



BLOW  
MOULDING

# INNOVATION THAT ENHANCES YOUR PROFIT



## MISSION:

To continuously innovate and build world class blow moulding machines that exceed customers' expectations.

Manufacture of high tech blow moulding machine ranging from 20 to 2000 litre, single & multilayer

# ABOUT US ■

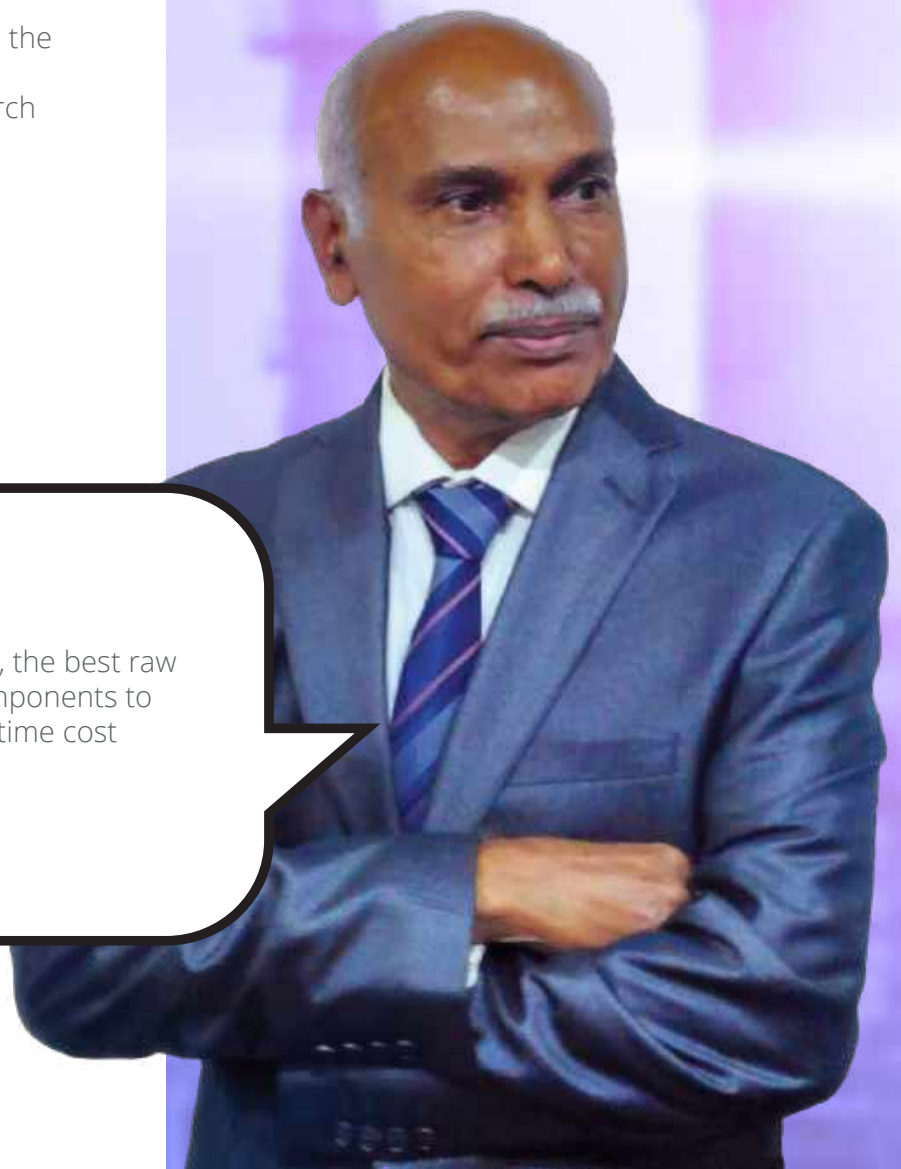
Industrial and Fluid power Consultants was founded by Mr. S.T. Sekharan, a renowned technocrat who spearheads the design and development activities. He has over 40 years of experience in design, manufacturing and testing of blow moulding machines, besides other fields like servo hydraulics, testing equipments and special purpose machines.

His proficiency in the fields of rheology, mechanics, hydraulics, pneumatics, electrical and electronics and our constant quest for newer technologies has led to continuous improvement of our expertise making us a premier company in the industry.

Our services are rendered to renowned government organisations like NAL – National Aerospace Laboratories, HAL – Hindustan Aeronautics Limited, RDSO – the Research Designs and Standards Organisation, ARAI – Automotive Research Association of India, CVRDE – Combat Vehicle Research and Development Establishment, BEML, MOOG covering various applications in Automotive, Aerospace, Aluminium, Iron and Steel Industries, etc.

## OUR MOTTO

Always employ the best technologies, the best raw material, the best processes and components to build energy saving and at the same time cost effective and excellent machines.



# DEVELOPMENT OF HIGH TECH BLOW MOULDING MACHINES ■

To start with, we manufactured good quality accumulator heads as replacement for those on existing blow moulding machines to improve the quality of blow moulded articles.

**And we have come a long way with many feathers in our cap, a few are given below:**

1

We Introduced Total Machine Control through computer before PLCs were introduced in India.

2

For the first time in India, we developed extruder & accumulator head suitable for processing of HM HDPE to produce 200 litre L-ring drums of high quality. Even now we continue to be the only manufacturer in India to achieve the performance required in this field.

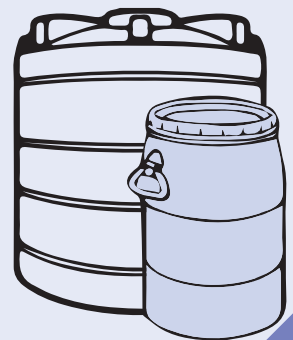
3

Again for the first time in India, we have developed a 50 litre 3 layer continuous blow moulding machine with production capacity of one 50 litre article per minute.

Our main activity covers manufacturing of high tech blow moulding machines ranging from 20 litre to 2000 litre in single as well as multi-layer up to 3 layers.

Our machines consume less energy per kg of sellable articles and need little maintenance while churning out consistent, high quality articles, 24 × 7 all through the year. That means least cost of ownership of the machine.

Our blow moulding machines continue to be the benchmark in India, while we strive to excel even further.



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# ACCUMULATOR TYPE - SINGLE LAYER

SPECIFICATIONS	UNIT	VBM 20	VBM 50	VBM 100	VBM 200
Article max size	Litre	20	60	120	240
Production Range	Litre	10 to 20	20 to 60	30 to 120	120 to 240
Screw Diameter	mm	60	70	81	110
Output	kg/ hour	60	120	148	320
Parison weight max	kg	3.6	6.5	8	14
Clamping Force	kN	150	200	280	610
<b>Mould Envelope max</b>					
Height	mm	980 / 650	800	950	1520
Width	mm	580 / 800	740	850	1080
Thickness	mm	450	440	635	800
Extruder Motor	kW	15	30	37	90
Motor (Main hydraulics)	kW	7.5	15	18.5	37
Motor (parison hydraulics)	kW	3.7	5.5	5.5	5.5
Total connected load	kW	43	86.5	104	198

## ADVANTAGES OF OUR MACHINE

- Superior quality products
- Consistent output
- Energy saving per kilogram of output
- Seamless parison gives superior hoop strength of parison and article
- Faster colour change
- Low maintenance
- Trouble free operation
- Huge savings in raw material

## ARTICLES MANUFACTURED

- Automotive parts
- Industrial Packaging
- Furnitures

**SETTING  
BENCHMARK  
SINCE 1984**



# 200 LITRE L-RING DRUM

SPECIFICATIONS	UNIT	VBM 200SS	VBM 200SX	VBM 200C2S	VBM 200C3L
Article max size	Litre	240	240	240	240
Production Range	Litre	120 to 240	120 to 240	120 to 240	120 to 240
No.of layers*	No.	1	1	2	3
<b>Screw Diameter</b>	mm	110	120	-	-
Inner Layer	mm	-	-	70	70
Mid Layer	mm	-	-	-	100
Outer Layer	mm	-	-	100	70
Total Output	kg/hr	320	400	400	450
Parison weight max	kg	14	14	14	16
Clamping Force	kN	610	610	610	610
<b>Mould Envelope max</b>					
Height	mm	1520	1520	1520	1520
Width	mm	1080	1080	1080	1080
Thickness	mm	800	800	800	800
<b>Extruder Motor</b>		90	110	-	-
Inner Layer	kW	-	-	30	22
Mid Layer	kW	-	-	-	75
Outer Layer	kW	-	-	75	22
Motor (Main hydraulics)	kW	30	30	30	37
Motor (parison hydraulics)	kW	5.5	5.5	5.5	5.5
Total connected load	kW	198	217	237	237
Production capacity	No./hr	32	40	40	45
Take-out device		included	included	included	included

## ADVANTAGES OF OUR MACHINE

- Consistent output
- Energy saving per kilogram of output
- Savings in raw material
- Faster colour change
- Low maintenance
- Trouble free operation
- Low cost of ownership
- Superior quality products
- Seamless parison gives superior hoop strength of article
- Desired wall thickness ratio of each layer can be easily adjusted with the help of AC Drive
- \* A multilayer machine can be used for manufacture of single, two or three layer articles

## ARTICLES MANUFACTURED

### Packaging for

- Pharmacuetical industry
- Chemical industry
- Food industry

# ACCUMULATOR TYPE - COEXTRUSION

SPECIFICATIONS	UNIT	VBM 50C2	VBM 100C2	VBM 200C2S	VBM 400C2
Article max size	Litre	50	120	240	450
Production Range	Litre	10 to 50	30 to 120	120 to 240	100 to 400
No.of layers*	No.	2	2	2	2
<b>Screw Diameter</b>					
Inner Layer	mm	52	52	70	70
Mid Layer	mm	-	-	-	-
Outer Layer	mm	70	81	100	90
Total Output	kg/hr	132	164	420	308
Parison weight max	kg	5.3	8	14	16
Clamping Force	kN	200	280	610	720
<b>Mould Envelope max</b>					
Height	mm	800	950	1520	1500
Width	mm	740	850	1080	1240
Thickness	mm	440	635	800	960
<b>Extruder Motor</b>					
Inner Layer	kW	11	11	30	22
Mid Layer	kW	-	-	-	-
Outer Layer	kW	22	30	75	55
Motor (Main hydraulics)	kW	15	15	30+7.5	37+7.5
Motor (Parison hydraulics)	kW	5.5	5.5	5.5	7.5
Total connected load	kW	79	100	237	210

## ADVANTAGES OF OUR MACHINE

- Superior quality products
- Consistent output
- Energy saving per kilogram of output
- Seamless parison gives superior hoop strength of article
- Savings in raw material
- Faster colour change
- Desired wall thickness ratio of each layer can be easily adjusted with the help of AC Drive
- \*A multilayer machine can be used for manufacture of single, two or three layer articles
- Low maintenance
- Trouble free operation
- Low cost of ownership

## ARTICLES MANUFACTURED

- Automotive parts
- Industrial Packaging
- Furnitures

# ACCUMULATOR TYPE - COEXTRUSION - WATER TANKS

SPECIFICATIONS	UNIT	VBM 500C3	VBM 1000C2	VBM 1000C3	VBM 2000C2	VBM 2000C3S
Article max size	Litre	500	1000	1000	2000	2000
Production Range	Litre	250 to 500	200 to 1000, IBC	200 to 1000	500 to 2000	500 to 2000
No. of layers*	No.	3	2	3	2	3
<b>Screw Diameter</b>						
Inner Layer	mm	70	70	70	70	81
Mid Layer	mm	90	-	81	-	100
Outer Layer	mm	70	100	70	110	81
Total Output	kg/hour	396	357	388	480	628
Parison weight max	kg	20	30	30	45	45
Clamping Force	kN	910	920	920	1420	1420
<b>Mould Envelope max</b>						
Height	mm	1150	1550	1540	1860	1860
Width	mm	1160	1380	1500	1620	1620
Thickness	mm	1050	1300	1260	1520	1520
<b>Extruder Motor</b>						
Inner Layer	kW	22	22	22	30	37
Mid Layer	kW	22	-	45	-	75
Outer Layer	kW	55	75	30	90	45
Motor (Main hydraulics)	kW	37 + 7.5	30 + 7.5	30 + 7.5	30 + 7.5	30 + 7.5
Motor (parison hydraulics)	kW	7.5	7.5	7.5	7.5	7.5
Total connected load	kW	204	230	235	290	340
Optional feature	-	-	melt scraper system**	melt scraper system**	melt scraper system**	melt scraper system**

## ADVANTAGES OF OUR MACHINE

- Consistent output
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- Savings in raw material
- Faster colour change
- Low maintenance
- Trouble free operation
- Low cost of ownership
- Superior quality products
- Seamless parison gives superior hoop strength of article
- Desired wall thickness ratio of each layer can be easily adjusted with the help of AC Drive
- \* A multilayer machine can be used for manufacture of single, two or three layer articles
- \*\* Facilitates rapid colour change

## ARTICLES MANUFACTURED

- Water tanks
- Floaters
- IBC - Intermediate Bulk Containers
- Industrial Packaging
- Furnitures

## ACCUMULATOR TYPE - COEXTRUSION - FLAT PRODUCTS

SPECIFICATIONS	UNIT	VBM 100F	VBM 100C2F	VBM 400F	VBM 1000C3AL
Article max size	Litre	120	120	400	1000
Production Range	Litre	30 to 120	35 to 120	120 to 400	200 to 1000
No.of layers*	No.	1	2	1	3
<b>Screw Diameter</b>	mm	81	-	120	-
Inner Layer	mm	-	52	-	70
Mid Layer	mm	-	-	-	90
Outer Layer	mm	-	70	-	70
Total Output	kg/hour	148	164	400	410
Parison weight max	kg	10	10	18	30
Clamping Force	kN	330	330	720	920
<b>Mould Envelope max</b>					
Height	mm	1200	1200	2200	1540
Width	mm	910	910	1080	1500
Thickness	mm	630	630	640	1300
<b>Extruder Motor</b>	kW	37	-	110	-
Inner Layer	kW	-	11	-	22
Mid Layer	kW	-	-	-	55
Outer Layer	kW	-	30	-	30
Motor (Main hydraulics)	kW	18.5	18.5	37.5	37.5
Motor (parison hydraulics)	kW	7.5	5.5	5.5	7.5
Total connected load	kW	112	108	227	245
Optinal feature					melt scraper system**

### ADVANTAGES OF OUR MACHINE

- Consistent output
- Energy saving per kilogram of output
- Savings in raw material
- Faster colour change
- Low maintenance
- Trouble free operation
- Low cost of ownership
- Superior quality products
- Seamless parison gives superior hoop strength of article
- Desired wall thickness ratio of each layer can be easily adjusted with the help of AC Drive
- \* A multilayer machine can be used for manufacture of single, two or three layer articles
- \*\* Facilitates rapid colour change

### ARTICLES MANUFACTURED

- Water tanks
- Industrial Packaging
- IBC - Intermediate bulk container
- Furnitures
- Floaters



# CONTINUOUS MOULDING MACHINE

SPECIFICATIONS	UNIT	VCM 50C3
Article max size	Litre	50
Production Range	Litre	20 - 50
No. of layers*	No.	3
<b>Screw Diameter</b>		
Inner Layer	mm	52
Mid Layer	mm	81
Outer Layer	mm	60
Total Output	kg/hr	240
Parison weight max	kg	3.5
Clamping Force	kN	218
<b>Mould Envelope max</b>		
Height	mm	630
Width	mm	720
Thickness	mm	550
<b>Extruder Motor</b>		
Inner Layer	kW	11
Mid Layer	kW	37
Outer Layer	kW	15
Motor (Main hydraulics)	kW	11
Motor (parison hydraulics)	kW	5.5
Total connected load	kW	128

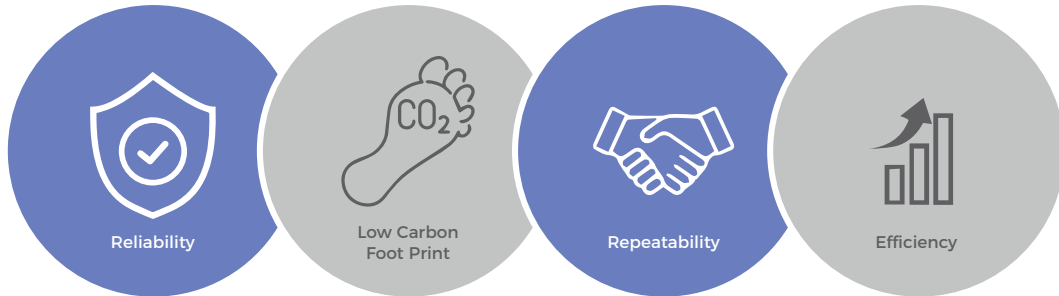
## ADVANTAGES OF OUR MACHINE

- Production output: One 50 litre article / minute
- Consistent output
- Energy saving per kilogram of output
- Savings in raw material
- Faster colour change
- Low maintenance
- Trouble free operation
- Low cost of ownership
- Superior quality products
- Seamless parison gives superior hoop strength of article
- Desired wall thickness ratio of each layer can be easily adjusted with the help of AC Drive
- \* A multilayer machine can be used for manufacture of single, two or three layer articles

## ARTICLES MANUFACTURED

- Industrial Packaging

## OUR MACHINES ARE SOUGHT AFTER FOR ITS



### A WIDE RANGE OF PLASTIC

ARTICLES CAN BE MANUFACTURED WITH THE MACHINES:

- 210 litre L-ring drums (for transport of hazardous material, petrochemical products, pharmaceutical products, etc.),
- Automobile components (fuel tanks, reservoir tanks, ducts, bellows, etc.),  
Furniture (for hospitals, schools, chairs for stadiums, buses, offices, etc.),
- Floaters (for solar panels, pontoon, etc.),
- Water tanks,
- Industrial Packaging (like jerry cans, 20 litres to 240 litre containers, etc.),
- Signage
- Any special products, as required by the customer



**HIGH  
PERFORMANCE  
EXTRUDERS &  
ACCUMULATOR  
HEADS FOR BLOW  
MOULDING ARE  
AVAILABLE AS  
RETROFIT TOO.**

# RETROFIT OF EXTRUDERS AND ACCUMULATOR HEADS

## EXTRUDER CHARACTERISTICS:

- High output
- Low specific energy consumption
- Faster colour change
- Stable conveying
- Reduced wear and tear
- Screw is bimetallic (tungsten carbide coated) resulting in undiminished output over long period
- Grooved bush made of tool steel for reduced wear and tear and long life
- Little changes in the properties of polymer leading to high quality extrudate
- After service life of screw, it can be used again by recoating

## ACCUMULATOR HEAD CHARACTERISTICS:

- Energy consumption is less
- Rejection rates are less
- Faster colour change
- Very high drop strength performance
- Uniform wall thickness of parison
- Article cooling time is lesser, so is the energy required for cooling
- Superior hoop strength of parison and article
- FIFO system of parison formation
- Excellent straight parison with homogeneous melt temperature is obtained
- Uniform melt distribution due to indigenously designed unique spiral distribution system

**The benefits of our Extruders and Accumulator heads can gainfully be employed as retrofit in other blow moulding machines too.**



**200 POINT PARISON  
PROGRAMMING MOOG SYSTEM**

## **STANDARD FEATURES OF OUR MACHINES INCLUDE**

- 200 Point Parison Programming MOOG system
- AC Drive driven system
- Energy meter
- Auto-lubrication

## **OPTIONAL FEATURES**

- Cost effective energy saving hydraulic system
- Servodrive system
- Top and bottom pincher
- Top and bottom preblow
- Angular neck facility
- Melt scrapper system to facilitate quick colour change - for 1000 litres and above
- Turn-key projects for complete plant setup
- Special features as required by customer



**TAKE-OUT DEVICE**

# BLOW MOULDING MACHINE SERVICE



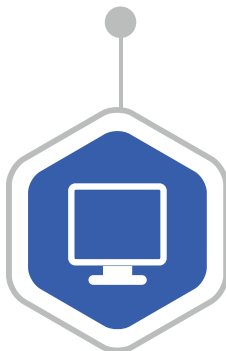
**Technical  
Support**



**Remote  
Diagnosis**



**Customer  
Training**



**After-Sales  
Service**



**BLOW  
MOULDING**

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