

Distill-Max™

Dividing Wall Column (DWC) Technology

BENEFITS

This highly efficient technology helps refiners increase competitiveness in the marketplace

- Combines two or more columns in one shell
- Sharp separation performance at lower cost
- Energy-efficient operation: Up to 30% less energy requirement than two-column sequence
- Up to 30% capital cost saving for a grassroots application
- Three or more products from a single column

MARKET AND ECONOMIC DRIVERS

- Changes in regulations
- Need to make additional products
- Plot space limitations
- Limited investment capital
- Maximizing return on investment
- Energy improvement initiatives
- Alternative use of existing assets

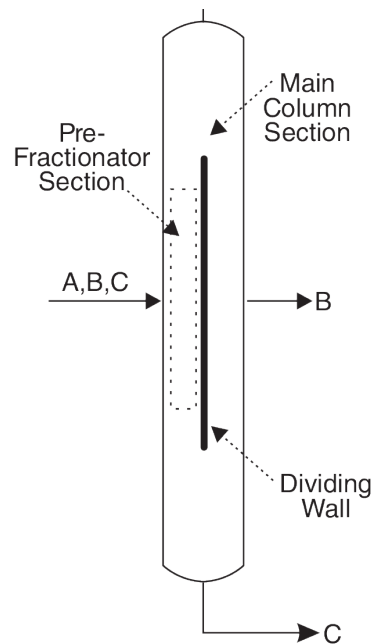
Distill-Max™ is an engineering process and service that has proven to reduce capital and energy usage by up to 30% compared with traditional distillation schemes. Rigorous design procedure enables KBR to guarantee Distill-Max column performance.

DISTILL-MAX DIVIDING WALL COLUMN (DWC) TECHNOLOGY PROVIDES HIGH SEPARATION EFFICIENCY FOR LOWER CAPITAL AND OPERATING COSTS

Distillation is the work-horse of the process industries. Effective distillation schemes make a significant difference to the profitability of a process plant. Innovative utilization of simple and complex distillation configurations can produce capital cost savings, improvements in yields, reductions in energy demands and emissions.

DISTILL-MAX

Distill-Max, KBR's proven distillation technology, provides superior fractionation performance at a lower capital cost than traditional column alternative arrangements, whether trayed and/or packed. Highly effective fractionation is achieved through the utilization of enhanced separation efficiency, offering increased capacity, yield improvements, and energy cost reductions.



Distill-Max™

WHY KBR?

Customized Design

The key to determining if a particular configuration is a suitable application for Distill-Max technology is firstly to complete a comprehensive scoping study. The study evaluates the technical suitability, potential CAPEX and OPEX savings for grassroots applications, potential OPEX savings for revamp applications and payback potential for technically feasible options.

Dividing Wall Column (DWC) installation can be designed to meet all product specifications as per a client's requirements for different feed cases. The revamp of existing distillation towers with this technology can be used for pure energy savings, maximization of material throughput, improved product recovery, or CAPEX/OPEX reduction. The revamp of existing distillation towers with this technology is mechanically straightforward and can be completed within a normal turnaround period.

Grassroots applications of this technology will result in smaller plot space requirement and lower specific energy consumption as compared to the conventional two-column sequence. A new distillation system with this technology can easily be incorporated within current refinery infrastructure; a unit requires no more plot space than a conventional single-column system and can be designed to utilize the available site's heating and cooling media, meaning less capital outlay.

Comprehensive approach

KBR can take the client from a conceptual idea to full EPC implementation and offers a comprehensive approach by providing study, BED, design of proprietary column internals, dynamic simulation, operator training simulator, and start-up advisory services. We have commissioned both revamp and grassroots applications with references in the UK, Asia and the US.

Unique design for each Distill-Max DWC application

- C₄ Isomer Separation
- C₅ to C₇ isomer splitting in naphtha processing
- Butane splitting in NGL-fractionation
- Pentane/Hexane/Heptane
- Depropaniser/Debutaniser
- Depentaniser/Dehexaniser
- Straight Run Naphtha Fractionation
- FCC Naphtha Fractionation
- FCC Debutaniser
- Reformate Fractionation
- Aviation Gasoline Production
- Naphthalene Fractionation
- Xylene Fractionation
- Benzene/Toluene/Xylene
- Benzene/Toluene/Ethyl Benzene
- Ethanol/Water/Ethyl Glycol
- Ethanol/Propanol/Butanol Separation

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