

## WHY HYDROPAC?

HPA has a long history in Catalyst Handling and Dense Loading Technology, having worked closely with ChevronTexaco in various locations around the globe, including America, Argentina and Asia. Having worked on catalyst change-outs and, in particular, Dense Loading of their catalysts for their reaction designs, we thoroughly understand Chevron's strict requirements in catalyst loading.

HPA was originally a Singapore based company known as VAC-TECH Engineering Pte Ltd, established in 1995 to provide Reactor and Environmental industrial services.

HPA has focused a division on catalyst dense loading bringing a much required alternative to the Oil & Petrochemical Industry.

Our experienced supervisors and specialists undergo rigorous and on-going training to keep updated on specialized knowledge. Working closely as a team, our dedicated professionals have achieved industry-leading turnaround times while maintaining an excellent Safety Record. The result is improved bottom-line results for our clients.



## CATALYST HANDLING SPECIALIST

*Your one-stop-shop for SAFE and EFFICIENT reactor turnarounds. We have made it our goal to create a name for ourselves that is synonymous with Quality, Safety, Customer Care, and Innovation!*

### HPAS - HPA (S) Pte. Ltd.

#### HPAI - Hydroprocessing Associates International Pte. Ltd.

1 Tuas Avenue South 6, The Westcom #01-20,  
Singapore 637021

### HPAM - HPA (M) Sdn Bhd

43 Jalan SILC 2/7, Kawasan Perindustrian SILC,  
79200 Nusajaya, Johor, Malaysia

### HPAG - Hydroprocessing Associates GmbH

Ruhlander Str. 23, 01987 Schwarzheide, Germany

### HPAB - HPA Brasil Serviços

#### De Manutenção Industrial Ltda

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Rio de Janeiro Brasil Cep: 22783-119

### FOR MORE INFORMATION, PLEASE CONTACT:

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## WORLD LEADER IN CATALYST HANDLING

**HYDROPAC® DENSE LOADER for Fixed-bed Reactors**



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## HYDROPAC VS. COMPETITOR

	HYDROPAC	Competitor D	Competitor U
Rotating	✓	✓	✗
Can load without excess dust	✓	✓	✗
Bed profile can be viewed from Tray man-ways continuously while loading	✓	✗	✗
Can load around Transfer Tubes	✓	✓	✗
Can load without obstruction to centre of catalyst bed	✓	✗	✗
Can load to maximum height beneath the Distributor Tray	✓	✗	✗

## SELECTED REPRESENTATION OF SATISFIED CLIENTELE

The following is a sample listing of our satisfied clients. Please contact us if you would like to receive a comprehensive list of our past projects.

### Malaysia

- Petronas
- Ethylene Malaysia
- Titan
- Shell
- Indimitsu
- Petronas Fertiliser
- FCM (Penang)

### Philippines

- Petron
- Shell
- Chevron

### South Africa

- Sasol
- Engens

### Singapore

- Shell (Bukom)
- Exxon Mobil
- Lynde
- PCS
- Celanese
- Singapore Refining Company

### USA

- Valero
- Premcor
- Chevron

### Taiwan

- Formosa
- CPC

### India

- MRPL
- BPCL

### Argentina

- Repsol

### Indonesia

- Pertamina
- KPA
- KMI
- Pusri

## Advantages of HYDROPAC LOADING

- 01 Tighter and more uniform catalyst packing, resulting in better reactant flow distribution in the trickle flow regime as used in Hydro-processing.
- 02 Catalyst beds do not sag/change flow patterns during the course of a run.
- 03 More catalyst is loaded into each bed because of the higher loading density, resulting in longer runs.
- 04 Direction of rotation is reversible, which is important for loading around Transfer Tubes to avoid shadowing.
- 05 Can load the catalyst bed higher due to its unique design, positioned 6" below the Distributor Tray.
- 06 The unique design allows the bed profile to be viewed continuously from the trays manway (no whips obstructing the drop-lights when lowered to inspect the bed profile during loading).
- 07 Has no centre shaft obstruction to the centre of the bed when loading, critical to achieve maximum uniformity of the catalyst particles, to lay horizontal across the entire bed as the catalyst is loaded