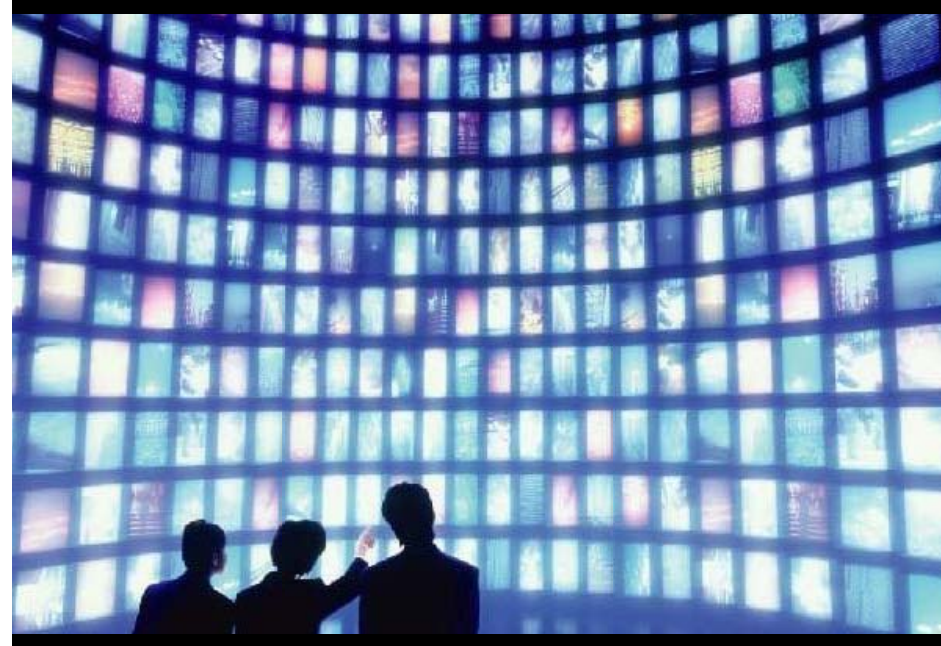


# ENGINEERING FOR A NEW ERA

Providing Total Process for the New Era



<http://www.parker-eng.co.jp>

 **PARKER ENGINEERING CO.,LTD.**

	ADDRESS	TEL	FAX
Head office	2-16-9 Nihonbashi, Chuo-ku, Tokyo 103-0027, Japan	+81-3-3278-4599	+81-3-3281-4910
Tokyo Sales office	( Same as above )	+81-3-3278-4800	+81-3-3281-4910
Kitakanto Sales office	26-2 Hiraike kogyo-danchi, Utsunomiya-shi, Tochigi 321-0905, Japan	+81-28-662-7641	+81-28-661-4838
Shonan Sales office	Banyu kogyo-danchi, 3-9 Tsutsumi-cho, Hiratsuka-shi, Kanagawa 254-0027, Japan	+81-463-25-2971	+81-463-21-3433
Nagoya Sales office	4-18 Momozono-cho, Mizuho-ku, Nagoya-shi, Aichi 467-0855, Japan	+81-52-823-1751	+81-52-823-0007
Osaka Sales office	11-41 Hiroshiba-cho, Suita-shi, Osaka 564-0052, Japan	+81-6-6386-6132	+81-6-6339-4032
Kyushu Sales office	4-7 Yubarumachi, Yahatanishi-ku, Kitakyushu-shi, Fukuoka 807-0813, Japan	+81-93-631-7464	+81-93-631-7474
Ordering Center	3-16-16 Shimeno, Neyagawa-shi, Osaka 572-0077, Japan	+81-72-827-5961	+81-72-827-5977
Adachi Laboratory	1-35-11 Miyagi, Adachi-ku, Tokyo 120-0047, Japan		

 **PARKER ENGINEERING CO.,LTD.**



An engineering enterprise continuing to provide new surface treatments and painting processes for industrial products.



Our engineering business is knowledge oriented rather than facility oriented. We take pride in our technical knowledge and creative ideas of each employee.



We provide total painting processes in connection with environmental load restraints worthy of the 21st century "era of environmental preservation".

Parker Engineering is a company which provides design, manufacture, installation, and commissioning for whole product lines related to 'painting'.

As a member of the Nihon Parkerizing Group, the leader in the surface treatment industry, we also provide all kinds of chemicals used for the painting process.

One of the main characteristics of our company is that in addition to providing new industrial product surface treatments and painting processes to our clients, we use our abundant technical know-how to reduce industrial waste and the production of CO2 as much as possible and supply total system engineering to a wide range of industries.

We use the phrase "Process Engineering Solutions" (Contributing to environmental protection through process innovation) to express our philosophy of contributing to the protection of the environment while at the same time contributing to the increased productivity of those involved in manufacturing. We believe this to be our most important mission.

Process Engineering Solutions



We have cutting edge technological know-how concerning surface treatment and painting that enhance the beauty of the finish and prevent deterioration by rust, etc. of industrial products such as automobiles, home electronics, communication devices, furniture, etc.



We provide problem-solving methods of surface treatment equipment to clients worldwide.

BUSINESS STRUCTURE

We uncover new needs from our correspondence with both domestic and overseas markets and provide our clients with total problem-solving methods for the painting process.



## Solutions

From partial optimization to total optimization—, This is a phrase often used in the Business Information System Industry, however this same philosophy is also applicable to the design of surface treatment equipment.

Parker Engineering has the technical know-how to solve our client companies' tasks such as "production cost", "product quality", "environmental measures" not as separate parts individually, but as one whole.



## Global



Nowadays, Asian countries have rapidly increasing demand for surface treatment and painting equipment. Our company has developed strong bases in America, Taiwan, Thailand, Indonesia and China, in order to take more rapid measures for client companies' overseas expansion. In October 2005, we established our 7th local subsidiary in Gurgaon, India and are strongly supporting the manufacturing process of automobiles and motorcycles, etc.



## Research & Development

In order to contribute to the "total optimization" of client facilities and as the core of the engineering business within the Parkerizing Group which advocates the philosophy of "Technology Based Enterprise", we are constantly placing priority on expanding our technical scope.

In addition, we are moving forward in the development of products applicable to state-of-the-art biotechnology and ecological systems, etc. and building the latest painting facilities and systems currently in demand.



### Our main products

- |                             |                                 |                              |
|-----------------------------|---------------------------------|------------------------------|
| 1. Pretreatment equipment   | 6. Ovens                        | 11. Sludge recovery systems  |
| 2. E-coat equipment         | 7. Deodorization systems        | 12. Powder coating systems   |
| 3. Wet-type paint booths    | 8. Conveyors                    | 13. Filters for paint        |
| 4. Dry-type paint booths    | 9. Wastewater treatment systems | 14. Solvent & powdered paint |
| 5. Air conditioning systems | 10. Paint circulation systems   | 15. Industrial chemicals     |



# Total support for all processes, Pretreatment, E-Coat, Paint Booth and Oven

In the case of the complex process involved in completing an automobile, etc. it is necessary to design and construct a giant facility up to several hundred meters long which uses several tens of thousands of parts.

There are extremely few companies which are able to provide precise consulting based on the client companies' facility plan and condition of the building site, provide total construction management and on-going service after delivery. Parker Engineering is one of those few: able to provide total support for all procedures from pretreatment to e-coat, paint booth and oven.

In addition to a large scale facility as shown in this diagram, we also provide individual unit facilities able to be set up in a short period of time to quickly answer the needs relating to the diversification of paint factories.

## Parker Engineering's philosophy concerning painting facility consultation to the design step

- To establish the desired functions in the smallest space possible under the restricted building lot size
- To maintain productivity while keeping quality as the base

PRODUCTS  
< LARGE PLANT >



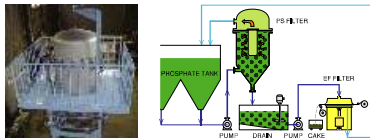
## 2. E-Coat

In this process, the whole body of the object is dipped into a tank filled with water-soluble paint. The paint adheres to the object due to a deposition by giving electric voltage to both the object and the electrode in the paint solution. This equipment is characterized by the evenness of the paint film and also the strong paint adhesion. This equipment is usually adopted for the Primer coating process.



## PS Filter (Phosphate sludge removal system)

Reducing the concentration of SS (suspended substances) in phosphate solutions has become a major theme for paint factories in recent years. Under present conditions, simply removing settled phosphate sludge to reduce the SS concentration is not enough to satisfy expectations. Accordingly, our company developed a system: a whole quantity filter method (PS Filter) which allows us to reduce the SS concentrate in the phosphate tank and deal with both the settled sludge and suspended sludge. Filter cleaning (back wash) time is reduced by using a high pressure method. In addition, possible cleaning using nitric acid allows the extended life of the filters.



## PMT Counter-flow Circulation System

The PMT (Parker Magic Turn) Counter-flow Circulation System adds the counter-flow of materials to be coated to the flow of the e-coat solution <Patent No. 339692> and with the construction of our original tank, allows us to reduce the amount of waste by 90% compared to the existing systems.



## Automatic Drain-board (Patent Pending)

Equipment generally used in the painting booth automated zone. When the line is in operation, the drain-boards located on the bottom surface of the booth are automatically stored to either side so that the over-sprayed paint does not come in contact with them. When the line stops (during maintenance) the drain-boards located on the bottom of the booth automatically expand to the center enabling maintenance to be performed easily.



## Reduced-pressure Distillation System

Jointly developed with Nihon Parkerizing Co., Ltd., the "Tubular Method", a method using new technology which takes the environment into consideration, is a system that separates waste water from the pretreatment process into re-usable "Distilled Water" (95%) and "Concentrated Water" for waste (5%). In addition to making waste water a re-usable resource, we do not discharge waste outside at all which contributes to the air quality control.



## 3. Paint Booth



The most appropriate painting processes and booths (Largely classified as "Dry" and "Wet") are determined by the special characteristics of each industrial product and we design and construct a painting process to fulfill the various demands of the client. In addition, at the same time, we provide the equipment and the know-how such as paint mist filters, disposal processes which are linked to the reduction of environmentally impacting agents.

## 4. Oven

For the purpose of hardening the coating film after painting. The temperature inside the oven (120°C to 180°C) is set and direct or indirect heating is chosen according to the type of paint. City gas or other clean energy is generally chosen as the heat source.

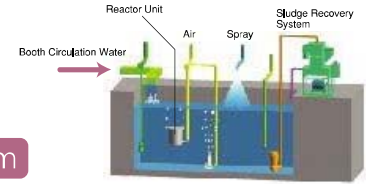


## 1. Pretreatment

"Pretreatment" is a process of treating the surface of the material before performing the application of the final painting in order to improve the quality of the painting. The process is typically made up of the 5 steps of "Degreasing", "Water Rinsing", "Surface Conditioning", "Phosphate Coating" and "Deionized Water Washing". This process plays an important role in determining the surface quality which becomes the "face" of the product.

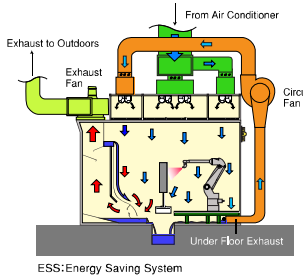
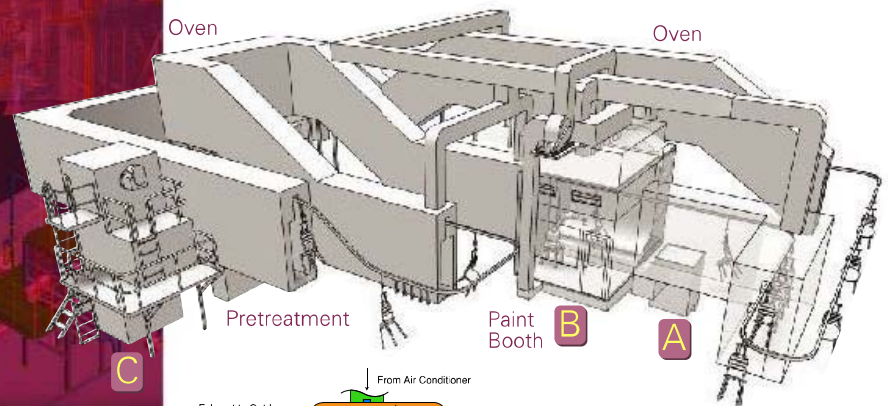


PRODUCTS  
< SMALL PLANT >



A. PBT (Parker Biotron) System

An epoch system that instantly decomposes the sludge in the wet booth using the latest bio-technology. It enables us to decompose the sludge by using harmless microbes instead of using chemicals such as aggregating agents. The organic materials (resin components) contained within the paint will be decomposed into water and CO2 and only the pigment settles down at the bottom in a sandy condition. Because no chemical agents are used, this system is not only a safe system that is environmentally friendly, but also contributes to the reduction of water used by increasing the amount of time between booth cleanings and the reduction of sludge waste costs. Operating and production costs, therefore, decrease.



B. ESS Paint Booth

This paint booth makes it possible to reduce electricity use by approximately 25%, by recycling a portion of the air intake necessary for the paint air conditioning.

C. Evaporation System

This system evaporates moisture by bringing the rinse water discharged from the phosphate coating equipment and e-coat equipment into contact with the high temperature exhaust gas discharged from the oven, boiler and other heat producing facilities. Any salts, etc. remaining in the rinse water are dried, powdered and recovered. We are striving to create a system that produces no waste water. Through effectively using the exhaust gas, we are also able to contribute to the reduction of energy costs.



STANDARDIZED PRODUCTS



- Standardized Functions
- Short Delivery Times
- Low Costs



Parker Engineering, a company that deeply understands the painting operation environment, manufactures and sells dry booths which trap paint mist by filters and wet booths which collect paint mist with an efficiency of more than 99% using scrubbers. We also prepare products with openings matched to the size of the product to be painted, moveable small sized booths to meet the needs of the client, etc. We contribute to the improvement of the clients' working conditions and increased productivity while a range of our products can be introduced at low costs in short delivery times.



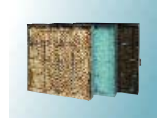
Dry Booths Parker Paint Arrestor Booth

A dry booth providing effective filtering and retention by directly trapping the paint mist to the filter. Through the employment of an enclosed construction, harmful substances are directly trapped from their source, protecting the worker from solvents and paint mist. Additionally, we also provide various types of filters.

- For supply air: To meet the air conditioning requirements for the painting room.
- For exhaust air: Optimal for the type of paint and painting requirements being used.

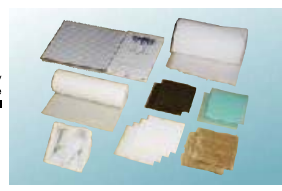


"Parker Paint Arrestor Booth" (NHR Type): A pre-coated filter is used in combination with the filters to prevent clogging.



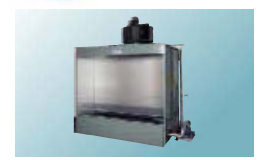
The various types of filters commonly used by many paint factories. These contribute to reduce the paint defects as well as environmental improvement both inside and outside the plant.

"Arrestor Set" (for exhaust air): The filter is used by placing it into a specially designed 1.6mm metal frame which has been bake-coated, and holding it in place with a metal grid on either side. Easily constructed by joining the frames with bolts. 4 types of filters can be chosen depending on the type of paint being used.



Wet Booths Parker Scrubber Booth

Wet booths which collect paint mist with an efficiency of more than 99% using scrubbers. Also contributes to the solving of waste water treatment concerns at the paint factories.



"Parker Scrubber Booth (Water Film Curtain attached B Type)": Paint mist is knocked down to the water surface by means of an abundant water curtain. The curtain surface cleanliness can be maintained because it does not become soiled by the paint.



The "PBT (Parker Biotron) System" uses microbes to instantly decompose paint sludge. As supplies for running the PBT System, we provide unique microbes, activating agents for the cultivation of the microbes, etc.



An aggregating agent that removes the viscosity of the over-sprayed paint in a short period of time, makes it agglomerate and simplifies the sludge removal. Prevents the rot of circulation water making long term use possible.



"Barupress"

A dehydrator utilizing new functions not found on conventional filter presses. Barupress can dehydrate micron and sub-micron particles continuously without the use of an aggregating agent. As a result, it is possible to, for example, recover the back grind from semiconductor silicon and solar dicing silicon, abrasives, fluorine compounds, etc. as valuable resources. Through the process of applying pressure to the sludge in normal wastewater, a cake with an extremely low moisture ratio can be obtained, thereby contributing to the reduction of industrial waste. In addition, it is possible to run automatically 24 hours a day with no supervision.

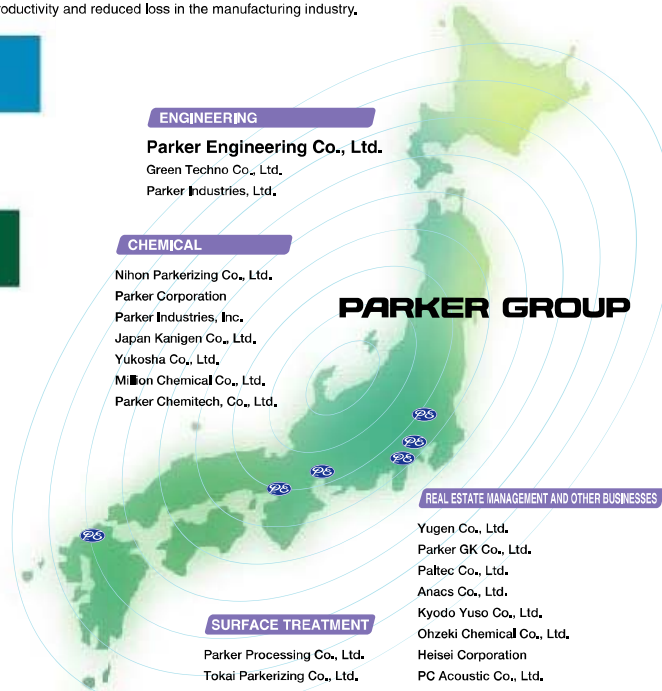
# Involved in total engineering of Pretreatment & Painting equipment — a member of the largest surface treatment corporate group in the Industry.

More than 70 years ago, the Nihon Parkerizing Group (Parker Group) was one of the first to provide surface treatment processes to protect metals from rusting to the manufacturing industry. Since then, we have provided the various functions and peripheral equipment necessary in a wide range of industries including automobile, steel, electronic devices, etc. brought on by the expansion of metal use as well as in the trend toward "high quality processes" for metal processing.

Currently, with a global network of approximately 70 affiliate companies working closely together, we are the top surface treatment corporate group in the industry.

Within the group we, Parker Engineering, are at the core of the engineering business.

Each company displays a high level of relationships on a global scale and contributes to the increased productivity and reduced loss in the manufacturing industry.



## PARKER GROUP



**INDIA**  
**Parker Engineering (India) Pvt. Ltd.**  
 Nipa Chemicals Ltd.



**NORTH AMERICA & EUROPE**  
**NORTH AMERICA**  
 Trutec Industries, Inc.  
 Parkwood Engineering Development Corporation (PEDCO)

**EUROPE**  
 P.I. of Europe, NV  
 P.I. of Italy, s.r.l.  
 PC International (CZECH) s.r.o.

**RUSSIA**  
 Zao Kawakami Parker

**KOREA**  
 Dae Han Parkerizing Co., Ltd.  
 Parker Industries Korea Co., Ltd.  
 Hankuk Parker Co., Ltd.  
 Hanil Metal Industry Co., Ltd.



**CHINA**  
**SHANGHAI**  
**Parker Engineering (Shanghai) Co., Ltd.**  
 Shanghai Parkerizing Co., Ltd.  
 Shanghai Parker M&E Parts Co., Ltd.  
 Parker International Trading (Shanghai) Ltd.  
 Shanghai Parker Paint Coating Co., Ltd.  
 Shanghai Parker Chemical Industries Co., Ltd.  
 Parker Surface Technologies (Shanghai) Co., Ltd.  
 Shanghai Parker Surface Modification Co., Ltd.  
 Kanigen Shanghai Co., Ltd.



Parker Engineering (Shanghai) Co., Ltd.

**SOUTH-EAST ASIA**  
**THAILAND**  
**Parker Engineering (Thailand) Co., Ltd.**  
**PET Trading Co., Ltd.**  
 Thai Parkerizing Co., Ltd.  
 Parker International Corporation (Thailand) Ltd.  
 Kanigen Thailand Co., Ltd.



**INDONESIA**  
**P.T. Parker Engineering Indonesia**  
 P.T. Nusantara Parkerizing  
 P.T. Parker Metal Treatment Indonesia



**MALAYSIA**  
 Nihon Parkerizing (Malaysia) Sdn. Bhd.  
 Parkerizing Industries (Malaysia) Sdn. Bhd.

**VIETNAM**  
 Vietnam Parkerizing, Co., Ltd.  
 Parker Processing Vietnam

**PHILIPPINE**  
 Philippine Parkerizing, Inc.

**TAIWAN**  
 Chung Jih Metal Treatment Chemicals, Inc.  
 Parker International (Taiwan) Corporation



Parker Engineering (Shanghai) Co., Ltd. Tianjin office



Parker Engineering (Shanghai) Co., Ltd. Guangzhou office



1

COMPANY PROFILE

Company name	PARKER ENGINEERING CO., LTD.	
Establishment	Mar 24th, 1951	
Capital stock	480,000,000 yen (100% owned by Nihon Parkerizing Co., Ltd.)	
Board members	Chairman	Kikuo Satomi
	President	Jiromaru Ukita
	Executive Advisor	Atsuo Ide
	Executive Director	Masataka Hattori
		Akio Ishimaru
	Director	Osamu Tanaka
		Hisanori Seike
		Yoichi Takahashi
		Masahiro Imamura
	Auditor	Shunji Miyajima
Shun Ono		
	Junichi Tosaka	

Object

- |  |  |
|--|--|
| 1 Manufacture, sale and processing of antirust agent for metal-surface treatment.                                    | 10 Undertaking of design and execution of construction work.         |
| 2 Manufacture, sale and installation work of chemical machinery equipment for metal-surface treatment, coating, etc. | 11 Undertaking of paint work.  |
| 3 Manufacture, sale and import business of barrier filters for paint.  | 12 Undertaking of design and execution of electric work.             |
| 4 Manufacture, and sale of scrubbers.  | 13 Manufacture and sale of automobile supplies.                      |
| 5 Manufacture and sale of industrial ovens and general heat process equipment.                                       | 14 Sale, purchase and lease of real estate, and building management. |
| 6 Manufacture and sale of heat exchanger.  | 15 Lease business of movable estate.                                 |
| 7 Manufacture and sale of antipollution devices for aerial pollution, waste water, ambient noise, etc.               | 16 Design and execution of interior decorating.                      |
| 8 Manufacture, processing and sale of other industrial machinery.  | 17 Sale of furniture and interior decoration.                        |
| 9 Sale of industrial chemicals.  | 18 Other business related to the above items.                        |

Our main products

1. Pretreatment equipment	6. Ovens	11. Sludge recovery systems
2. E-coat equipment	7. Deodorization systems	12. Powder coating systems
3. Wet-type paint booths	8. Conveyors	13. Filters for paint
4. Dry-type paint booths	9. Wastewater treatment systems	14. Solvent & powdered paint
5. Air conditioning systems	10. Paint circulation systems	15. Industrial chemicals



Mar. 24, 1951	Established TOWA TSUSHO CO., LTD. Started business since obtaining utility model right for spray-type phosphate coating equipment (Spra-bonde equipment), mainly undertaking its design and manufacture in conjunction with Nihon Parkerizing Co., Ltd. chemicals.
Mar. 1960	Became a subsidiary of Nihon Parkerizing Co., Ltd. Started design and manufacture of Spra-bonderite equipment and all kinds of painting equipment, scrubbers and ovens. Changed its company name to SHIN TOWA TSUSHO KOGYO CO., LTD. Started design and manufacture for integral paint plant besides pretreatment equipment.
Nov. 1960	Absorbed Nihon Parkerizing Nagoya Factory Co., Ltd. and changed its company name to PARKER SANGYO CO., LTD.
Nov. 1986	Changed its company name to PARKER ENGINEERING CO., LTD.
Feb. 1987	Established PE OF AMERICA, INC. in Chicago, Illinois, USA
Oct. 1987	Established TAIWAN PARKER ENGINEERING CO., LTD. in Taipei, Taiwan
Feb. 1988	Established PARKER ENGINEERING (THAILAND), CO., LTD in Bangkok, Thailand
May. 1995	Opened liaison office in Shanghai, China
Nov. 1996	Established P.T. PARKER ENGINEERING INDONESIA in Jakarta, Indonesia
May. 1997	Established PET TRADING CO., LTD. in Bangkok, Thailand
Sep. 1999	Sold off PE OF AMERICA, INC (USA) to Trutec Industries, Inc.
Aug. 2000	Took over all businesses (excluding hard-coat business) from PARKER ARRESTOR CO., LTD.
Dec. 2002	Established PARKER ENGINEERING (SHANGHAI), CO., LTD in Shanghai, China
Oct. 2005	Established PARKER ENGINEERING (INDIA), PVT. LTD. in Gurgaon, Haryana state, India
Jul. 2006	TAIWAN PARKER ENGINEERING CO., LTD. merged with a surviving company Chung Jih Metal Treatment Chemiclac, Inc.

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PET TRADING CO., LTD.	Suriyawongse, Bangrak, Bangkok 10500, Thailand	+66-2-236-0122	
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	Jakarta 13710, Indonesia	+62-21-8770-6470	
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PARKER ENGINEERING (INDIA) PVT. LTD.	The Pavilion 4th Floor, 339/2, Mehrauli Road, Gurgaon,	+91-124-411-2614	
	Haryana 122001, India	2615/	
		+91-124-411-2613	