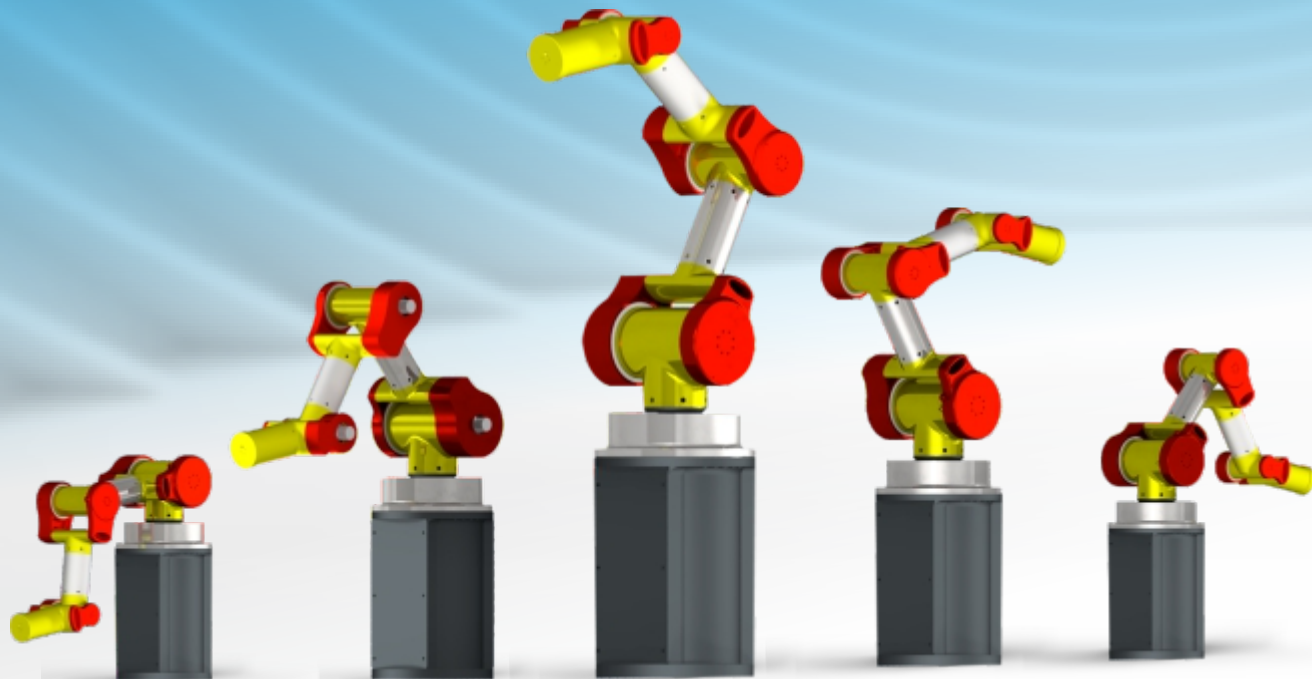


# NEXT STEP in INDUSTRIAL PRODUCTION

Smart, Reliable & Affordable



ACE Robotics



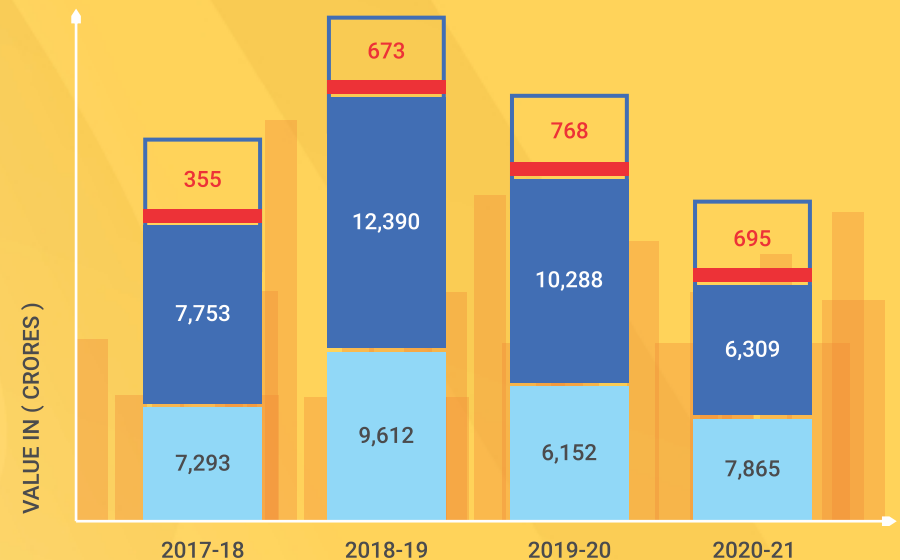
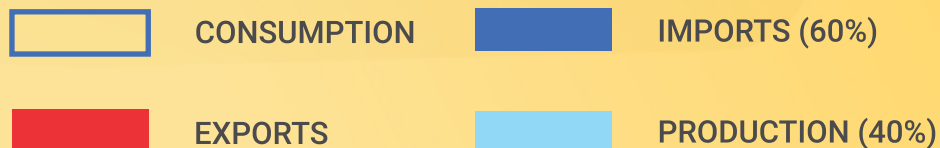
# MANUFACTURING INDUSTRY

Indian Manufacturing Industry continues to dominate contribution **16-17% to India's GDP** also creating millions of Jobs. Manufacturing has emerged as one of the high growth sectors with '**MAKE IN INDIA**' program placing India on the world map as a manufacturing hub giving global recognition to the Indian economy. The manufacturing GVA at current prices is US\$ 97.41 billion in the first quarter of FY22. Government aims to create 100 million new jobs in the sector by 2022. The manufacturing industries in India has the potential to reach **US\$ 1 trillion by 2025**.



## INDIAN MACHINE TOOL INDUSTRY

In year 2019-20, Indian Machine Tool Industry had production of Rs.6,152 Crores and Imports worth Rs. 10,288 Crores and Exports of Rs.768 Crores. Which clearly indicates the huge MAKE IN INDIA Potential in our Country. It is evident from the charts that about 60% of our machinery requirements are still Imported from other countries.



# CHALLENGES OF MANUFACTURING INDUSTRY



01

## PRECISE & TIMELY DELIVERIES

Irrespective of any issues faced, In manufacturing the committed quantities have to be supplied or have to endure huge losses and penalties.

02

## HIGH CAPITAL INVESTMENTS

With Every Order we need to invest in Machinery, Space, Labour & Mechanisms to fulfill the Orders. Also Raise Loans for the same.

03

## LOW MARGINS & LONG CONTRACTS

Orders are taken with Low Margins and further with time, the cost increases and the Margins Vanish.

04

## LABOUR MANAGEMENT

Today's biggest challenge for all Manufacturers is getting sufficient Labours and then getting work out of them. But are we able to achieve or are we facing the following issues??



# TIRED of LABOUR PROBLEMS ?



Indian industrial sector is facing huge crisis of labour shortages and rising labour costs that has hindered the growth and profitability of numerous MSME's. This shortage of labours combined with rising raw material, quality concerns, safety issues, etc. has led to a drastic decrease in the productivity of goods and commodities.

- **UPKEEP OF PERMANENT LABOUR**

- **SOURCING CONTRACT LABOUR**

- **MACHINE DAMAGES**

- **TOOL BREAKAGES**

- **QUALITY REJECTIONS**

- **ACCOMADATION, TRANSPORT & FOOD Cost.**

- **SAFETY & STATUTORY NORMS.**

# ROBOTICS INDUSTRY

India is one of the strongest growing economies among the emerging world markets. Indian industry is rapidly moving towards automation for increasing production volume, accuracy, and safety. To build up the industrial automation for increasing the product supply and domestic manufacturing, Indian Industrial Robotics market pre-covid was evaluated at 4,771 units in 2019 and is estimated to grow at 14% CAGR from 2019-2025. For meeting the automation needs, recently in 2020, the Indian market installed 30% more industrial robots compared to 2019. Industrial Robotics manufacturers are now considering India as a prime destination for their product sales.

There are various types of Robotic solutions according to the solution to be implemented like Articulated, Cartesian, Cylindrical, Polar, SCARA & Delta Robots.

## ARTICULATED ROBOTS

This robot design features rotary joints and can range from simple two joint structures to 10 or more joints. The arm is connected to the base with a twisting joint. Typical industrial robots are Articulated and feature 6 axes of motion. This design allows maximum flexibility. Six-axis robots are ideal for:

- Material Handling [Pick n Place]
- Machine Tending [CNC & VMC Tending]
- Arc Welding
- Spot Welding
- Other Applications



ACE Robotics



# Welcome to the 3 DIMENSIONAL World

---

Everything in this world is about equilibrium between  
3 Key parameters of any aspect

- Human life - Personal, Professional n Social.
- Use of MONEY - Spend, Save, Invest.
- Manufacturer's Requirements- Materials, Men n Machines.
- Production Variables - Quality, Quantity and Cost.
- Key Parameters of Robot - Speed, Repeatability, & Precision
- **ACE Robotics delivers - Faster ROI, Reduction in Cost & Increase in Production**



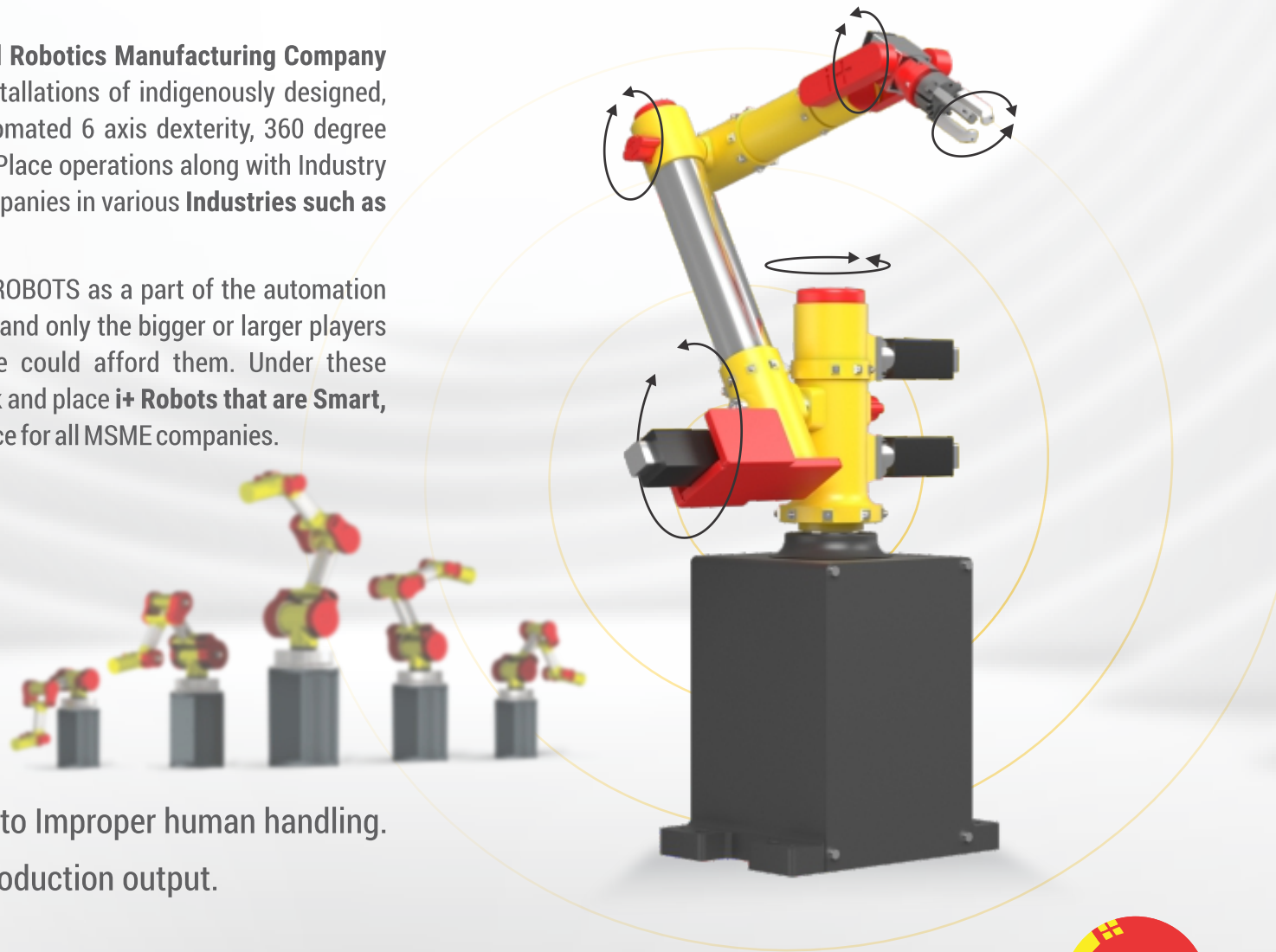
# About ACE ROBOTICS

ACE Robotics is **India's First Industrial Robotics Manufacturing Company** which has successfully completed several installations of indigenously designed, developed, manufactured fully functional automated 6 axis dexterity, 360 degree rotation Robots for Machine Tending & Pick n Place operations along with Industry 4.0 automation solutions for Indian MSME companies in various **Industries such as Automobile, Aerospace, Textiles** etc.

Presently MSME's feel that engaging ROBOTS as a part of the automation process at their factories are highly expensive and only the bigger or larger players with the ready and necessary infrastructure could afford them. Under these circumstances, cost-effective & synergetic pick and place **i+ Robots that are Smart, Fast, Reliable & affordable** will be the best choice for all MSME companies.

## BENEFITS of ACE ROBOTICS

- ⚙️ Reduce quality-related issues.
- ⚙️ Eliminate production failures due to Improper human handling.
- ⚙️ Maintain stable and consistent production output.
- ⚙️ Resolve labour shortage issues.
- ⚙️ Provide safe workplace.



# MEET THE i+Series FAMILY 3kg

---

The i+ series family has two members the i+Lite, i+Duo. Each robot offers different processing capabilities and they share the same ease of use and dependability that makes them a valuable addition to any production facility.

Subject to risk assessment, i+ series robots can typically work on the production line, thanks to built-in configurable programming interface. Safety is one of the pioneering features of robotics, i+ series robots are installed with necessary safety standards while exploring the unlimited applications. Greater productivity, improved product quality, reduced cost and peace of mind are ways we're making automation accessible to everyone.



## i+Lite - 3kg

Small but powerful, the i+ Lite robot has a payload of 3 kg and reach radius of 1000 mm. With 360-degree rotation, this low payload robot handles **1 CNC** Machine Tending jobs with high precision and can easily perform any repetitive tasks with ease.



## i+Duo - 3kg

Small but powerful, the i+ Duo robot has a payload of 3 kg and reach radius of 1000 mm. With 360-degree rotation, this low payload robot handles **2 CNC's** Machine Tending jobs with high precision and can easily perform any repetitive tasks with ease.



# i+SERIES 3kg SPECIFICATIONS

Model	i+ Lite 3kg	i+ Duo 3kg
<b>SPECIFICATION</b>		
Payload	3kg	3kg
Reach	1000mm	1000mm
Degees Of Freedom	6 Dof	6 Dof
Programing	10 inch touch input withGUI application	10 inch touch input withGUI application
<b>PERFORMANCE</b>		
Power Consumption ( Max Utilisation )	900 W	950 W
Power Consumption ( Nominal Utilisation )	400 W	450 W
<b>MOVEMENT</b>		
Positional Accuracy	+ / - 0.5 mm	+ / - 0.5 mm
Positional Repetability	+ / - 0.05 mm	+ / - 0.05 mm
<b>AXIS MOVEMENT</b>		
Axis 1	-150 to +150	-150 to +150
Axis 2	0 to +130	0 to +130
Axis 3	0 to +130	0 to +130
Axis 4	-90 to +100	-90 to +100
Axis 5	-90 to +90	-90 to +90
Axis 6	-180 to +90	-180 to +90
<b>MAX SPEED</b>		
Axis 1	90 / S	90 / S
Axis 2	90 / S	90 / S
Axis 3	90 / S	90 / S
Axis 4	90 / S	90 / S
Axis 5	90 / S	90 / S
Axis 6	90 / S	90 / S
<b>FEATURES</b>		
I/O ports		
Digital input	12	12
Digital output	12	12
I/O Voltage requirment	24v	24v
I/O Current requirment	600mA to 1.5A	600mA to 1.5A

# MEET THE i+Series FAMILY 6kg

---

The i+ series family has two members the i+Lite, i+Duo. Each robot offers different processing capabilities and they share the same ease of use and dependability that makes them a valuable addition to any production facility.

Subject to risk assessment, i+ series robots can typically work on the production line, thanks to built-in configurable programming interface. Safety is one of the pioneering features of robotics, i+ series robots are installed with necessary safety standards while exploring the unlimited applications. Greater productivity, improved product quality, reduced cost and peace of mind are ways we're making automation accessible to everyone.



## i+Lite - 6kg

Small but powerful, the i+ Lite robot has a payload of 6 kg and reach radius of 1200 mm. With 360-degree rotation, this low payload robot handles 1 CNC Machine Tending jobs with high precision and can easily perform any repetitive tasks with ease.



## i+Duo - 6kg

Small but powerful, the i+ Duo robot has a payload of 6 kg and reach radius of 1200 mm. With 360-degree rotation, this low payload robot handles 2 CNC's Machine Tending jobs with high precision and can easily perform any repetitive tasks with ease.

# i+SERIES 6kg SPECIFICATIONS

Model	i+ Lite 6kg	i+ Duo 6kg
<b>SPECIFICATION</b>		
Payload	6kg	6kg
Reach	1200mm	1200mm
Degees Of Freedom	5 / 6 Dof	6 Dof
Programing	10 inch touch input withGUI application	10 inch touch input withGUI application
<b>PERFORMANCE</b>		
Power Consumption ( Max Utilisation )	1900 W	2100 W
Power Consumption ( Nominal Utilisation )	950 W	1050 W
<b>MOVEMENT</b>		
Positional Accuracy	+ / - 0.05 mm	+ / - 0.05 mm
Positional Repetability	+ / - 0.05 mm	+ / - 0.05 mm
<b>AXIS MOVEMENT</b>		
Axis 1	-150 to +150	-150 to +150
Axis 2	0 to +130	0 to +130
Axis 3	0 to +130	0 to +130
Axis 4	-90 to +100	-90 to +100
Axis 5	-90 to +90	-90 to +90
Axis 6	-180 to +90	-180 to +90
<b>MAX SPEED</b>		
Axis 1	90 / S	90 / S
Axis 2	90 / S	90 / S
Axis 3	90 / S	90 / S
Axis 4	90 / S	90 / S
Axis 5	90 / S	90 / S
Axis 6	90 / S	90 / S
<b>FEATURES</b>		
I/O ports		
Digital input	12	12
Digital output	12	12
I/O Voltage requirment	24v	24v
I/O Current requirment	600mA to 1.5A	600mA to 1.5A



# MEET THE i+Series FAMILY 12kg

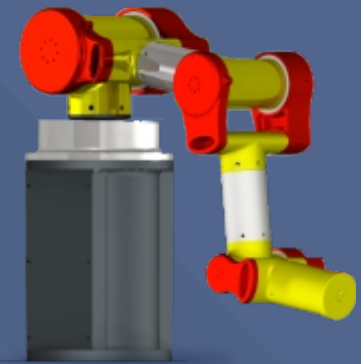
The i+ series family has two members the i+Lite, i+Duo. Each robot offers different processing capabilities and they share the same ease of use and dependability that makes them a valuable addition to any production facility.

Subject to risk assessment, i+ series robots can typically work on the production line, thanks to built-in configurable programming interface. Safety is one of the pioneering features of robotics, i+ series robots are installed with necessary safety standards while exploring the unlimited applications. Greater productivity, improved product quality, reduced cost and peace of mind are ways we're making automation accessible to everyone.



## i+Lite - 12kg

Small but powerful, the i+ Lite robot has a payload of 12 kg and reach radius of 1700 mm. With 360-degree rotation, this low payload robot handles **1 CNC** Machine Tending jobs with high precision and can easily perform any repetitive tasks with ease.



## i+Duo - 12kg

Small but powerful, the i+ Duo robot has a payload of 12 kg and reach radius of 1700 mm. With 360-degree rotation, this low payload robot handles **2 CNC's** Machine Tending jobs with high precision and can easily perform any repetitive tasks with ease.

# i+SERIES 12kg SPECIFICATIONS

Model	i+ Lite 12kg	i+ Duo 12kg
<b>SPECIFICATION</b>		
Payload	12kg	12kg
Reach	1700mm	1700mm
Degees Of Freedom	5 / 6 Dof	6 Dof
Programing	10 inch touch input withGUI application	10 inch touch input withGUI application
<b>PERFORMANCE</b>		
Power Consumption ( Max Utilisation )	8000 W	8500 W
Power Consumption ( Nominal Utilisation )	4000 W	4500 W
<b>MOVEMENT</b>		
Positional Accuracy	+ / - 0.05 mm	+ / - 0.05 mm
Positional Repetability	+ / - 0.05 mm	+ / - 0.05 mm
<b>AXIS MOVEMENT</b>		
Axis 1	-150 to +150	-150 to +150
Axis 2	0 to +130	0 to +130
Axis 3	0 to +130	0 to +130
Axis 4	-90 to +100	-90 to +100
Axis 5	-90 to +90	-90 to +90
Axis 6	-180 to +90	-180 to +90
<b>MAX SPEED</b>		
Axis 1	90 / S	90 / S
Axis 2	90 / S	90 / S
Axis 3	90 / S	90 / S
Axis 4	90 / S	90 / S
Axis 5	90 / S	90 / S
Axis 6	90 / S	90 / S
<b>FEATURES</b>		
I/O ports		
Digital input	12	12
Digital output	12	12
I/O Voltage requirment	24v	24v
I/O Current requirment	600mA to 1.5A	600mA to 1.5A

# Common CHALLENGE based on CASE STUDIES



## RETURN of INVESTMENT < 2 Years

Based on our Case Studies with our Clients, we have seen ROI to be between 14-19 months. And Continue Savings for years after that.



## REDUCE MONTHLY COST

We would bring down your monthly cost of operations by reducing Labour Salaries, Upkeep & Production Loss.



## REVENUE INCREASE

We would improve production by operations 24/7 of CNC Machine as Robot can function with same intensity and accuracy, round the Clock.



# BENEFITS for CLIENTS



## INCREASE in

- ⚙️ Production Quantity
- ⚙️ Efficiency
- ⚙️ Quality
- ⚙️ Preference for New Orders
- ⚙️ Respect among Clients & Peers

## DECREASE in

- Quality Rejections ⚙️
- No. of Labour ⚙️
- Labour Sourcing Pain ⚙️
- Machine Damages ⚙️
- Non Productivity Losses ⚙️
- Labour Management Expenses ⚙️
- [Accommodation, Transport, Meals, Safety etc)

## OUR ESTEEMED CLIENTS



## OUR EDUCATIONAL PARTNERS



## ACE Robotics Private Limited

[sales@acerobotics.in](mailto:sales@acerobotics.in) | [www.acerobotics.in](http://www.acerobotics.in) | +91 95000 39024

ARR Building, 1st Floor, 47A North Phase SIDCO, Thiru Vi Ka Industrial Estate, Chennai - 600032



FOR BROCHURE



FOR CONTACTS

"The information on this brochure is presented as general information and no representation or warranty is expressly or impliedly given as to its accuracy, completeness or correctness. It does not constitute part of a legal offer or contract. This brochure may unintentionally include inaccuracies or errors with respect to the description of services offered by ACE Robotics. Further the service packages may vary from the one displayed in the information and material displayed on this brochure."