

Eugineers to Healthcare Industry®

PHARMA \* FOOD \* COSMETICS \* CHEMICAL \* PACKAGING

### **COMPANY PROFILE**

www.intertechglobal.com

## **PROFILE**

**INTERTECH TECHNOLOGIES PVT.LTD.** was established in the year 2005 & started our journey to carry out fabrication & to provide technical advisory design services along with design and development of equipments & machines. Since then, our activities have slowly and steadily grown and today we cater to a wide spectrum of clients in Pharmaceuticals, Cosmetics, Foods, Chemical and other allied industries with over 100 varieties of Processing, Packaging and allied equipments & machineries. The strong technical background, enterprising skills and best available engineering know-how enabled us to project our presence as a leader of manufacturer & exporter. We provided services including Equipment selection, Turnkey project execution, Installation and after sales service. We have our offices & Works located both in New Delhi & Mumbai, India. Pro-active management and continuous product innovation have enabled us to earn a good will among our customers. We have our strong presence in USA, CIS regions, Far East countries.

We handle Pharmaceuticals, Foods, and Cosmetics & Personnel care projects from Conceptualization to Execution within compliances of relevant standards. While our engineering, design, procurement and management services are available in comprehensive project packages. We also provide this engineering project management, project management & consultancy services individually or in any combination that a client specifies. We support process, utility and environmental systems, facilities and plant infrastructure etc.

We stress on an environmentally friendly industry as a common target. The Company endeavours towards achieving an engineered solutions for all processes demand of all Pharmaceuticals, Food, Cosmetics & other allied industries.

### **SERVICES**

### Our core services include:

### A. Project management

Skilful, experienced management is vital for the success of any project. Our project teams provide total capability for project of any size. Each team brings together experts from many fields.

Project management services include:

- Planning & Scheduling
- Procurement and contract strategy
- Design management, Cost control & project deliverable in compliance of statutory need
- Schedule control, Reporting and related aspects.
- PMC (Project Management & Consultancy)
- EPC (Engineering, Procurement & Construction) services.

### **B.** Design

We have the resources to provide traditional design services as well as specialized capabilities in leading edge technologies. We also design the processes crucial to getting your products to the market and improving your operations. From production processes and technology implementation to process controls and advanced systems.



Engineers to Healthcare Industry®

PHARMA \* FOOD \* COSMETICS \* CHEMICAL \* PACKAGING

### **COMPANY PROFILE**

www.intertechglobal.com

Our design services include

- Detailed Engineering
- Process Engineering
- Chemical Engineering
- Electrical Engineering
- Mechanical Engineering & related aspects.

### C. Utility Management

We have experienced personnel in the process, utility management, project management energy conservation study, cost control techniques. These project management tools, along with our experience and facility of pilot plant study ensures a practically zero defect system in all undertakings that we do.

Utility management services include:

- Constructability studies, Site supervision
- Safety and security, Materials control
- Quality control, Cost control & related aspects.

### **D.** Commissioning & Validation

We help you minimize the amount of time it takes to get your facility fully operational, with testing, validation and start up services to assist you in commissioning your plan. Once your facility is up and running, we can help you with continuing services that encompass preventive maintenance plant upgrades, and line change-outs, in order to minimize downtime and maximize production flexibility:

Commissioning & Validation services include:

- Validation master planning, validation protocols
- Installation qualification, operational qualification
- Process qualification, mechanical completion and related aspects.

### E. Validation & Reports

**INTERTECH** considers validation very important requirements for both the client and **INTERTECH** as this is the only system available for ensuring constant improvements and modernization in the processes.

Our validation services comprise a multi disciplined team of engineers. We provide validation and GMP compliance services to the bulk and secondary pharmaceutical and medical device industries. We offer a comprehensive range of validation services

- Validation master plans
- Computer system validation
- GMP training for project engineering disciplines
- GMP material and personnel flows



Engineers to Healthcare Industry®

PHARMA \* FOOD \* COSMETICS \* CHEMICAL \* PACKAGING

### **COMPANY PROFILE**

www.intertechglobal.com

### **OUR FACILITIES**

The success story of the company can be largely attributed to its continuous efforts in upgrading technologies. Today, the company offers state of art standard models. G.M.P. models with the options for Fully Automatic PLC Controls for various Process & packaging Equipments, designed to suit a specific end process as required by

Client's product.

We have experienced and skilled personnel to develop and manufacture quality machinery in our well-organized factories at Mumbai (INDIA). We design and fabricate various equipment to overcome the difficulties and problems encountered by chemical, pharmaceutical and engineering industry. At **INTERTECH** the efficient and academically qualified team spares no stone unturned, to be the best in Custom built Engineering by combining State-of-the Art design and technology.

### **QUALITY**

The Company is committed to ensure that no trouble being spared to see that every user of companies' product is satisfied with his equipment. The company has in house Quality control unit equipped with latest testing facilities & manned by highly technical and skilled work force to ensure strict quality control. Quality of our product is compatible to international standards. The Company offers a wide range of models of various capacities which suit a specific end use i.e., Lab models, Pilot Plant models and batch size production models of various capacities.

### **CLIENTS**

The products are of proven performance and can be seen in use in Small Scale Industries, Top Leading Indian Companies and Multinationals. Our products are also exported to various African, Gulf, European countries both directly & also through third party exports. Our clients are dispersed in Maharashtra, West Bengal, Tamilnadu, Andhra Pradesh, Haryana, Himachal Pradesh, Orissa, North East and many Union Territories in India.

### **PRODUCTS**

We are manufacturers and suppliers of Chemical Machines, Pharmaceutical machines, Bulk Drugs, Ayurvedic, Food, Cosmetics, Turnkey Projects & Pilot Plants.

# Pharmaceutical & Cosmetics Equipment's & Machines

- Blending Equipment's
- Mills Equipment's
- Pneumatic Conveying Units
- Tablet & Capsule formulation plants & equipment's
- Drying systems
- Automatic Tablet Coating Systems

- Ointment Plant & Filling Machines
- Liquid Oral plant & Filling Machines
- Soft gel plant
- Sterile product formulation plant
- Injectible plant
- Material transfer systems
- Homogenizing equipment's



Engineers to Healthcare Industry®

PHARMA \* FOOD \* COSMETICS \* CHEMICAL \* PACKAGING

## **COMPANY PROFILE**

www.intertechglobal.com

# **Chemical Equipment's**

- Reactors
- Storage Tanks & Vessels
- Multipurpose R &D Pilot Plant
- Extraction plant

- Pressure Vessels and other process Equipment
- Rotary Valves
- Vacuum Evaporators

## **Mixers & Blenders**

- Sigma Mixer
- Cream Mixer
- Planetary Mixer
- Rapid Mixer Granulator
- Vertical Screw Mixer

- Contra Rotary Mixer
- Ribbons Blender with double Choppers
- Powder Dozing System (Screw Conveyor)
- 'V' Cone Blender
- Octagonal Blender

## **Dryers**

- Agitated Vacuum Dryer with Mechanical Rake
- Double Cone Vacuum Dryer,
- Vacuum Tray Dryer
- Tray Dryer with all CGMP Models
- Fluid Bed Dryer with PLC
- Fully automatic with Raking Arrangements

# **Liquid Oral Plant Machineries**

- Stirrers
- Agitators
- **Emulsifiers**
- Reactors
- Sugar Conveying system

### Filling Machinery

## Powder Filling Machinery / Granules Filling Machinery

- Powder Dozing Machinery
- Automatic Single Head Powder Filling Machinery
- Automatic Twin Head Powder Filling machinery



Engineers to Healthcare Industry®

PHARMA \* FOOD \* COSMETICS \* CHEMICAL \* PACKAGING

### **COMPANY PROFILE**

www.intertechglobal.com

• Automatic Rotary Powder Filling machinery

### **Cream Filling Machinery**

- Semi Automatic Cream Filling Machines
- Automatic Single Head Cream Filling Machines
- Automatic Twin Head Cream Filling Machines
- Automatic Single Head Twin Piston Cream Filling Machines
- Automatic Twin Head Twin Piston Cream Filling Machines
- Lamy/Plastic Tubes & Aluminium Tube filling Machines

## **Closing or Cartooning Machinery**

- High Speed Fully Automatic Cartooning Machines for Mono Cartons
- High Speed Fully Automatic Cartooning Machines for Box Cartons
- Single Station Screw or ROPP Capping Machinery
- Multi Head Screw or ROPP Capping Machinery

# Wrapping Machinery

- Carton Over wrapping and Sealing Machinery
- Collating & Over wrapping Machinery
- Sleeving & Shrink Wrapping Machines using PE film
- Shrink Wrapping Machines using POF film
- PVC Shrink Labelling Machines for bottles

### **Other Plants**

- Total Powder mix plant & handling System
- Complete Chocolate Manufacturing Plant
- Neutraceuticals & Food additives plant
- Tomato Ketch up & Mayonnaise manufacturing plant
- Fruit juice & jelly manufacturing plant

For more details of our range of Supply of Machines & Equipments, moreover, for Live Video Presentation of our each Machine & Equipment, please reach to our official Website



Eugineers to Healthcare Industry®

PHARMA \* FOOD \* COSMETICS \* CHEMICAL \* PACKAGING

# **COMPANY PROFILE**

www.intertechglobal.com

# **ORGANISATION DETAILS**

Name of the Company	INTERTECH TECHNOLOGIES PVT. LTD
> Year of Establishment	2005
Corporate - Delhi Office	#4, 3 <sup>rd</sup> Floor, B-7 Vasant Arcade, Dr. Nelson Mandela Road, Vasant Kunj, New Delhi —110070 (INDIA)
➤ Works-1	Building No. 1 & 2, "A" Wing, Unique Industrial Estate, Survey No. 36, Hissa No. 10, Dhumal Nagar, Waliv, Vasai (East), Distt.  Palghar-401208.  Tel: +91-9607940371-78
➤ Works-2	Plot No. 5 and 6, Intertech Industrial Estate, Survey No. 62, Hissa No. 2 and 3, Behind Verma Shell Petrol Pump, Waliv, Vasai (East), Distt. Palghar, - 401208
> Corporate Telephone No.	+ 91-11-2689580/ 81/ 82
> E-Mail	marketing@intertechglobal.com

FACTORY AREA		
Built Up	150,000 sq.ft.	
Open	45000 sq.ft.	

POWER		
Connected	500 KVA.	
Back Up	250 KVA	



Engineers to Healthcare Industry®

PHARMA \* FOOD \* COSMETICS \* CHEMICAL \* PACKAGING

COMPANY PROFILE

MACHINERY INSTALLED				
Material Handling	<ul> <li>EOT Overhead Crane – 10 Tonne Safe Working load – 4 nos.</li> <li>EOT Overhead Crane – 5 Tonne Safe Working load – 2 nos.</li> <li>EOT Overhead Crane – 3 Tonne Safe Working load – 2 nos.</li> </ul>			
Cutting & Shearing	<ul> <li>Hydraulic Shearing machine with Motorized Back Gauge with DRO</li> <li>Plasma Cutting machine capacity 40mm 2 nos.</li> <li>Pug &amp; Profile cutting machine - 2 nos.</li> <li>Hand Shear - 1 nos.</li> <li>Cut off Machine - 2 nos.</li> <li>Horizontal Metal Cutting Band Saw Machine</li> </ul>			
> Plate Bending	<ul> <li>Hydraulic Press Brake capacity 40 Ton – 1 no.</li> <li>Hand Press upto 6mm thk. – 4 nos.</li> <li>Hydraulic Pipe Bending Machine upto 3"dia –2 nos.</li> <li>Captive Hydraulic Power Press upto 2 mtr. dia X 25mm thk 1 no.</li> <li>Rolling Machine for Plate Size: 2550x12mm Pyramid Type – 1 no.</li> </ul>			
> Welding	<ul> <li>TIG Welding 400 amps with pulsing effect – 4 nos.</li> <li>TIG Welding 600 amps – 5 nos.</li> <li>ARC Welding – 2 nos.</li> <li>Mobile hand held TIG Welding 200 amps—2 Nos.</li> <li>Orbital Welding – under installation</li> </ul>			
> Machining	<ul> <li>Radial Drill Machine RM 63 Model HMT – 1Nos.</li> <li>Pillar Drill Machine upto 38mm – 3nos.</li> <li>Magnetic Stand with Drill – 1 nos.</li> <li>Heavy Duty Lathe with Machine Bed Length 9Feet – 2 nos.</li> <li>Heavy Duty Lathe with Machine Bed Length 14Feet – 1 no.</li> <li>Heavy duty Lathe with Machine bed Length 6 Feet 3 nos.</li> <li>Universal Horizontal Milling Machine 5 feet with DRO – 2 Nos.</li> <li>Vertical Slotting Machine 12" 1 no.</li> </ul>			
> Surface Finishing	• Portable, flexible shaft grinding & polishing units – 25 nos.			



Engineers to Healthcare Industry® PHARMA\*FOOD\*COSMETICS\*CHEMICAL\*PACKAGING

# COMPANY PROFILE

	<ul> <li>Angle Grinding &amp; Bevelling Tools – 12 nos.</li> <li>Motorized polishing Adaptor – 2 nos.</li> <li>Pedestal Polishers – 3 nos.</li> </ul>	
	<ul> <li>Dedicated Bead blast facility chamber 2 mtr. X 2 mtr.</li> <li>Pickling &amp; Passivation, Hand held Spray Nozzles &amp; Applicators.</li> </ul>	
> Sundry Equipment	<ul> <li>High Efficiency Single Stage Screw Air Compressor (92 CFM) – 1 no.</li> <li>Air compressor, 10 HP–1 nos. &amp; 5 HP–1 no.</li> <li>Portable Handheld Power tools such as:</li> <li>Drill machines</li> <li>Pneumatic Screw Drivers</li> <li>Hand Shears, etc.</li> </ul>	

DESIGN FACILITIES		
Pressure Vessels	- In House	
Heat - Exchangers	- In House	
Process Equipment's	- In House	
Material Handling Systems	- In House	
Process Column	- In House	



Engineers to Healthcare Industry®

PHARMA \* FOOD \* COSMETICS \* CHEMICAL \* PACKAGING

### **COMPANY PROFILE**

www.intertechglobal.com

## IN HOUSE INSPECTION FACILITIES

- ➤ Surface Roughness measurement kit MITUTOYO Make
- ➤ Ultra sound D Meter Range :0.7 to 250 MM(Steel)
- Agitator air trial bench with Run out & Current monitoring facility
- ➤ Vacuum Pump Both water & oil ring (On Demand)
- ➤ Hydro-Test Pump upto 30 kgs. Capacity.
- Miscellaneous handheld instruments such as:
  - Dial Bore Gauge
  - Micro meters
  - Vernier calipers
  - Height Gage
  - Weighing Scale
  - Tong Tester
  - Multimeters
  - Infrared Temperature Sensors
  - Digital Contact type temperature Sensor
  - Digital Air Temperature Sensor.
  - Shore A gasket Hardness Meter(DUROMETER)
  - Digital Manometer
  - Digital Humidity Sensor.
  - Lux meter
  - Anemometer
  - Sound level Meter (DB meter)
  - Non-Destructive / Destructive contractual Testing Facilities available for checking chemical & Physical properties of metals.
  - Hydrogen leak detecting facility On demand



Engineers to Healthcare Industry®

PHARMA \* FOOD \* COSMETICS \* CHEMICAL \* PACKAGING

## **COMPANY PROFILE**

www.intertechglobal.com

# **OUR BANKERS**

> ICICI BANK	Indian Spinal Injuries Centre Opp. Sector-C, Vasant Kunj, New Delhi-110070.
> IDBI BANK	Prakash House, 1, Mahipalpur, Main Vasant Kunj Road Mahipalpur, New Delhi-110037.

### SKILLED PERSONNEL

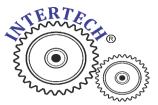
DIRECTORS	MR. AKHILESH SHARMA MS. UMANG SHARMA	02 Nos.
> Sales & Marketing:	<ul> <li>PGDM in Piping &amp; Mechanical Engineering + Six Sigma Green Belt.</li> <li>Mechanical Engineers</li> <li>BCA / BA- Graduates</li> </ul>	01 No. 01 No. 02 Nos.
Project & Planning	<ul> <li>Mechanical Engineers</li> <li>Electronic and Instrumentation Engineer</li> <li>Commerce Graduate</li> </ul>	10 Nos. 01 No. 01 No.
<ul><li>Design, Drawing &amp;</li><li>Documentation</li></ul>	<ul> <li>Mechanical Engineers</li> <li>Auto Cad Terminal &amp; ITI Draughtsmen – 14 nos.</li> </ul>	07 Nos. 01 No.
QA / QC & Documentation, Standardization and R&D	<ul> <li>Mechanical Engineers</li> <li>B. B.E. Automobile + PGD (Tool Design)</li> <li>Science Graduate</li> </ul>	05 Nos. 01 No. 01 No.
> Electrical & Automation	<ul> <li>Electrical &amp; Automation Engineer.</li> <li>Instrumentation &amp; Electrical Engineer</li> <li>Electricians</li> <li>Buffer &amp; Fabricators</li> </ul>	01 No. 01 No. 07 Nos. 05 Nos.



Engineers to Healthcare Industry® PHARMA\*FOOD\*COSMETICS\*CHEMICAL\*PACKAGING

# COMPANY PROFILE

> Production & Operation:		
<ul><li>Asst. Manager Production</li></ul>	• Engineer	02 Nos.
Supervisory	• Engineers	08 Nos.
■ Fitters	• ITI	11 Nos.
■ Welders	• Qualified	10 Nos.
■ Turner, Fabricator, Buffer,	Qualified	90 Nos.
Grinder, Miller, Driller etc.	Quantited	
Store, Purchase, Supply	Mechanical Engineers	02 Nos.
Chain Management/Logistic	Graduates and Diploma Holders	17 Nos.
	Mechanical Engineers	02 Nos.
> After Sales Engineers	• Electrical Engineers	02 Nos.
	• ITI	10 Nos.
> Accounts and HR-Admin	• MBA (Finance/ Administration)	02 Nos.
Accounts and TR-Admini	Commerce Graduate	10 Nos.



Engineers to Healthcare Industry®

PHARMA \* FOOD \* COSMETICS \* CHEMICAL \* PACKAGING

### **COMPANY PROFILE**

www.intertechglobal.com

# MAJOR INDUSTRIES WE SERVED

**Agrochemical** 

**Chemical** 

**Cosmetics** 

Dairy

Detergent

Fertilizer

Food Processing

Paints & Dyes

**Petrochemical** 

**Pharmaceuticals** 

\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\*

\***\*** 



Engineers to Healthcare Industry®

PHARMA \* FOOD \* COSMETICS \* CHEMICAL \* PACKAGING

## **COMPANY PROFILE**

www.intertechglobal.com

# MANUFACTURING ACTIVITIES / PRODUCT RANGE

# \*\*Pharmaceutical Process Equipment\*\*

SECTION - TABLETING / DRY SYRUP / POWDER			
Operation	Machines	Model / Size / Options	
A: Sieving/Grading of powder Granules	1.Mechanical Sifters 2. Vibro Sifters	20", 30" 12" To 48" with multiple options.	
	3. Rota Siever	Production model	
B: Dry/ Wet mixing of tablet Ingredients	Horizontal Mass Mixer     Planetary Mixer	50 To 100 Kgs 20 To 7580 Litres with options for Vacuum Jacketed bowl, hydraulic Lifting. etc.	
	3. Rapid Mixer Granulator	25 To 1000 litres with option for Jacketed bowl, loading unit, etc.	
	4. Starch Paste Kettle	Hemispherical, with in place tilting agitator	
C: Milling / Communitting /	1. Vertical Rota mill	Lab model & production model	
Granulation	2. Oscillating Granulator	Production standard model	
D: Lubricating / Blending of Ingredients	<ol> <li>Double Cone Blender</li> <li>'Y' Blender</li> <li>Ribbon Blender</li> </ol>	5 To 650 Kg 20 To 1000 Litres 60 Litres To 3500 Ltrs.	
	4. Drum Blender (inclined type)	Std. Size (200 Litres Drum)	
	5. Rotating type Drum Blender	200 To 750 Litres	
	6. Octagon Blender	150 To 4000 Litres	
E: Sugar / Film Coating & Finishing of Tablets	Autocoater     Coating Pans With     Option for Auto Spray     System, Hot Air Blower     Exhaust System, and	12" to 60"  12 To 72 Inches	
	3. Polishing Pan with Canvas	To suit drive and size of above pans	
F: Material Handling	1. Bins	To suit capacity requirement	
	2. Bin lifting & loading device	To suit above bins	
	3. FBD bowl lifting & tilting	To suit FBD bowl	
	SECTION - CAPSULES		
Operation	Machines	Model / Size / Options	
A: Sieving/Grading of powder Granules	<ol> <li>Mechanical Sifters</li> <li>Vibro Sifters</li> <li>Rota Siever</li> </ol>	20", 30" 12" To 48" with multiple Options Production model	

Operation	Machines	Model / Size / Options
A: Sieving/Grading of powder	1.Mechanical Sifters	20", 30"
Granules	2. Vibro Sifters	12" To 48" with multiple
	3. Rota Siever	Options
		Production model



Engineers to Healthcare Industry®

PHARMA \* FOOD \* COSMETICS \* CHEMICAL \* PACKAGING

# **COMPANY PROFILE**

www. intertech global. com

B: Milling / Communiting / Granulation	Vertical Rota Mill     Oscillating Granulator	Lab model & production model Production standard model
C: Lubricating / Blending of Ingredients	<ol> <li>Double Cone Blender</li> <li>'Y' Blender</li> <li>Ribbon Blender</li> <li>Drum Blender (inclined type)</li> <li>Rotating type Drum Blender</li> <li>Octagon Blender</li> </ol>	5 To 650 Kg 20 To 1000 Litres 60 Litres To 3500 Ltrs. Std. Size (200 Litres Drum) 200 To 750 Litres 150 To 4000 Litres

SECTION - OINTMENT/CREAM		
Operation	Machines	Model / Size / Options
A. Preparation Of Ointment	Jacketed Tilting Pan     Hemispherical Type	25 Litres and above
	2. Petroleum Jelly Storage and Melting Kettle	50 Ltrs and Above
	3. Transfer Pumps and Piping	Including filters, Valves, etc.
B : Ointment Mixing	1. Planetary Mixer	20 To 750 Litres with Options for Jacketed Bowl, Hydraulic Lifting, etc.
	2. Ointment Mixer	Up to 2000 Litres with Option for Vacuum Jacketed Bowl, Hydraulic Lifting and a variety of Agitators, homogenisers, etc.

## **SECTION - LIQUID SYRUP**

SECTION EIGOD STROT		
Operation	Machines	Model / Size / Options
A: Liquid /Oral Preparation	1: Sugar Syrup	Upto 10000 Ltrs Jacketed &
	Preparation Tanks	Non Jacketed with a Range of Agitators
B: Storage / Transfer	1. Holding /Storage	50 To 10000 Ltrs (Vertical/
	Tanks	Horizontal)
	2. Pumps / Transfer Lines	To Suit Above Capacities
	3. Horizontal Plate Filters	8" To 24" Plate Diameters
C: Bottle / Vial Cleaning	Inline Bottle / Vial Washing	Option for 1 To 3 Washes,
	Machine	Air Wash Recirculation of Water, Loading
		/Unloading Arrangement, etc.

# MATERIAL HANDLING / TRANSFER EQUIPMENT

- 1. FBD Bowl Lifting and Tilting Device
- 2. IPC Lifting and loading device
- 3. IPC and bins
- 4. Conveyors and trolleys
- 5. Jacking Trolleys and raising platforms



Engineers to Healthcare Industry®

PHARMA \* FOOD \* COSMETICS \* CHEMICAL \* PACKAGING

## **COMPANY PROFILE**

www.intertechglobal.com

# COSMETIC / FOOD / CHEMICAL EQUIPMENT - BUILT TO CUSTOM DESIGN

- 1. Contra Rotary Mixers
- Screw Conveyors
- 3. Pasteurising Shells
- Herbal Extraction Systems
- Soxellete Type
- Reflex Type
- Baro-Metric Type

- Reactors
- 6. Heat Exchangers
- **Evaporators and Crystallizer** 7.
- 8. **Distillation Columns**
- **Disperses**
- 10. Extractors
- 11. Hydrogenators
- 12. Condensers

## **MATERIALS HANDLED**

- SS 304
- SS 316
- SS 317L
- SS 904L (UNS No.8904)
- Alloy 20
- Hastealloy B2
- Carbon Steel confirming IS 2062/A 515/A 516, etc.

## **DESIGN CODES**

Design manufacturing, testing and inspection in accordance with:

- ASME Sec VIII, Div I.
- TEMA Standards.
- IS 2825 Standards.
- EJMA Standards.
- IS 4503 Standards.
- DIN Standards.

(India). Tel: +91-11-26899580/81/82

### WORKS - 2