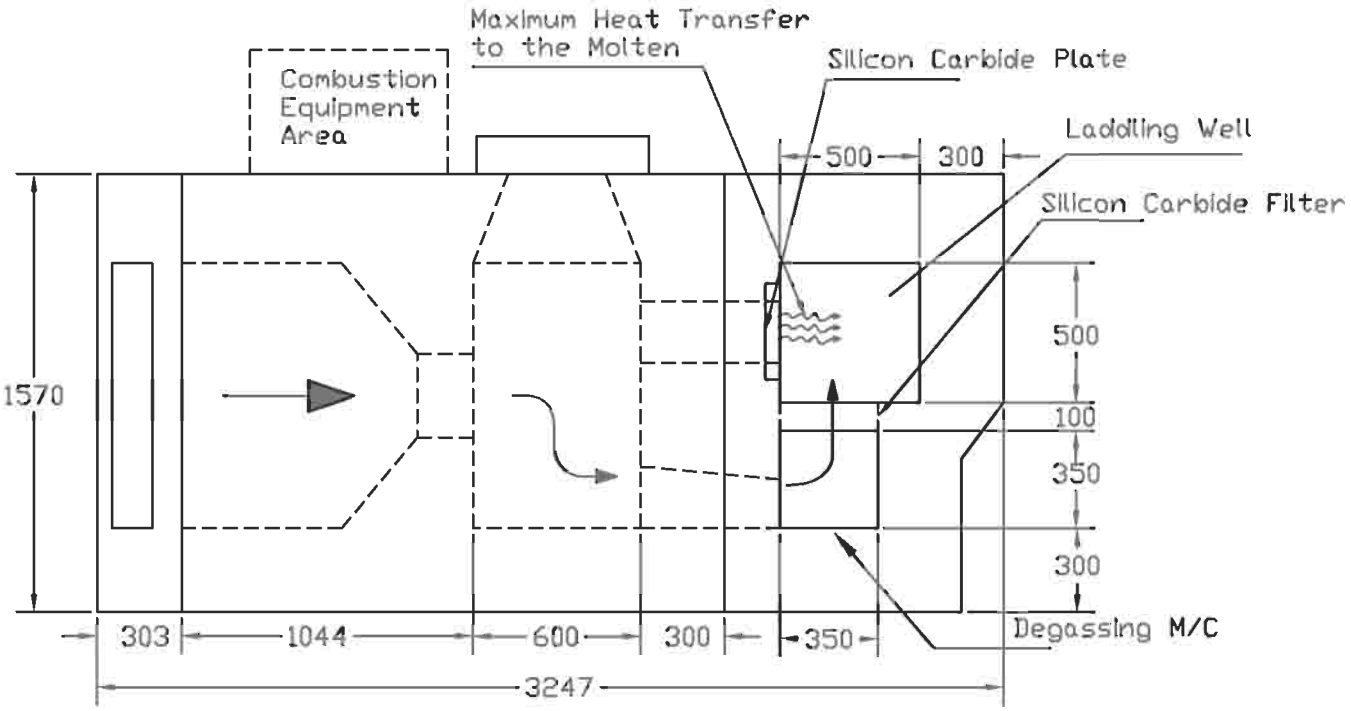
Heat insulating castable is installed. Open & shut by timer

Charging cover open to the end melting main burner off

Remaining aluminium processing : Drain tap hole

Material charging unit : Bucket cart rise and fall by gear motor with inverter control.





The Fast-Melter, a two chamber dry hearth reverberatory furnace delivers maximum melting

Efficiency and excellent control of holding temperature.

High-production melting of aluminium ingot, pig or heavy scrap is achieved in the sloping dry hearth section. From there, it flows into the separate holding chamber. Individual firing systems in each chamber ensure rapid melting in one chamber and close holding temperature in the other all without interrupting casting cycles. The combination of fast melting and close holding temperature helps you cut costs and reduce metal losses.

HIGH-TECH, HIGH-QUALITY FEATURES

- Separate melting and holding chambers
- Individual chamber combustion control
- Melting burner fires only when needed
- Proportioning combustion control in holding chamber
- Metal level detector
- Pressure sensing mechanical flue damper
- Low-cement castable refactory, non-contaminating
- High thermal release burners
- Air-operated charge door
- Rugged shell construction

COST-SAVING BENEFITS

- Energy efficient
- Low melt loss
- Uninterrupted casting cycles
- Long refactory life
- Clean filtered metal
- Fast melting
- No pot or crucible to replace
- Melt and hold in one furnace

REDUCES HAZARDS

Dry hearth charging eliminates most of the hazards encounted in charging cold metal into a molten metal bath.

PROVEN MELTING EFFICIENCY

The Fast-Melter melting chamber burner fires only as needed. Previous two-chamber units stayed on high-fire even when no metal was on the hearth until excess roof temperature would shut it down. The melting burner remains on low fire until the following sequence is completed

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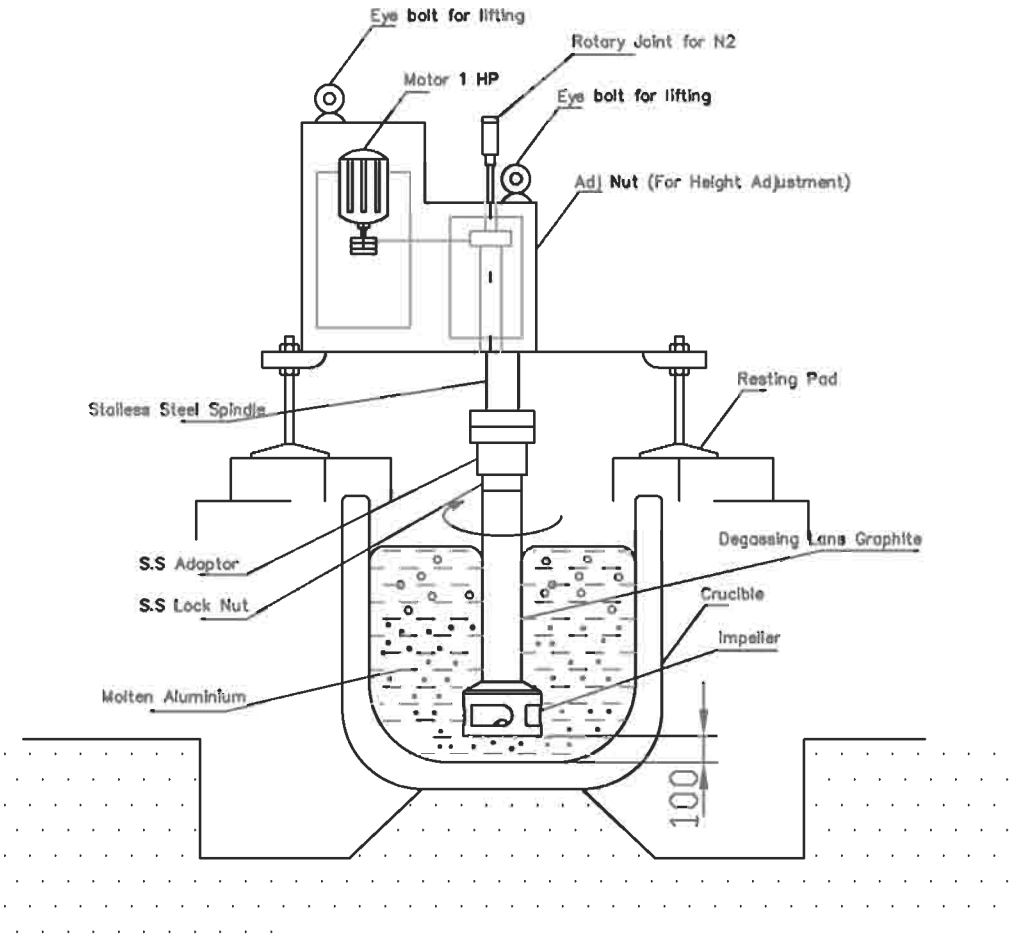

DEGASSING MACHINE

Rotary degassing is widely used in the foundry industry for removing hydrogen gas and solid impurities from molten aluminum alloys. In this method, a specially designed impeller rotates inside the melt and gas is purged into the molten alloy through holes located at the bottom of the impeller The purged gas forms bubbles that rise to the melt's surface. While rising, the bubbles pick up hydrogen gas and solid impurities from the melt and carry them to the surface where they are incorporated into the sludge layer. Removal of hydrogen from the melt is essentially a consequence of diffusion of the dissolved hydrogen from the melt into the rising gas bubbles, and removal of solid particles is a consequence of their clustering and settling, as well as their attachment to the rising gas bubbles. A mathematical model is developed to simulate the removal of hydrogen and unwanted solid particles from aluminum alloy melts. Hydrogen removal is modeled by applying conservation of mass to the melt and developing a hydrogen mass balance. Similarly, particle removal is modeled by applying a special particle population balance. This model is comprehensive as it allows simulation of the entire rotary degassing melt-cleansing process including the removal of unwanted particles and hydrogen gas.

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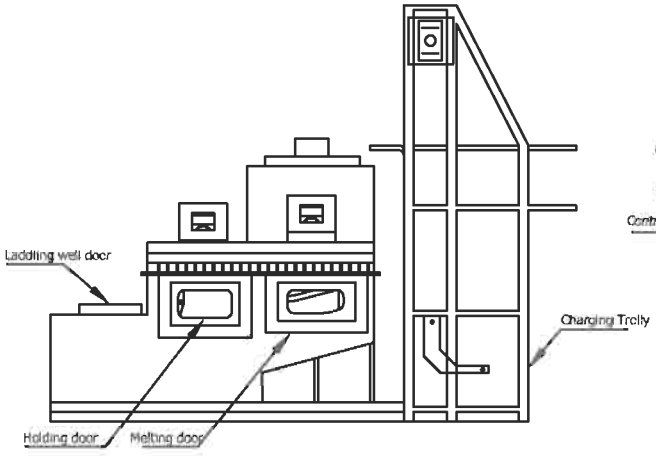

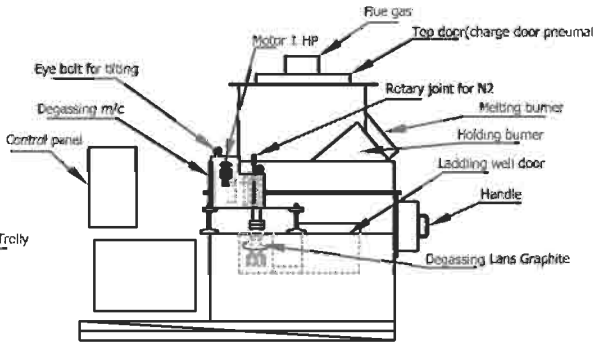

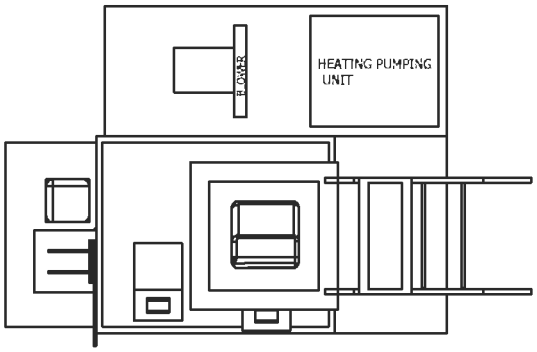

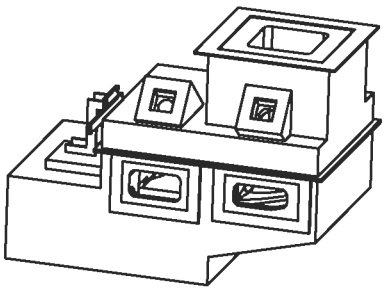

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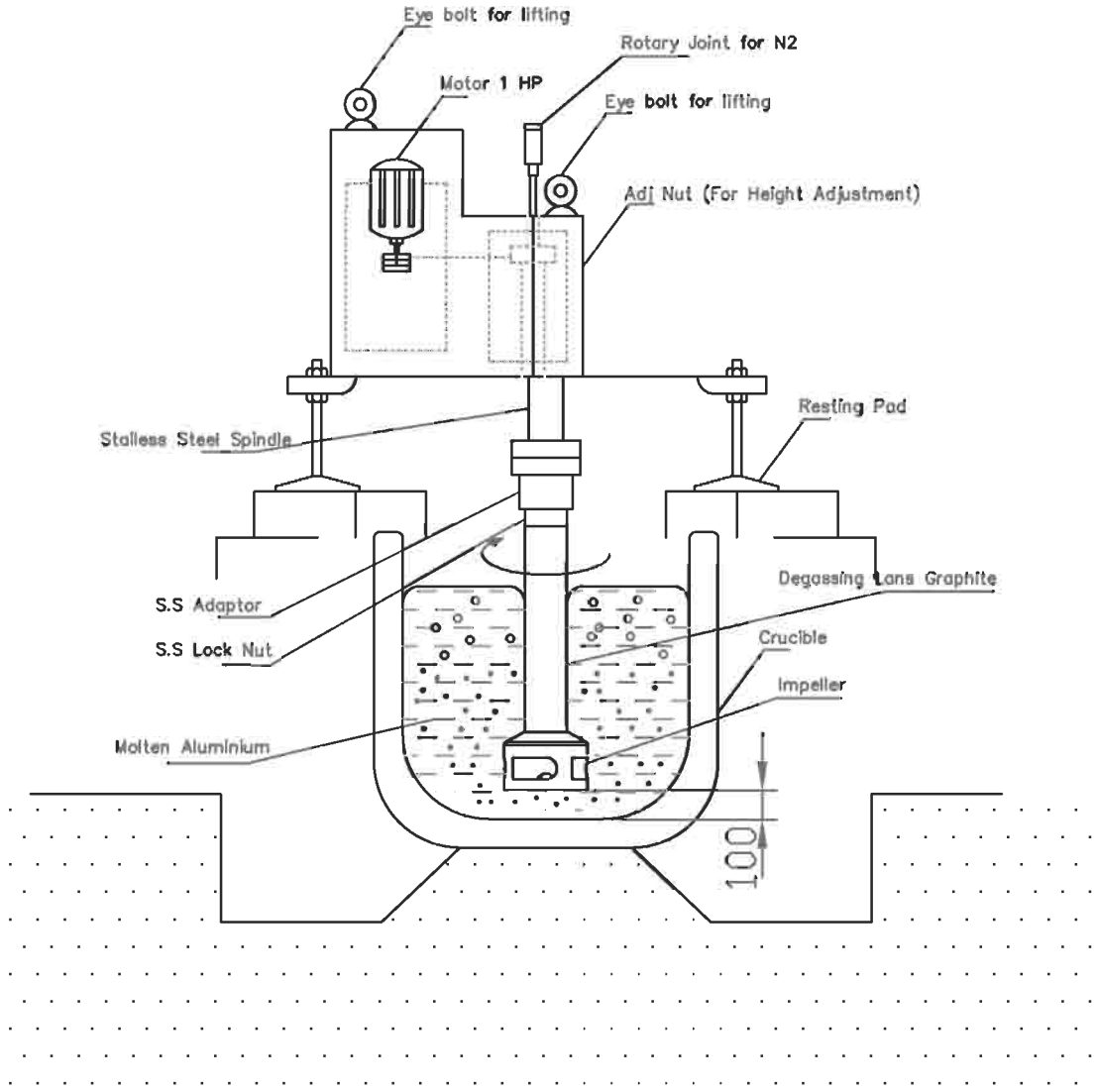

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BEHR NORMAL GDC

BASIC SPECIFICATION

Dimensions of the machine (GDC Machine)

Necessary floor area	:	2282 x 2385
Height of the machine	:	2594 mm
Weight of the machine	:	5000kg Aprox.

Die installation plate measurements

Die installation plate measurement	:	520mm x 950mm
Open Height	:	1035mm
Shut Height	:	535mm

Die opening & closing settings

Die opening & closing cylinder	:	Dia100 x 500st.
Die closing power	:	7855kg @ 50kg/cm2
Die opening power	:	5392kg @ 50kg/cm2

Tilting Angle

Tilting angle end	:	45deg Complete tilting time 4sec
Tilting cylinder	:	Dia125 x 372st.
Tilting speed	:	Flow Control Valve

Knock out

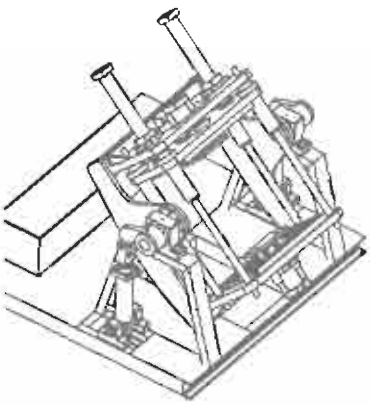
Upper knockout		
Upper knockout power	:	6136kg @ 50kg/cm2
Ejection		
Ejection power	:	6136kg @ 50kg/cm2

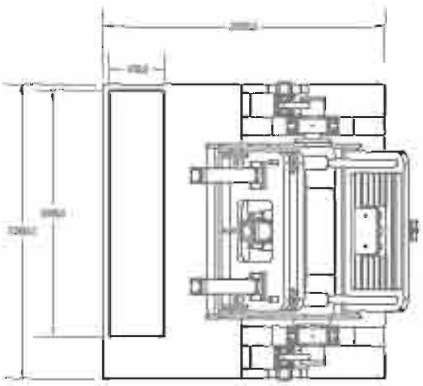
(Hydraulic) oil pressure settings

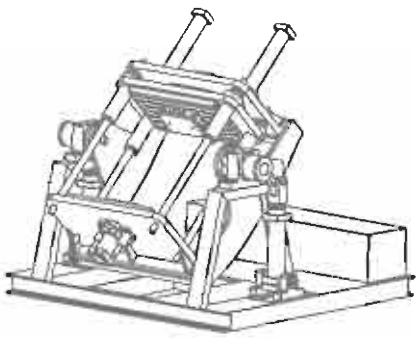
Tank Oil running		
Oil (Hydraulic) pressure pump	:	PVR 150-FF-70-RAA-3480 (Oil research manufacturing industry)
Electric Motor	:	11KW x 4P
Power used (Daily)	:	50 kg/cm2
Maximum pressure used	:	70 kg/cm2

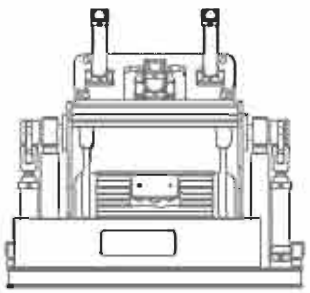
Electricity control

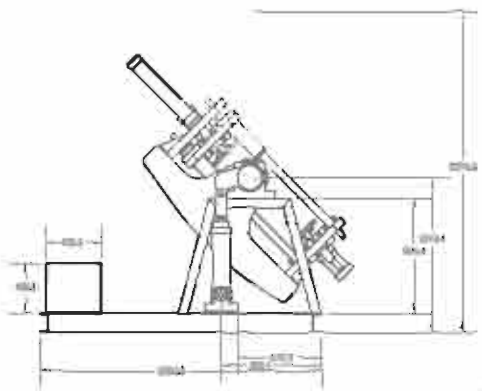
Operation Control Method		
Control of the electric pressure	:	230 / 50HZ X 24V/
PLC controlled panel		
Others		

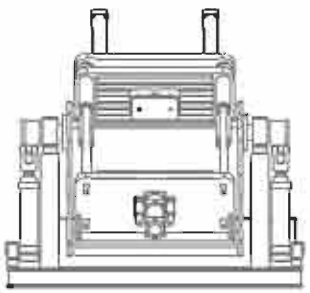












2W GDC M/C.

Application - **For all 2W castings**

Floor Area - **2000x2000 mm.**

Hydraulic Cylinders - **6 nos.**

Power Pack - **5HP**

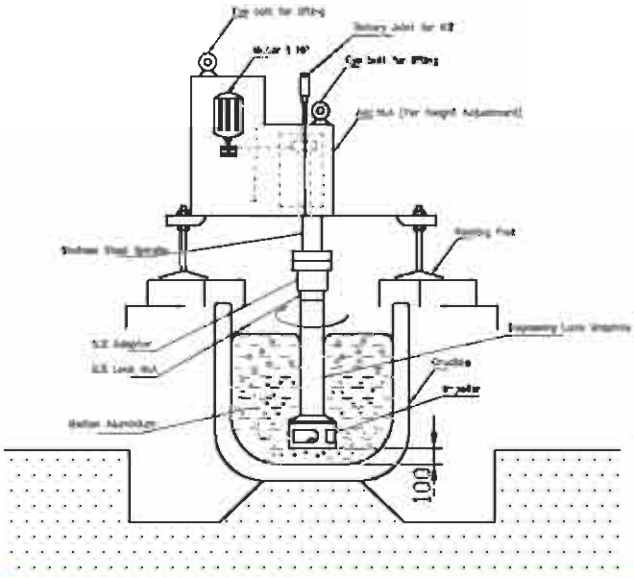
Control Panel & Control System of Siemens.

Hydraulic Parts - **Yuken.**

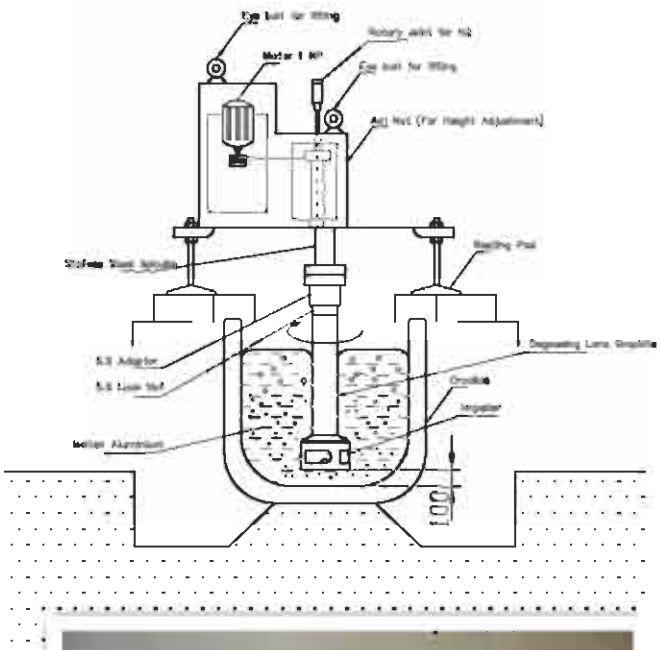
Sr. No.	Item Description	Qty.
	Electrical System	
1.	Hydraulic Panel	1
2.	Main Panel	1
3.	Pendent Box	1
4.	Structure Mounting Box	1
5.	Touch Panel 5.7' TP170N Colours	1
6.	Siemens Make PLC	
	Mechanical System	
1.	Hydraulic Powerpack	1
2.	Complete Structure	1
3.	Pneumatic Line	1 Set
4.	Hydraulic Bank	1 Set
5.	Hydraulic Cylinders	6 Nos

DEGASSING MACHINE

Rotary degassing is widely used in the foundry industry for removing hydrogen gas and solid impurities from molten aluminum alloys. In this method, a specially designed impeller rotates inside the melt and gas is purged into the molten alloy through holes located at the bottom of the impeller The purged gas forms bubbles that rise to the melt's surface. While rising, the bubbles pick up hydrogen gas and solid impurities from the melt and carry them to the surface where they are incorporated into the sludge layer. Removal of hydrogen from the melt is essentially a consequence of diffusion of the dissolved hydrogen from the melt into the rising gas bubbles, and removal of solid particles is a consequence of their clustering and settling, as well as their attachment to the rising gas bubbles. A mathematical model is developed to simulate the removal of hydrogen and unwanted solid particles from aluminum alloy melts. Hydrogen removal is modeled by applying conservation of mass to the melt and developing a hydrogen mass balance. Similarly, particle removal is modeled by applying a special particle population balance. This model is comprehensive as it allows simulation of the entire rotary degassing melt-cleansing process including the removal of unwanted particles and hydrogen gas.



DEGASSING MACHINE LANCE



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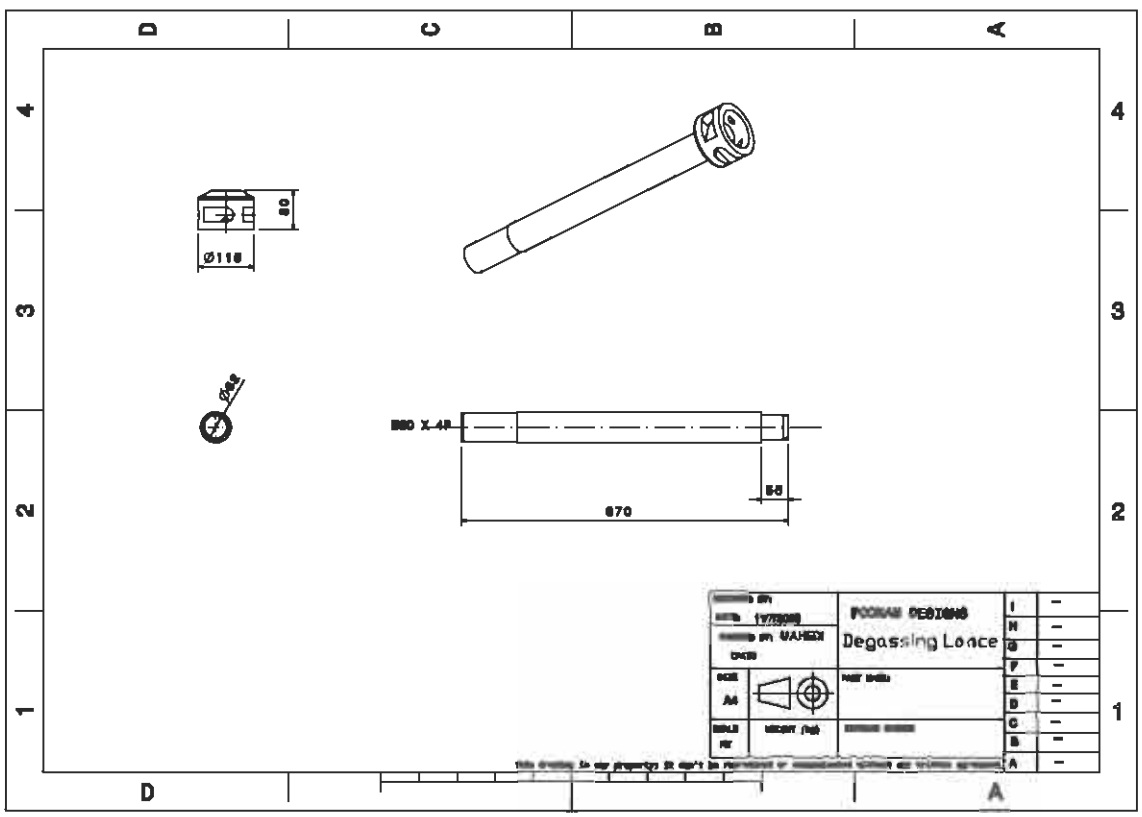


HONDA GDC

Application - For Cylinder Head (Honda Activa)

Floor size - 3500x4000mm

Weight - 6.5 ton

with Hydraulic Power Pack & Control Panel.

Control System Siemens.

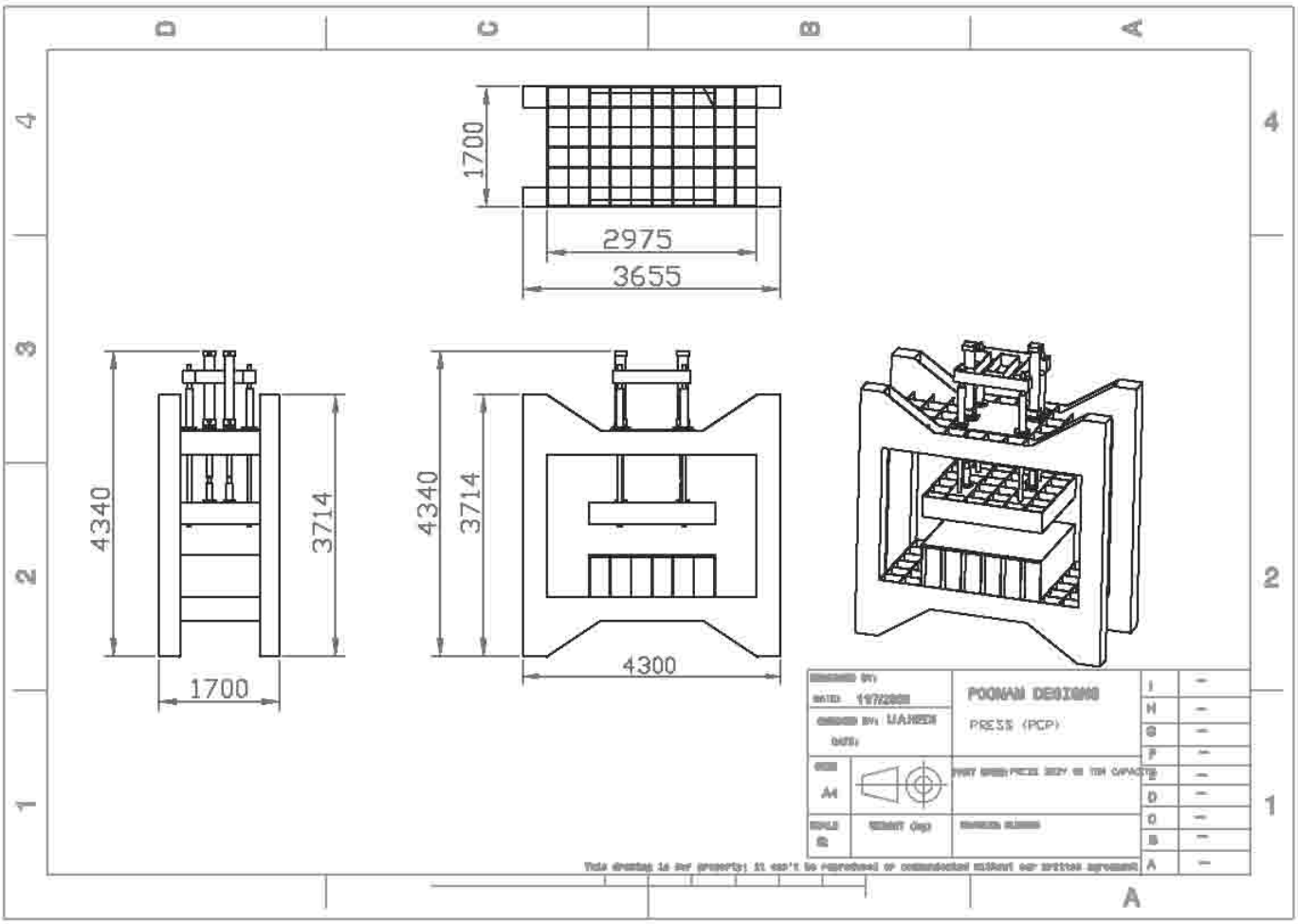
Hydraulic Parts - Yuken.

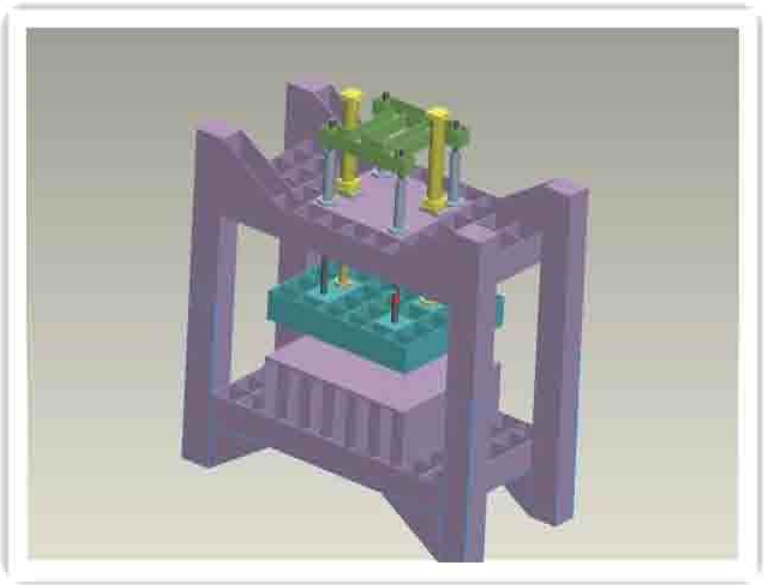
Hydraulic Cylinders - 9 nos.

HONDA GDC PANEL

HONDA GDC CONTROL PENDENT

HYDRAULIC PRESS





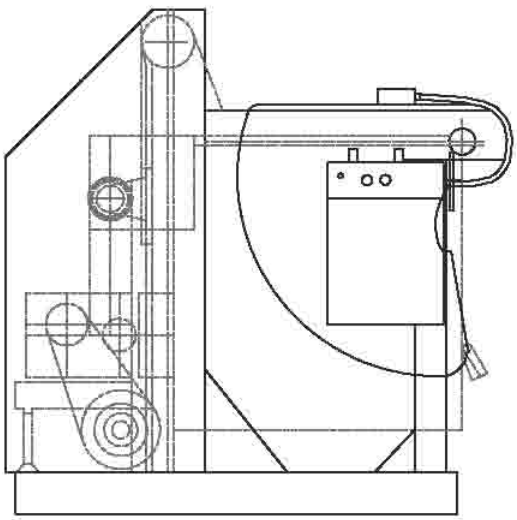
TILTING TYPE CRUCIBLE/POT MELTING FURNACE

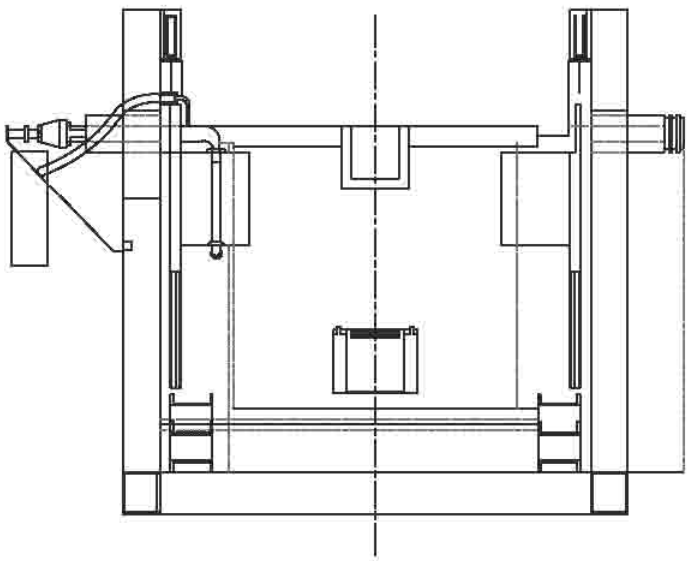
FEATURES :

- Constant arc pouring
- Long-flame,nozzle-mix burner
- Flame supervision standard
- Simple operation
- Low charging height
- Self-contained,low pressure combustion air blower

BENEFITS :

- Easy pouring
- Long life refractory
- No energy waste during non-productive hours
- Fuel conservation sealed in burner prevents excess air entry
- Rapid melting
- Fast simple installation.

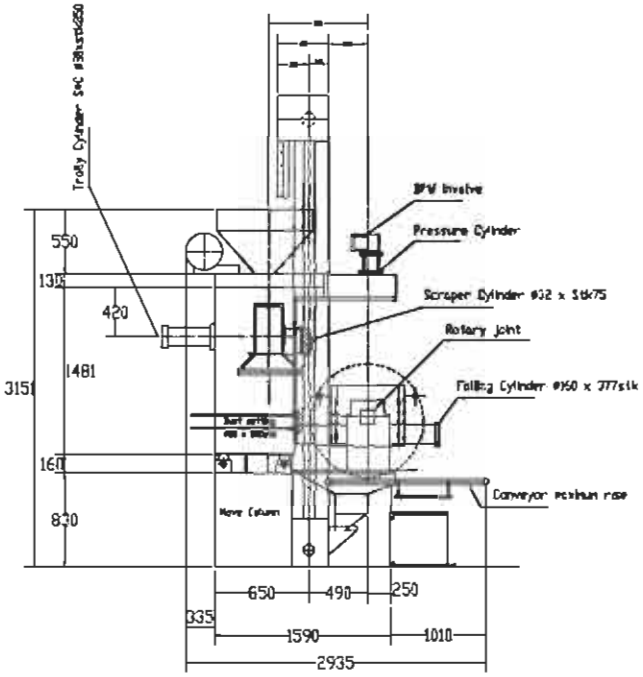


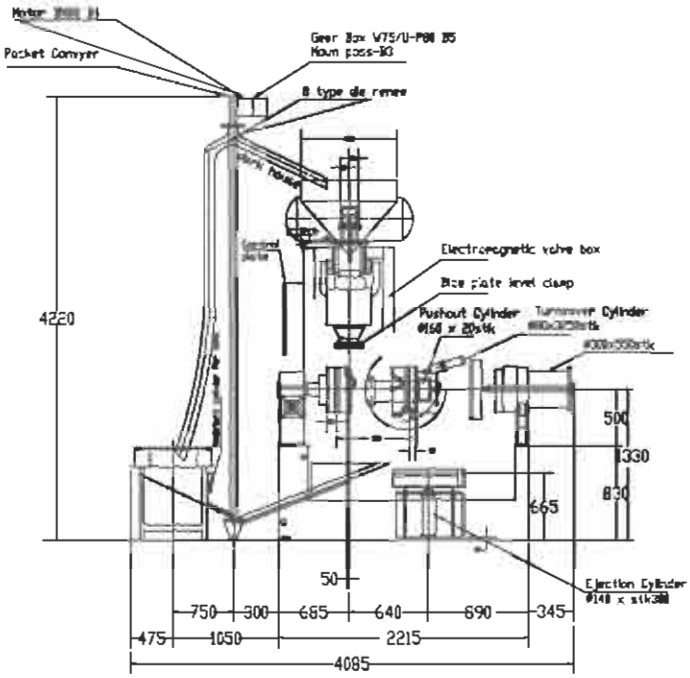


FURNACE TYPE	APPROX.HOLDING CAPACITY LBS		APPROXIMATE DIMENSION-INCHES					
	ALUM	ZINC	A	B	C	D	E	90° TILT CLEARANCE
61-CMT300	300	800	64	50	37	47	65	106

IM CORE SHOOTER

Weight of the m/c	-	3000 kgs.	PLC controlled panel.		
Die size	-	600 x 600	Dry Cycle time	-	20 secs.
Gas heating			Power consumption	-	3 HP



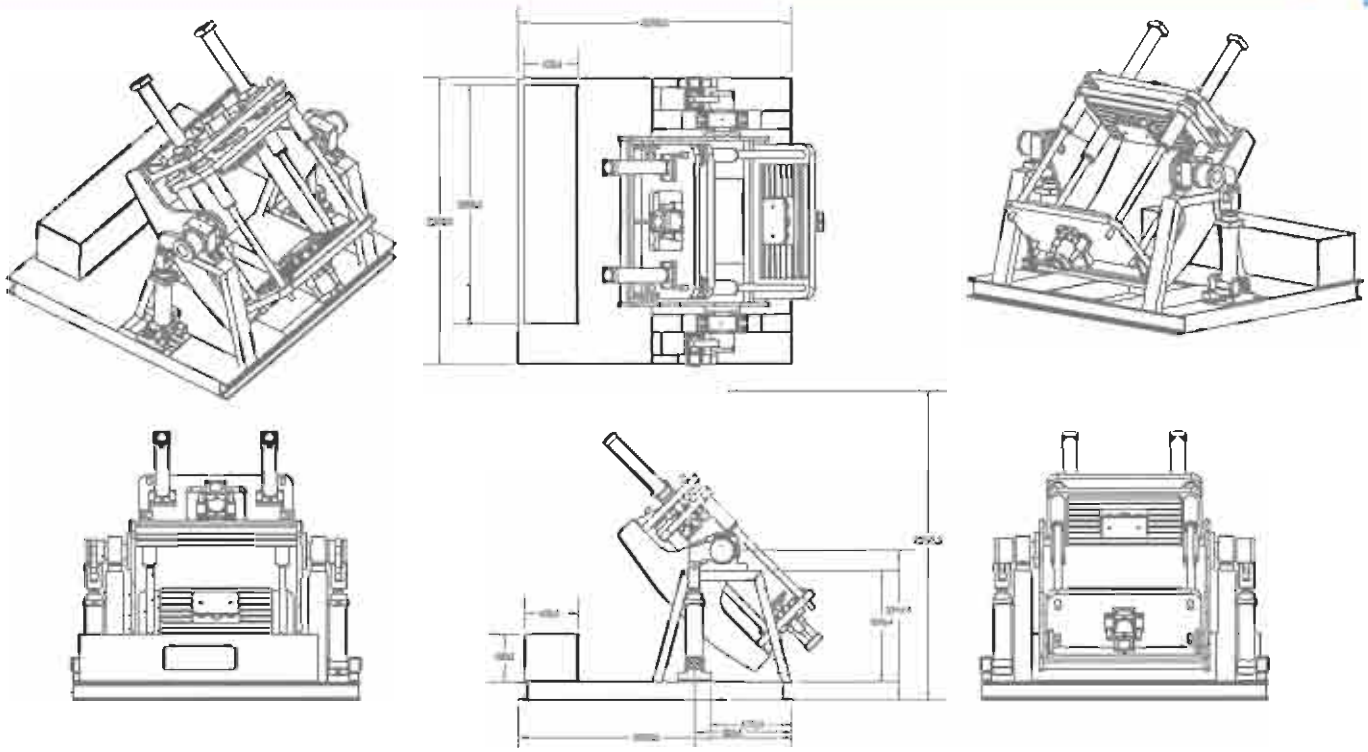


1] Plants Specification

1)	Machine Name	:	Gravity Casting Machine	
2)	Quantity	:	1 unit	
3)	Power Sources	:	AC 415v/50Hz 3	
4)	Accessories	:	Maintenance Tools	1unit
			Operation Manual	3 copies
			Maintenance Manual	3 copies
			Consumable Spares	
			Packing KIT for dia 125	1 set
			Packing KIT for dia 100	2 set

2] Specifications

1)	Required Area	:	W2000 X L2600 X H2820
2)	Aprox. Weight	:	3.8 ton
3)	Die Clamping		
	Die Clamping Force	:	Max 8590kg
	Die Opening Force	:	Max 6870kg
	Die Opening Stroke	:	Max 600mm
	Open Height	:	1000mm
	Shut Height	:	400mm
	Die Closing Speed	:	Max 14sec./ 600mm
	Speed Control	:	1 speed (variable)



4]	**Tilting**		
	Tilting Angle	:	90degree
	Speed Control	:	2 speed (variable)
	Tilting Speed	:	Max 5.5 sec/90 deg
5]	**Lower Knock Out**		
	Knock Out Force	:	Max 3900 kg
	Knock Out Stroke	:	Max 50 mm
6]	**Upper Knock Out**		
	Knock Out Force	:	Max 3900 kg
	Knock Out Stroke	:	Max 50 mm
7]	**Die Plate**		
	Die Plate Size	:	520mm x 850mm
	Mold Clamping	:	Manual M16 T-slot

8] Tie Bar			
	Dia	:	Dia 60 x 4
9] Hydraulic Unit			
	Tank Capacity	:	300 Ltr
	Oil	:	Turbine Oil ISO VG-32or46
	Pump Capacity	:	Max 33L/min
			A22-L-R-01-C-32 (YUKEN)
	Applicable Press	:	50 kg/cm (Max 70kg/cm)
	Motor	:	3.7 kw x 4p
10] Electric Specifications			
	Operation Mode	:	Manual & One Cycle Automatic
	Power Source	:	Power AC 415v / 50Hz
			Out-put Voltage AC 100 v/50 Hz
			In-Put Voltage DC 24 v

INTAKE MANIFOLD GDC

INTAKE MANIFOLD GDC FRONT VIEW

INTAKE MANIFOLD GDC SIDE VIEW

LPDC (LOW PRESSURE DIE CASTING MACHINE)

Machine Description:

Machine structure :

The machine structure consists of Steel base and top plate with 4 nos. of tie rods, Duely chrome plated and ground. The top hyd cylinder and side cylinders are used for opening and closing of the die and with the mode selection switch we can have 7 combinations of the same. The machine structure consists of hyd. Cylinder, solid piping, limit switch, limit switch wiring, hyd. Manifold totally complete assembled.

Technical details for LPDC Furnace :

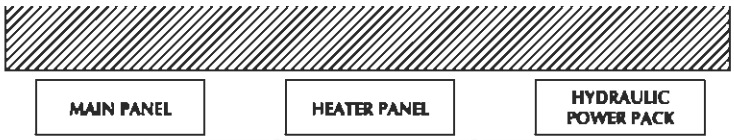
Type	: Electrical holding furnace.
Capacity	: 300 KG.
First heating	: 3 Hr.
KW	: 50 KW.
Heating element	: Strip type 6 nos with 8.88 KW each.
Size of the furnace	: Dia 1500 x 1200 Ht.
Crucible Size	: 300 KG capacity.
Electrical panel	: Thyrister drive 50KW.
Lining of th	: Ceramic board & brick lining.
Control I/P	: k type thermocouple.
Shell	: Fabricated out of mild steel material and Leak proof.

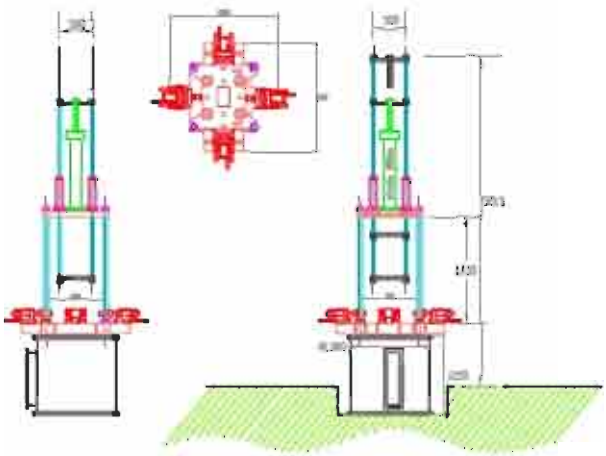
Control panel :

The main panel consists of PLC and relays. The operator panel consists of MMI and all the controls are on the operator panel like, furnace temp. Setting, pressure, timer shift no, operator no, heat batch no, casting serial no. This is capable of storing 7 days data on it. The heater panel is controlled by PLC and thyrister drive of 50 KW rating.

Scope of supply :

1) Main structure in assembled condition fully complete as per above.
2) Main PLC panel & heater panel as above:
3) Operator panel
5) Control panel for the above furnace:
6) Air Unit (SMC)
7) Hydraulic power pack with standby pump arrangement includes individual control panel





LPDC PNEUMATIC PANEL

Sr. No.	Item Description	Qty.
	Electrical System	
1.	Hydraulic Panel	1
2.	Main Panel	1
3.	Pendent Box	1
4.	Structure Mounting Box	1
5.	Heater Panel Along with 50kw Thyristor & PID	1
6.	Touch Panel 5.7' TP170N Colours Siemens Make	1
7.	Siemens Make PLC for Control of LPDC M/C.	
	Mechanical System	
1.	Hydraulic Powerpack	1
2.	Complete Structure	1
3.	Furnace	1
4.	Pneumatic Line	1 Set
5.	Hydraulic Bank	1 Set
6.	Hydraulic Cylinders	1 Set

LPDC HEATER PANEL

LPDC WITH FURNACE

LPDC HEATER PANEL

LINING OF LPDC FURNACE

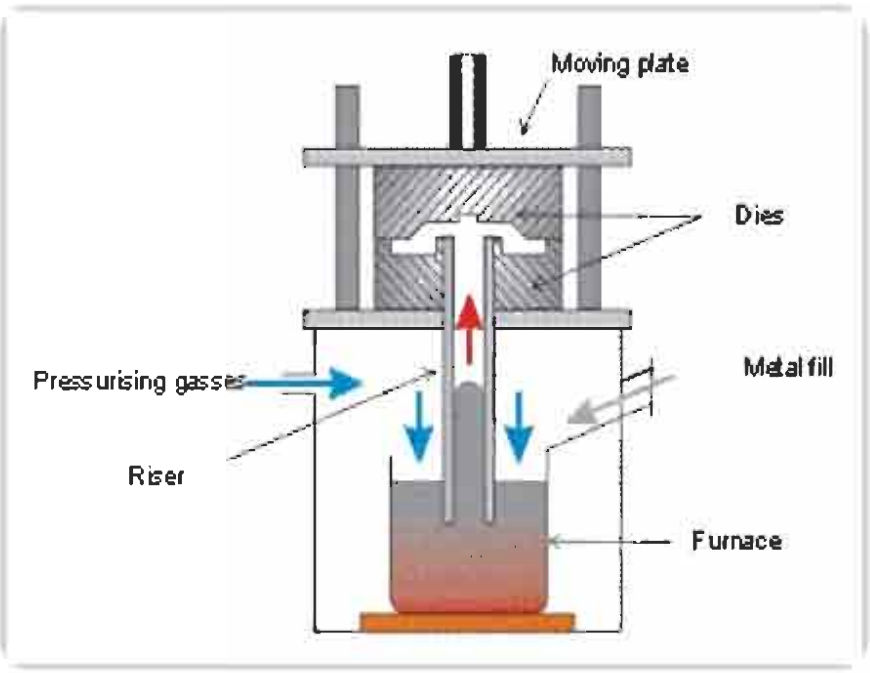
CONTROL PANEL OF LPDC

LPDC DATA

Vertical Press		
Clearance between the columns	Width	900 mm
	Height1	600 mm
Platen stroke		1050 mm
Moving column diameter		60 mm
Min. distance between platen and casting table		440 mm
Opening force		8836kg
Locking force		6912kg
Ejection force		8836kg
Weight		6000 kgs
Pressure Furnace		
Type	Crucible furnace	
Capacity	300kg/500kg	
Electric Power	50KW/60 KW	
Temperature control (SCR)	Thyristors	
Max operating pressure	1 BAR	
Hydraulic Pack		
Tank capacity	600 lt	

LPDC DATA

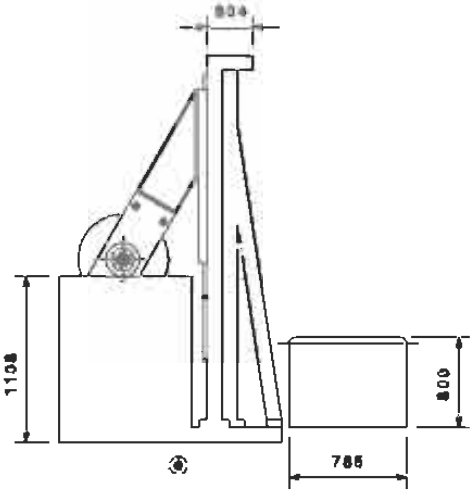
Operating pressure	50 bar
Motor electric power	11 KW
Type of pump	vain
Flame-retardant fluid	Glycol water
Cooling water consumption	approx. 300 lt/h
Overall dimensions (p x l x h)	1300 x 1300x 1000 mm
Weight	1000 Kg
Control unit	
Control unit	Mitsubishi
PLC unit	A1
Voltage	400 V 50 Hz
Auxiliary circuit voltage	110 V AC
PLC In/Out voltage	24 V DC
Overall dimensions (p x l x h)	900 x 500 x 1800 mm
Weight	800 Kg
Installation data	
Power	
Average consumption	30 kW/h
Connected load min.	70 kW
Compressed air	
Pressure6	8 bar
Fumace pressurization consumption	2 Nm3/min
Water	
Pressure2	3 bar
Hydraulic unit flow rate (with water at 25°C)	18.5 lt/min
Cooling circuit flow rate	15 lt/min

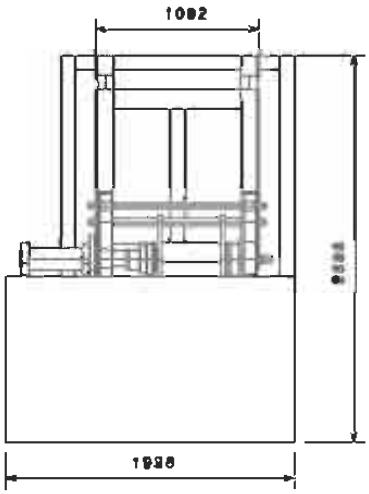


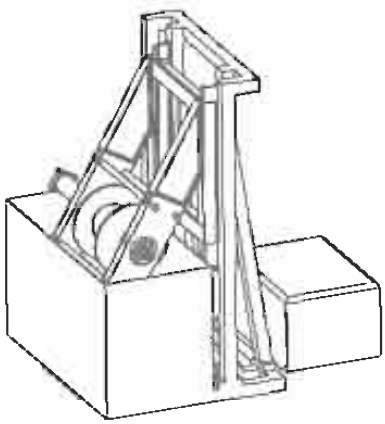
4W 2W LEAK TESTING M/C

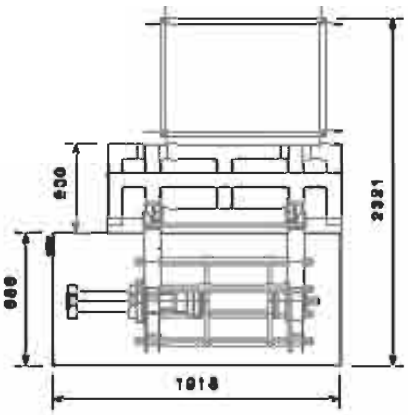
Water Tank Type

Wheel size -	From 6 inches to 19 inches
Leak testing pressure -	6 kgs.
PLC controlled panel	
Power Consumption -	5 HP
Weight -	2500 kgs.
Cycle time -	40 secs.









4W 2 W LEAK TESTING M/C

4W 2W LEAK TESTING M/C REAR VIEW

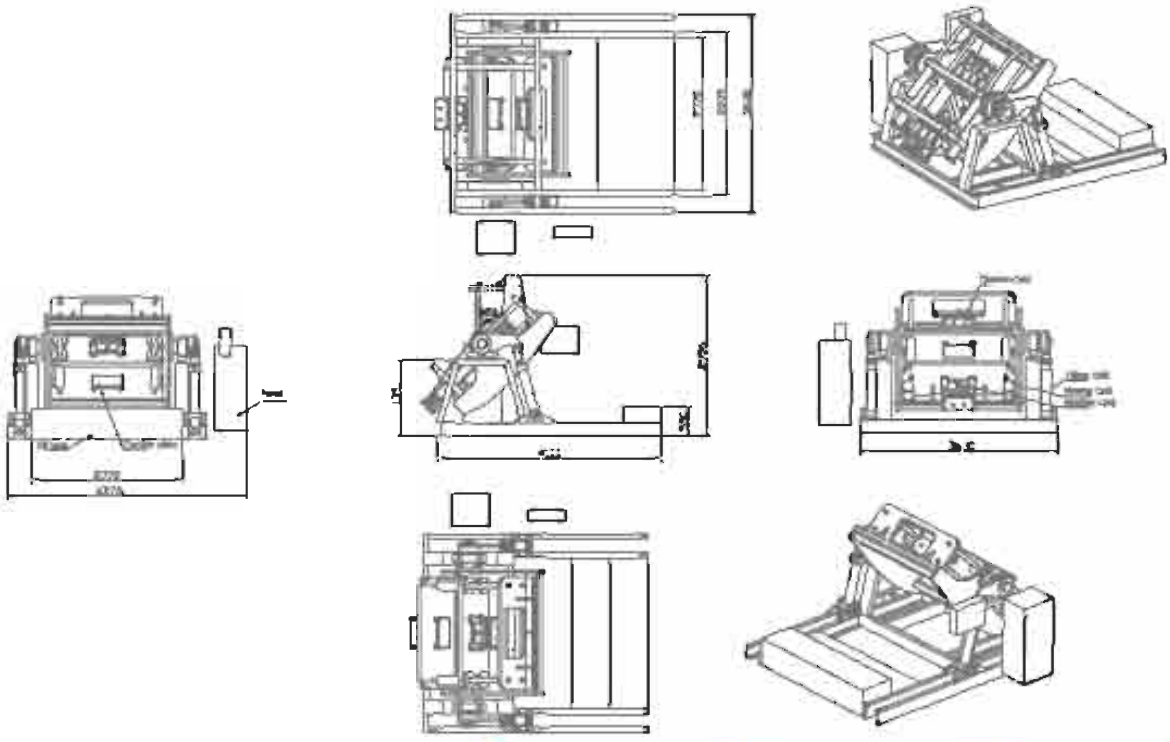
MAN GDC M/C

PLC controlled panel

MAN GDC die mounting area 1430 X 920 width, height resply.

Dimensions of the machine (GDC Machine)	
Necessary floor area	4100x4376mm Approx.
Height of the machine	2956 mm Approx.
Weight of the machine	17000kg Approx.
Die installation plate measurements	
Die installation plate measurement	1430mm x 920mm
Open Height	1700 mm
Shut Height	850mm
Die opening & closing settings	
Die opening & closing cylinder	Dia125 x 850st.
Die closing power	8350kg @ 50kg/cm2
Die opening power	12200kg @ 50kg/cm2
Knock out	
Rear knockout	Dia150x100stk. (B rod) oil pressure (Hydraulic) cylinder.
Ejection power	17000kg @ 50kg/cm2
front knockout	Dia150 x 100stk (B rod) oil pressure (Hydraulic) cylinder.
Ejection power	17000kg @ 50kg/cm2

(Hydraulic) oil pressure settings	
Tank	3800 ltr capacity.
Oil runing	Turbine oil ISO VG46
Oil (Hydraulic) pressure pump	PVR 50-FF-170-RAA-3480
Electric Motor	30 HP as per req.
Power used (Daily)	50 kg/cm2
Maximum pressure used	60 kg/cm2MAN GDC m/c
Electricity control	
Operation	Manual / Auto
Control Method	S7 200 CPU 226 DC/DC/DC
Control of the electric pressure	230 / 50HZ X 24V/
Others	Cooling Timer
	Buzer



2WHL/4WHL RAISER CUTTING MACHINE

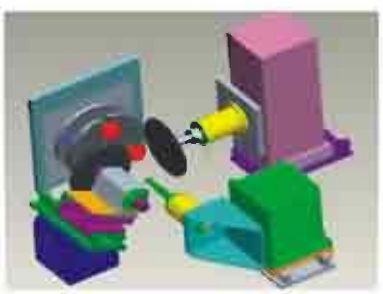
(CENTER /OUTLINE/COLUMN)

SPECIFICATIONS

1)	Size of the machine	Fitting size	Width 7.980 Length 3.450 To upper surface of bed 1.270 (To F.L after fit the stand) *Switch for safety confirm open and shut of the box cover inspection door(HSIC-P) High about 3.670
2)	Work Chuck (Wheel)	Wheel (Work) size Chuck across	2 WHL = 15"~19"/7J ~6J 4 WHL = 13"~17"/5J~8J 308 mm ~ 550 mm Chuck roller 130 mm (3 pieces) Needle BRG NAG 4906 Eccentric pin & link mechanism Hydraulic cylinder 63x45 st
3)	Work rotary	Special spindle	Spindle across 100 mm Taper roller BRG 33070 U Gear drive speed ratio 1:10 Hydraulic motor with brake SBD19AA7B-VSDA5A-PD19
4)	Work rotary per minute		3 rpm
5)	Work position	90 turn over unit (Link type)	0°~90°(Chuck at horizontal position) Turnover fulcrum spindle 60 mm Hydraulic cylinder for turnover 63x295(7 pieces) Turnover output 3.100 kgf (1.550 kgf/1 piece) Stopper knock adjust type
6)	Center cutting spindle (Cutting center boss)	Center cutting spindle unit	KS-70M Angular BRG 7214 All closed outside fan type flange motor 4P/5.5 KW AC 380V/50 HB
7)	Center tip saw	(Catridge type)	Ø135 xØ 70 x 3.5(For 2 WHL) PCD 55 4-M8 dish BT Ø85 x Ø10x3 (For 4 WHL) PCD 30 4-M8 dish BT
8)	Cutting speed		V=606m/min(2WHL) V=380m/min
9)	Center spindle feed unit		KF-1055A X-axis=575 s.t Ball screw BNFN 4017-5(THK) LM guide NSR 50 TBA 2UUJ+1050L(THK) Hydraulic motor with brake SBD16AA2B-VSDASA-PD16 (SUMITOMO) Ø64-Ø202 (30-99T)2M Gear increase speed ratio 3.3:1 Rotary encorder TRD-GK170-RZ(X-axis) Y-axis=125s.t LM guide NSR40TBC2UUJ+570 L(THK) Hydraulic cylinder Ø63x125s.t Rotary encorder TRD-GK1000-RZ(y-axis)
10)	Outline cutting spindle (cutting outline dam)	Outline cutting spindle unit	KS-75A High speed angular BRG7315C/7314C All closed outside fan type motor 6P/7.5 KW AC 380V/50 HB V pulley speed ratio 1:1.27 (6":71/2") pulley Section 'C' nos 3

SPECIFICATIONS

11)	Spindle rotary per minute		757 rpm
12)	Outline tip saw		Ø610xØ30x4.5 PCD 160 4M17CSBT
13)	Cutting speed		V = 1449m/min
14)	Outline spindle feed unit		KF-700C X-axis = 240 s.t Ball screw BNF 4017-5(THK) Gear increase speed ratio 3.3:1 Hydraulic motor with brake SBD16AA2B-VSDASA-PB16 (SUMITOMO) Angular slide Rotary encorder TRD-GK 170-RZ(X-axis) Y-axis = 250 s.t Hydraulic cylinder Ø63x250 s.t Angular slide
15)	Discharge cutting piece, chip		
16)	Hydraulic pump unit (Separate set up)	Pressure vomitting quantity. Hydraulic pump. Pump motor. Tank capacity. Hydraulic oil	50 kgf/cm7 (Normal pressure) 94 l/min PV7R3-94-L-RAA-30 (YUKEN) 6P/11KW/380V/50HB 400l water glycol system(incombustible) *HAW(matsumara petroleum)
17)	Automatic lubricant oil unit	Pump, Tank capacity	ML-0307A(SHOWA) (With level pressure switch)* 4kgf/cm7 ~ 5kgf/cm7



STATIONARY GDC

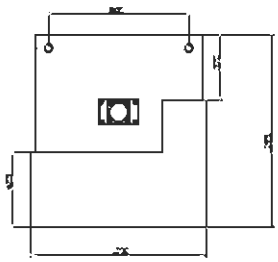
Stationery GDC die mounting area 500/400 width,height resply.

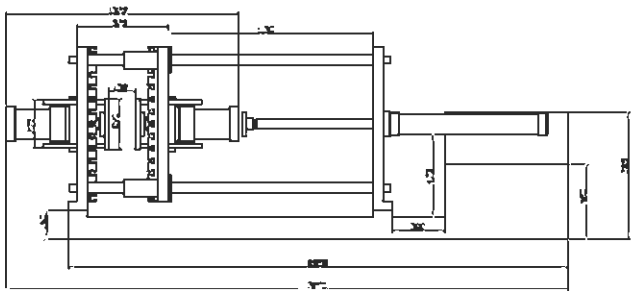
Dimensions of the machine (GDC Machine)	
Necessary floor area	1800x2500mm Approx.
Height of the machine	1000 mm Approx.
Weight of the machine	3500kg Approx.
Die installation plate measurements.	
Die installation plate measurement	520x400mm
Open Height	650mm
Shut Height	100mm

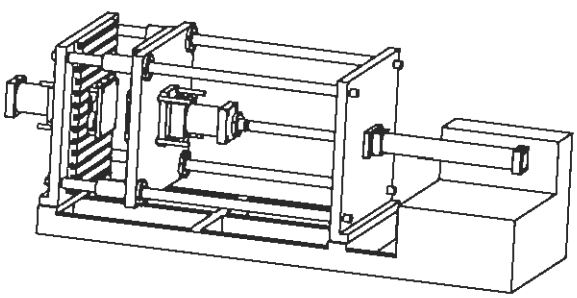
Die opening & closing settings	
Die opening & closing cylinder	Dia100 x 650st.
Die closing power	7855kg @ 50kg/cm2
Die opening power	5392kg @ 50kg/cm2
Knock out	
Rear knockout	Dia150 x 100stk.(B rod) oil pressure (Hydraulic) cylinder.
Ejection power	8836kg @ 50kg/cm2
front knockout	Dia150 x 100stk (B rod) oil pressure (Hydraulic) cylinder.
Ejection power	8836kg @ 50kg/cm2

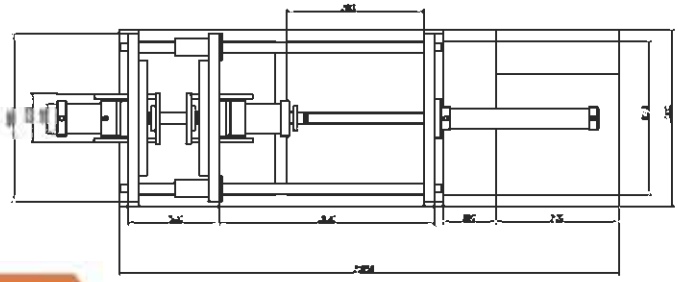
(Hydraulic) oil pressure settings.	
Tank	3200 ltr - 300 ltr capacity.
Oil runing	Turbine oil ISO VG46
Oil (Hydraulic) pressure pump	PVR 50-FF-60-RAA-3480
Electric Motor	5 HP as per req.
Power used (Daily)	50 kg/cm2
Maximum pressure used	70 kg/cm2Stationery GDC m/c

Electricity control	
Operation	Manual / Auto
Control Method	S7 200 CPU 224 DC/DC/DC
Control of the electric pressure	230 / 50HZ X 24V/
Others	Cooling Timer
	Buzer





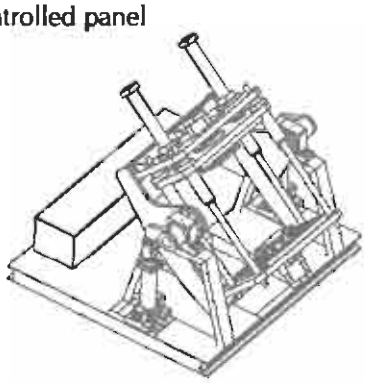


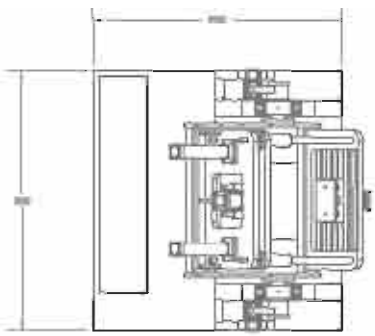


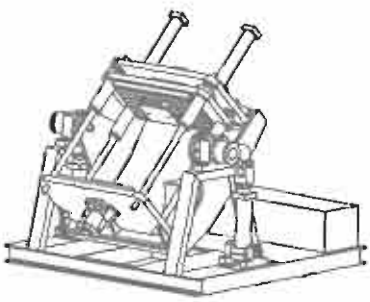
TILT CASTER 135 DEGREE

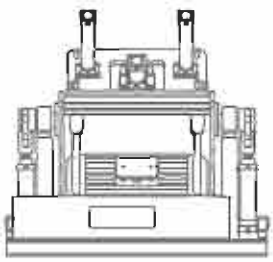
BASIC SPECIFICATION

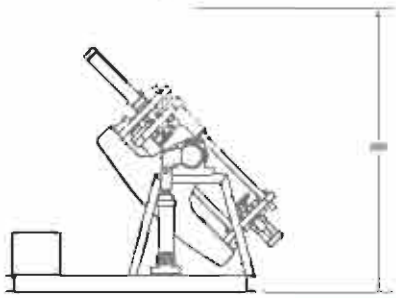
Dimensions of the machine (GDC Machine)	
Necessary floor area	2900 x 3000MM
Height of the machine	3500MM
Weight of the machine	5500kg Aprox.
Die installation plate measurements.	
Die installation plate measurement	650mm x 950mm
Open Height	1135mm
Shut Height	535mm
Die opening & closing settings	
Die opening & closing cylinder	Dia100 x 600st.
Die closing power	7855kg @ 50kg/cm2
Die opening power	5392kg @ 50kg/cm2
Tilting Angle	
Tilting angle end	135deg Complete tilting time 6sec
Tilting cylinder	Dia125 x 372st.
Tilting speed	Flow Control Valve
Knock out	
Upper knockout	
Upper knockout power	8836kg @ 50kg/cm2
Lower Knockout	
Lower Knockout power	8836kg @ 50kg/cm2
(Hydraulic) oil pressure settings.	
Tank Oil runing	
Oil (Hydraulic) pressure pump	PVR 150-FF-70-RAA-3480 (Oil research manufacturing industry)
Electric Motor	11KW x 4P
Power used (Daily)	50 kg/cm2
Maximum pressure used	70 kg/cm2
Electricity control	
Operation Control Method	
Control of the electric pressure	230 / 50HZ X 24V/
PLC controlled panel	
Others	

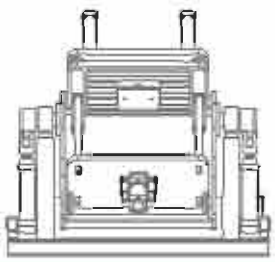












TRELLBORGE M/C

BASIC SPECIFICATION

Dimensions of the machine (GDC Machine)	
Necessary floor area	1500 x 1560
Height of the machine	1310 mm
Weight of the machine	2500kg Aprox.
Die mounting area.	
Die installation measurement	1180mm x 250mm
Open measurement	540mm
Shut measurement	190mm
Die opening & closing settings	
Die opening & closing cylinder	Dia100 x 350st.
Die closing power	7855kg @ 50kg/cm2
Die opening power	5392kg @ 50kg/cm2
Knock out	
Ejector 1	Dia150 x 60stk.(70 rod) oil pressure (Hydraulic) cylinder.
Ejector 1 power	8837kg @ 50kg/cm2
Ejection 2	Dia125 x 60stk (B rod) oil pressure (Hydraulic) cylinder.
Ejection 2 power	8837kg @ 50kg/cm2
Electricity control	
Operation	Manual / Auto
Control Method	Logo PLC
Control of the electric	230 / 50HZ X 24V/
PLC controlled panel	
Others	Cooling Timer
	Buzer