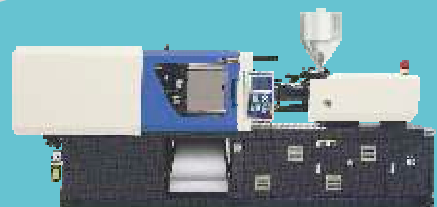


# MATHMAN

## Auxiliary Robotics Automation



[www.texairpl.com](http://www.texairpl.com)

## SDG HOPPER PLASTICS DRYER SERIES

### FEATURES:

- Even Heat Distribution : High efficiency to save lots of drying time.
- Accurate Thermo Control : Very high accuracy assured by excellent controller
- Labor-Saving : Compact in size for easy used.
- Increase the Speed for injection Cycle : Decrease melting time by having the raw material pre-dried and pre-heated.

### Specifications

Model	Capacity (kg)	Heat Power (kw)	Fan Power (kw)	External Dimensions LxWxH in mm	Installation Dimension LxW in mm
SDG-15E	15	2.5	0.12	580x400x720	110X110
SDG-25E	25	3.9	0.12	700x400x850	160x160
SDG-50E	50	5	0.18	850x500x950	160x160
SDG-75E	75	6	0.18	880x580x1040	160x160
SDG-100E	100	6.5	0.30	1000x650x1250	200x200
SDG-150E	150	8	0.30	1050x750x1330	200x200
SDG-200E	200	11	0.40	1150x800x1550	230x230
SDG-300E	300	13	0.40	1250x880x1600	230x230
SDG-400E	400	18	0.50	1400x950x1650	280x280
SDG-500E	500	18	0.50	1400x950x1760	280x280
SDG-600E	600	22	0.60	1600x1120x2000	280x280
SDG-800E	800	22	0.60	1800x1200x2300	320x320
SDG-1000E	1000	27	0.80	1800x1200x2600	320x320



Dryer



Base of Magnetic Rack (Optional)



Dust Collector (Optional)

## GIANT & EURO

### FEATURES:

- Features of 100-3000kg giant hopper dryers.
- Double layer construction for heat preservation and power saving with elegant appearance
- Downward blowing and circumfluent hot-air assures even drying and high efficiency.
- Contacting parts made of stainless steel to assure purity of material. Airtight door for easy cleaning.
- P.I.D for accurate temperature controlling.
- High-temperature protective devices for safety.

### Specifications

Model	Capacity (kg)	Heat Power (kw)	Fan Power (kw)	External Dimensions LxWxH in mm	Installation Dimension LxW in mm
ZF-100	100	6.5	0.25	101x70x141	18x18
ZF-150	150	9	0.35	110x74x170	20x20
ZF-200	200	12	0.35	118x84x176	23x23
ZF-300	300	15	0.4	142x100x183	27.5x27.5
ZF-400	400	15	0.4	148x106x202	27.5x27.5
ZF-600	600	20	0.8	158x116x240	28x28
ZF-800	800	30	1.0	177x118x254	28x28
ZF-1000	1000	40.8	1.1	1470x1920x3280	-
ZF-1500	1500	51	1.5	1540x2000x4030	-
ZF-2000	2000	61	3.0	2400x1890x4100	-
ZF-3000	3000	68	4.0	2500x1990x4680	-



We can produce various specifications according to customer demands.

## DRYING AND DEHUMIDIFYING

### HONEYCYCLE

The machine adopts PID temperature controller system and 24 hour timer for auto start-up operation. It can adjust the rotating speed of honeycomb wheel. There are protection for motor overload and reverse phase. The dried air can reach a dew-point up to -60°C; It is a perfect device for processing plastic products.



#### Specifications

Models of single type, 2 in /type, 3 in/type available

Model	ZDD-90L/80A	ZDD-120L/80A	ZDD-160L/130A	ZDD-230L/160A	ZDD-300L/220A	ZDD-450L/300A
Material Hopper Capacity(L)	90	120	160	230	300	450
Hopper Heat protection material	Fiberglass					
Dry-Air Dew point	40°C					
Temperature(°C)	80-160					
Air Flow(m/h)	80	80	130	160	220	300
Blower Power(kw)	0.75	0.75	1.1	1.5	2.2	3
Regeneration Blower(kw)	0.25	0.25	0.25	0.55	0.55	0.75
Drying Heater(kw)	3.9	6	6	7.2	12	15
Regeneration Heater(kw)	3.9	3.9	3.9	5.4	5.4	7.2
Pipe Sizes Drying(mm)	51	51	51	63	63	76
Pipe Sizes Cooling(inch)	3/4"					
Pipe Sizes Regeneration(mm)	38	38	38	51	51	63
Conveying Blower(kw)	1.1	1.1	1.1	1.5	1.5	1.5
Conveying Distance(mm) Stage 1	10					
Conveying Distance(mm) Stage 2	10					
Hose Sizes (inch)	1.5					
Sensor Hopper Capacity(L)	6	6	12	12	12	12
Vacuum Hopper Capacity(L)	6	6	12	12	12	12
Dimensions HxWxL(mm)	180x100x87	180x100x87	180x100x87	225x165x125	225x165x130	290x150x130

## HAL VACUUM AUTOLOADER



Hopper of deposit Material



300 Style



300 European Style

### FEATURES:

- Material hopper separates with main controller. Safer and more convenient
- With isolated filter, it is easy to clean
- It is equipped with the special device to reduce the working noise
- Material hopper is made of stainless steel, light and durable
- Separately - designed control chest is operated by micro computer It is equipped with motor auto protection device
- Warning device works automatically when lacking material
- Dust-removing device can be installed specially

### Main specifications of auto-loader

Model	Single Phase Motor Specification (W)	Conveying Capacity (kg/h)	Material Hopper Volume (L)	Conveying Tube (mm)	External Dimensions Main Controller (mm)	External Dimensions Material Hopper (mm)	Conveying Height (mtr.)
HAL-300G	1200	300	6	Ø38mm	260x360x400	530x360x260	4-5
HAL-700G	1200	350	6	Ø38mm	400x400x500	530x360x260	4-5
ZF-300	1200	300	6	Ø38mm	260x300x450	530x360x260	4-5

Motor Type : Carbon Brush / 220V

## HAL VACUUM AUTOLOADER



Electrical Eyes for material Exit



700 Style, 800 Style, 900 Style

### FEATURES:

- Material hopper separates with main controller. Safer and more convenient
- With isolated filter, it is easy to clean
- It is equipped with the special device to reduce the working noise
- Material hopper is made of stainless steel, light and durable
- Separately - designed control chest is operated by micro computer It is equipped with motor auto protection device
- Warning device works automatically when lacking material
- Motor can rotate anti-clockwise to get rid of dust

### Main specifications of auto-loader

Model	Motor Specification (W)	Conveying Capacity (kg/h)	Material Hopper Volume (L)	Conveying Tube (mm)	External Dimensions Main Controller (mm)	External Dimensions Material Hopper (mm)	Conveying Height (mtr.)
HAL-700	1100	350	7.5L	Ø38	500x400x400	530x360x260	4-5m
HAL-800	1500	350	7.5L	Ø38	500x400x600	530x360x260	6-8m
HAL-800G	1500	550	7.5L	Ø38	500x400x600	560x360x300	6-8m
HAL-900	2200	580	12L	Ø51	520x450x650	560x360x300	6-12m
HAL-1000	3000	1000	12L	Ø51	520x450x650	730x360x300	6-12m
HAL-1000G	5500	1200	38L	Ø51	520x450x650	730x360x300	20m

Motor Type : Induction / 220V

## FEEDING AND CONVEYING

### HAL-800-PA/3 VACUUM POWDER AUTOLOADER

This machine can avoid dust in materials conveying, to make the workshop clean. it is suitable to convey Powder. Pellet which the specific gravity is 0.5g-2.2g/cm<sup>2</sup>

The part of machine which contacts with materials is made of stainless steel, to make materials clean and unpolluted. It is controlled by microcomputer to ensure automatic working and it can be chosen by hand operation.



Main controller



Hoper of deposit material

#### Specifications

Model	Motor (HP 3Ø)	Conveying Capacity (kg/h)	Material Hopper Volume (L)	Conveying Tube (mm)	External Dimensions Main Controller (mm)	External Dimensions Material Hopper (mm)	Conveying Height (mtr.)	Absorption time (s)
HAL-800G2-PA	2	380	7.5	Ø38	70x48x111	52x35x79	4/2	20
HAL-800G2-P	2	600	18	Ø38	70x48x111	52x35x103	4/2	40
HAL-3HP-PA	3	700	25	Ø51	70x48x116	52x35x103	5/2	20
HAL-3HP-PB	3	800	45	Ø51	70x48x116	52x35x138	5/2	40

### SCREW TYPE POWDER AUTOLOADER



Height 2.6m / 3.1 meter

Models : ZF-240, ZF-260, ZF-280, ZF-310

#### Features and Functions:

Screw type Power Auto-loader is an ancillary equipment for feeding powder and granules.

This machine can convey the powder and granules into the hopper automatically. The machine is made of Stainless steel which make the plastics materials to avoid the pollution competency and is without any foreign matters during the conveying process. This machine is applicable to all type of plastics materials including the calcium carbonate, soft chlorine and color granules mixed with oil. The conveying capacity can be reach 50kgs per minute.

Safe & convenient operation and the machine's move function to avoid the artificial feeding troubles that make the feeding job to be as more safe, time-saving and energy-saving.

The height can be made according to customer's requirement

## MIXERS

### VKG SERIES MIXER



Vertical style



Vertical style 300E

#### Characteristic:

- The tank and agitating blades are made of stainless steel. And the agitating blades can be easily removed for cleaning
- Airproofed, large capacity, and simple operation.
- It is driven by motor directly, not easy to glide, high speed of mixing, labour saving, and high efficiency for mixing



Recline style



High-speed drying mixer

#### Main Technical Parameters

Model	Motor Power (kw)	Mixing Capacity (kg)	Mechanism Size (L xW xH in mm)
VKG-25E	0.75	25	670x550x900
VKG-50E	1.5	50	700x750x1100
VKG-100E	3	100	850x950x1250
VKG-150E	4	150	950x1100x1300
VKG-200E	5.5	200	1050 x1200x1380
VKG-300E	7.5	300	1350x1350x1450
Reclining VKG-100E	2.2	100	1290x830x1150
Reclining VKG-200E	4	200	1430x1230x1440
Reclining VKG-300E	5.5	300	1550x1350x1540
Reclining VKG-500E	7.5	500	1650x1400x1600
High Speed Drying-Mixer-50E	7.5 -11	50	1150x850x1100
High Speed Drying-Mixer-100E	11 -15	100	1480x900x1400
High Speed Drying-Mixer-150E	22	150	1600x980x1550
High Speed Drying-Mixer-200E	30	200	1680x990x1550



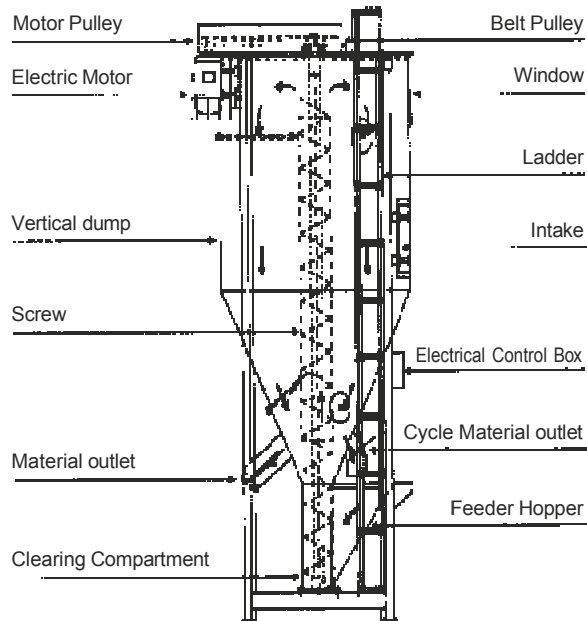
# MIXERS

## VERTICAL MIXER SERIES (screw style)

Helical circular mixture, fast and equal stirring.

Suitable for all kind of plastic raw material & color.

Fully stainless steel contacting parts, rust free & easy to clean. Installed with power control device to ensure safety.



### Working principle

The ZF series vertical are able to perform even mixture for large volume of material in short mixing time by utilizing the paddles rotation to gather the material from the bottom of dump center to the top, shed the material floe back to the bottom and complete the mixing function in short period time.

### Specifications

Model	Power (Kw)	Power (HP)	Capacity (kg)	Dimensions (cm)	Rotating Speed (r/min)
ZF-500	3	4	500	0110x220	300
ZF-1000	4	5.5	1000	0158x310	300
ZF-2000	5.5	7.5	2000	0189x347	300
ZF-3000	5.5	7.5	3000	0210x375	350
ZF-5000	11	15	5000	0243x435	350
ZF-7000	11	15	7000	0270x70	350
ZF-8000	11	15	8000	0275x495	350
ZF-10000	11	15	10000	0290x525	350



Base of Magnetic Rack



Dust Collector



Magnetic Rack



Hopper of Deposit Material



Frame



Dryer Heater



Iron Frame



Hopper of Deposit Material

## ZF-16/20 MIDDLE SPEED RECYCLE CRUSHER

### LOW SPEED RECYCLE CRUSHER

- ZF-16/20 series low speed recycle crusher, is suitable to crush small and undesirable products of forming machine, low rotating speed, low noise, little dust, easy operating.
- The materials entrance has magnetic-iron, can absorb iron pieces in materials.
- The crusher is small and has wheels, can be moved easily. Good design for repairing and dismantled
- We have V-4E and ASP-23 of blades for customers.
- Low rotating speed and sound-proofing design make the noise of crushing low.
- High safety standard design is suitable for European standard.



Claw Blade

### Main Technical Parameters

Model	Electromotor Power (Kw)	Main Axis Rotating Speed (r.p.m.)	Blade Material	Fixed Blade (pcs.)	Rotary Blade (pcs.)	Chamber size (mm)	Mill Ability (Kg/h)	Crushing Noise dB(A)	Mesh (mm)
ZF-16/28	2.2(1.5)	195(190)	SKD-11	2x1	3x4	160x280	50(45)	82-86	Ø5
ZF- 16/35	2.2(3.0)	195(290)	SKD-11	2x2	3x5	160x350	60(75)	82-86	Ø5

## PC SERIES STRONG CRUSHER

### FEATURES

- All structure is made by steel. Substantial and durable, it won't affect its capability for smashing matter long term.
- Can bear a heavy load, prevent oil leakage and noise from processing, no vibration during processing and make sure products are not polluted by oil.
- A safety protection system connecting between power and motor to prevent overload, enclose with safe pad to prevent cleaning knife in safety position. Modulation on knife stretch in and out, a blunt knife can be polished and keep using for a long time.
- Mill soft and hard plastic easily.
- Separate design for plastic tank, crusher and filter net, easy for cleaning.
- Sliding wheel on stand for moving easily.



Crusher PC180-1200 Series



Rotary and Fixed blade



Bearing Pedestal



Main Axes

### Main technical parameters

Model	Crusher's caliber (mm)	Mill Ability (kg/h)	Electromotor Power (kw)	Fixed Blade (pcs)	Rotary Blade (pcs)	Machine Dimension LxWxH (mm)
PC-180	190x140	30-80	2.2	2	9	700x520x900
PC-230	230x220	50-110	4	2	6	960x650x1020
PC-300	300x220	100-250	5.5	2	9	1110x720x1130
PC-400	400x250	200-450	7.5	2	12	1200x850x1280
PC-500	500x290	360-720	11	2	15	1300x100N1520
PC-600	600x340	450-800	15	4	18	1500x1150x1750
PC-800	800x500	800-1000	22/30	4	24	2000x1250x2100
PC-1000	980x500	1000-1500	37/45	4	30	2100x1500x2500
PC-1000	980x650	1000-1400	45/55	4	15x2	2100x1570x2500
PC-1200	1200x650	1500	55	4	12x3	2500x1770x3000



## ZF HEAVY BLOCK CRUSHER

The heavy block crusher is cast-iron and durable, especially for plastic blocks. The perfect design and installation of bearings, blades and axes insure longer work life of crusher. Different blades covers for different plastic materials and shapes.

It would be better to crush plastic blocks two times, with bigger holes filters for the first time, smaller holes filters for the second time, thus crusher works in high efficiency.



Automatic Recycling Device



Heavy Duty Block Crusher

### Main technical parameters

Model	Crusher's caliber (mm)	Mill Ability (kg/h)	Electromotor Power(kw)	Fixed Blade (pcs)	Rotary Blade (pcs)	Machine Dimension LxWxH (mm)
ZF-22/30	425x400	550-800	22/30	2	3	2100x850x2000
ZF-37/45	630x510	800-1000	37/45	4	6	1950x1550x2350
ZF-45/55	800x510	1000-1500	45/55	4	6	1950x1750x2500
ZF-75/880	1000x660	2000-3000	75/90	4	6	2100x1950x3000

Best quality SKD-11 blades are available to extend the Crusher's service life.

## LOW SPEED-SOUND PROOF RECYCLE CRUSHER

1. Low speed-sound proof recycle crusher
2. Motor from Taiwan or Sumitomo
3. Timer, over-heating protection
4. CY12 mov of blade material

MODEL	ZF-230	ZF-315
Power (kw)	1.1	1.5
Fixed blade	3	3
Rotary blade	2	2
Crushing chamber size (mm)	310x230	315x315
Machine size (mm)	900x450x1300	1100x500x1550

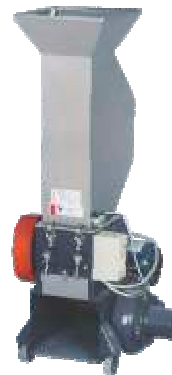


## PCE SMASH - AUTO RECYCLE MACHINE

### FEATURES:

1. Machine equipped with automatic loader and material Prorating valve, can used to reclaim used material at once. The wasters will be crushed, an sent to the molding machine. Minimize waste is guarantee.
2. Used materials don't pass the secondly drying procedure and don't change its color. Directly feeding thus make the environment clean and economic.

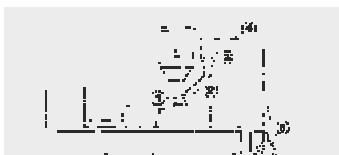
Type	PCE-180	PCE-240	PCE-300
Motor Power (kw)	1.1	1.5	2.2
Material Inlet (mm)	180x200	215x240	260x300
Max Recycling Capacity (g/s)	100/10	200/10	250/10
Machine Dimension (mm)	850x580x620	940x580x620	1450x600x700
Net Weight (kg)	100	150	220



Vertical Style



Recline Style



### STRUCTURE DIAGRAM

- Mixed filling base
- Down loading material tube
- Revolving separating machine
- Feeding material tube

# HEATING AND COOLING

## THERMAL

### NEW TYPE OIL / WATER THERMAL CONTROLLER

Oil type thermal controller of ZHENFEI series includes standard style and high temperature style, can be used heating mould and keep temperature

- The temperature can be controlled  $\pm 3^{\circ}$
- Adopt high efficiency pump, good pressure and steady It can find out the problem automatically and showed by alarm when there is breakdown
- It is convenient to be repaired and dismantled
- The heating pipe is made of stainless steel
- The temperature of standard style can reach 200°C, and 300°C for high temperature style



### Specifications

MODEL	MX-6W	MX-9W	MX-12W	MX-60W	MX-90W	MX-120W
Pump (kw)	0.37	0.75	0.75	0.37	0.37	0.75
Discharge L/min	60	85	95	40	60	60
Heater Power (kw)	6	9	12 / 18 / 24	6	9	12
Medium	WATER			OIL		
Maximum Temp. (°C)	98			120 or 180		
Dimension LXWXH (mm)	365x560x590	365x560x590	460x660x850	365x560x590	460x660x850	460x660x850

\*All specifications and design are subject to changes without prior notice.

## INDUSTRIAL CHILLER

### Water Cooled, Air Cooled & Screw Type



It is mainly used in plastic industry, it can exactly control the temperature of mould of all kinds for plastic process, shorten period of injection, improve quality of products. Make the product not shrink, high transparent, and surface is smooth and clean, it applies to electroplate industry, electronic manufacture, rinse industry, ultrasonic-machinery etc, it is operated easily, good quality and design. It is not short of equipment in modern industry.

Adopt new design compressor of America and Europe and pump of Italy, quietly, cost saving durable. Allocate the computer temperature controller, can control +3 to +50°C of inside accurately. There are brand-new condenser designed alone, and the radiator, it is specially good to transfer heat efficiently. There are putting type of stainless steel jars, it is convenient and swift to wash maintenance. This machine combines to pack to have the electric current to carry to protect high low pressure make and computer delay the time etc, safety device-, When the breakdown occurs, immediately give an alarm display the reason of breakdown.

### Specifications

Model	Refrigeration capacity btu/kcal	Water tank capacity (L)	Water pump power (kw) / flow (min)	Mechanism size L x W x H in mm	Power (kw)
ZF-5HP	12900	40L	0.75 / 70	880x570x890	5.5
ZF-10HP	26230	65L	1.5 / 280	1200x800x1140	12
ZF-15HP	38700	115L	2.2 / 600	1700x850x1420	17.5
ZF-20HP	52460	140L	4 / 750	1910x990x1520	24
ZF-30HP	79120	150L	4 / 750	2400x1350x1500	34
ZF-40HP	104920	180L	5.5 / 750	2600x1350x1600	45.5

\* Chiller models over 20HP can be made specially according to customers' requirements

## ROBOTS AND ROBOTIC ARMS

These robot arms specially designed for plastic injection molding machines. Our innovative research and development has technically advanced product range.

### Robotic Products Range

- Large Full Servo Traverse Driven Series
- Five-axis Servo Traverse Driven Series
- Three-axis Servo Traverse Driven Series
- Two-axis Servo Traverse Driven Series
- High Speed Two-axis Series (Suitable for smack-box)
- One-axis Servo Traverse Driven Series
- Single Servo Axial Robot Series
- Swing Series
- Vertical Swing Series
- Automation Solutions
- Four axis Stamping manipulator series
- Six axis joint robot
- Conveyor

### Main Automation Applications

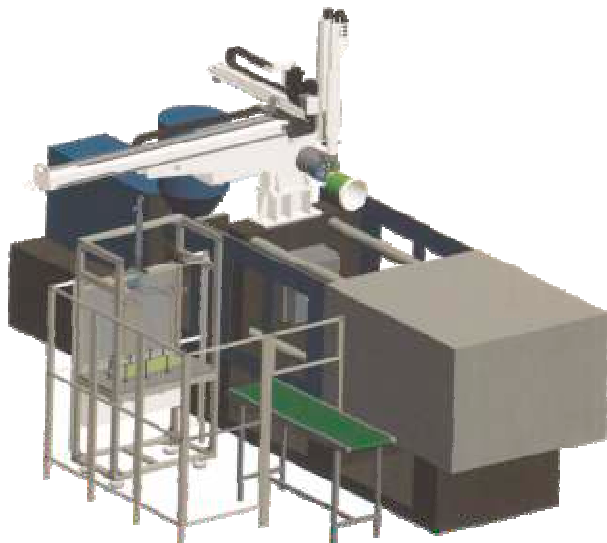
- Ultra hi-speed and high precision In Mold Inserting
- In Mold Labeling
- Hi-Speed Side Entry Robot
- Multi-Purpose Automation units



Servo Traverse Driven Series



Six Axis Joint Robot



Top and Side Entry IML System



## PLASTIC MOULDING MACHINES

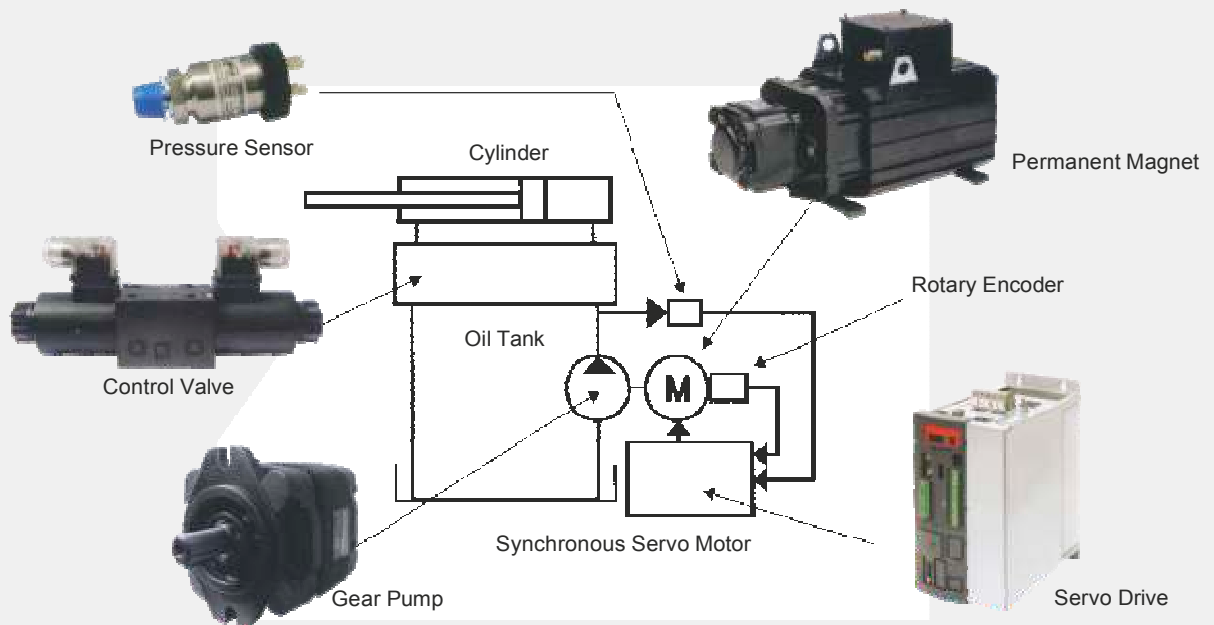


Horizontal Injection Moulding Machines



Vertical Injection Moulding Machines

## SERVO HYDRAULIC CONTROL SYSTEM RETROFITS



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