



TANK FARM – STORM WATER SYSTEM

There are many possible applications for WyunaSep Separator at Tank Farm, Airport and Fuel Farm facilities.

Tank Farm, Storage terminals and Airport fuel farm storm water: All Tank Farms, Storage Terminals and Airports have fuel storage facilities for various oils and fuels, some small and others very large.

The storage tanks and their accompanying pumps, filters, and piping are usually contained in a dike or berm for safety reasons in case of a spill or fire. Rainwater that falls within the diked area will become contaminated with leaks from the tanks, from valves or flanges or perhaps from changing the fuel filter cartridges and must be treated if discharged to surface waters to meet the “no sheen” requirement of the Clean Water Act. Separators for this application require careful design to manage possible spills (with the usual accompanying fire-hose wash down of the area) as well as the normal flow of storm water.

WyunaSep has experience in this type design and can offer both equipment and design suggestions for safe effective treatment of the water from fuel farms.

Airport Fueling Aprons: Similar design conditions exist for fueling aprons as apply to fuel farms, but the possible spills are usually much less in volume.

Vehicle Maintenance Facilities: Most airports have vehicle maintenance facilities for ramp vehicles, fire equipment, and other vehicles needed for the operation of the airport. Many also have rental car maintenance facilities as well. WyunaSep systems can be used to remove oil from water resulting from these operations either for discharge to surface water or (more common) as pretreatment before discharge to municipal sewer systems.



Model – WS-10

Why “WyunaSep” is a better technology than conventional systems

BENEFITS

Foot Print : Compact, 10% the size and weight of conventional systems. -2 to 24 m³ = 1 to 1.5 m² area.

Most efficient, and cost effective solution to water treatment problems.

Very short residence time (in the order of seconds)

Highly consistent performance & Proven technology

Power supply – only one motor for Pump - Pneumatic version up to 10m³ available.

Oil content – single cycle <20 ppm or recycle <5ppm in two stage

Clean water with no chemicals.

Effluent can be recycled for continuous treatment.

Hydrocyclone has no moving parts significantly reduces maintenance requirements

Modular add-on features. Independent , skid based or containerised.

Control – Manual or automatic

Can be installed vertically or horizontally



Model – WS-3



Model – WS-3



Model – WS-3 Trolley Mounted



Model – WS-3

BENEFITS

- Foot Print : Compact, 10% the size and weight of conventional systems.
- From 2 to 24 m3 = 1 to 1.5 m2 area.
- Most efficient, and cost effective solution to water treatment problems.
- Very short residence time (in the order of seconds)
- Highly consistent performance & Proven technology
- Power supply – only one motor for Pump - Pneumatic version up to 10m3 available.
- Oil content – single cycle <20 ppm or recycle <5ppm in two stage
- Clean water with no chemicals.
- Effluent can be recycled for continuous treatment.
- Hydrocyclone has no moving parts significantly reduces maintenance requirements
- Modular add-on features. Independent , skid based or containerised.
- Control – Manual or automatic
- Can be installed vertically or horizontally

The Impact of Micron Removal Efficiency on Oil/Water Separator Design

For conventional Tank separation /CPI/coalescing tank etc



Determining the micron removal efficiency required to meet your effluent requirements (ppm, mg/l) is an important design and sizing on oil water separators. A small change in the micron removal efficiency can result in a large size of the specified oil water separator. For example look at the following spreadsheets.

USER INPUTS IN YELLOW	
DESIGN FLOW RATE (IN GPM)	150.000
TEMPERATURE (IN DEGREES F)	60.000
SPECIFIC GRAVITY OF THE OIL (IN G/CM ³)	0.900
OIL DROPLET SIZE (IN MICRONS)	30.000
MEDIA SPACING (0.5 0.75 or 1.20)	0.750

Area = 132 Cubic Ft

MODEL NUMBER 132 HB - OS - NC - OA

EXAMPLE ONE

USER INPUTS IN YELLOW	
DESIGN FLOW RATE (IN GPM)	150.000
TEMPERATURE (IN DEGREES F)	60.000
SPECIFIC GRAVITY OF THE OIL (IN G/CM ³)	0.900
OIL DROPLET SIZE (IN MICRONS)	60.000
MEDIA SPACING (0.5 0.75 or 1.20)	0.750

Area = 39 Cubic Ft

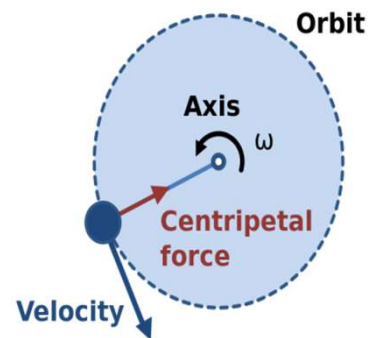
MODEL NUMBER 39 HB - OS - NC - OA

EXAMPLE TWO

In conventional Tank separator - Residence time for Oil separation
Time taken for Oil droplet to separate out from waste stream.

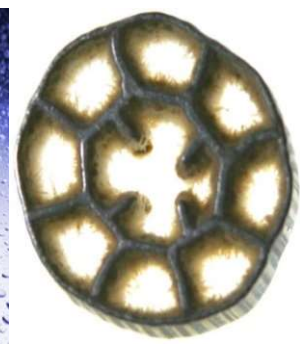
The test performed, as outlined, is based on oil of the specific gravity of .85. The value of "microns diameter" will vary as the specific gravity changes. Please consult the factory for details.

- 12 minutes 60 microns and greater oil droplet
- 18 minutes 50 microns and greater oil droplet
- 29 minutes 40 microns and greater oil droplet
- 51 minutes 30 microns and greater oil droplet
- 116 minutes 20 microns and greater oil droplet



Wyuna Sep -Very short residence time (in the order of seconds) due to high centrifugal /centripetal force generated.

Which makes this system very efficient & compact for large flow rates.

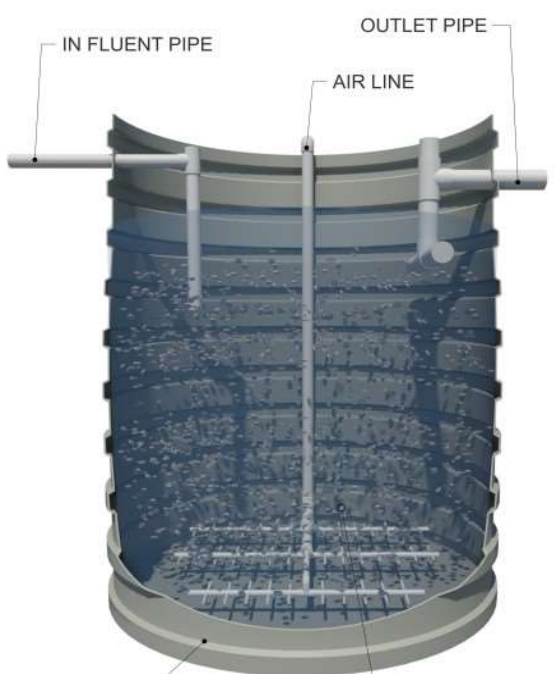


WYUNASEP-DHRR Dissolved Hydrocarbons Removing Reactor

Dissolved Hydrocarbons Removing Reactor

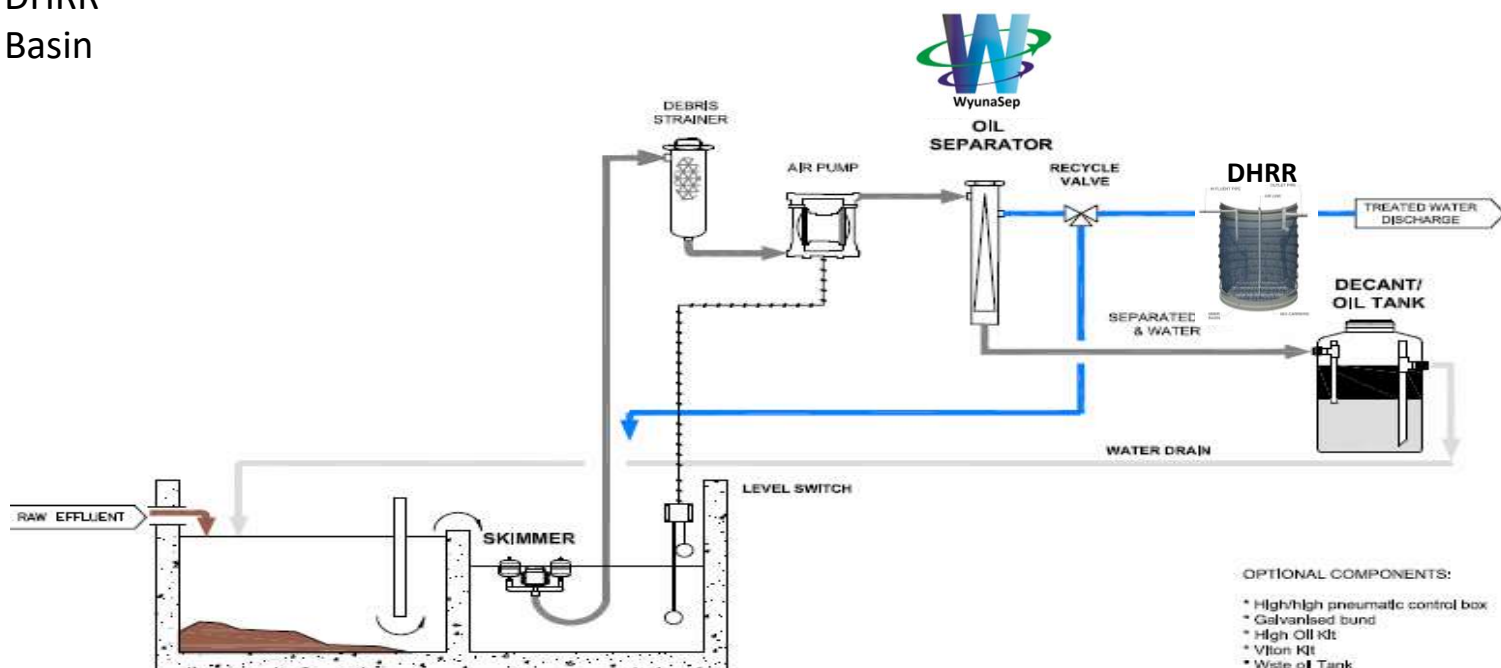
WyunaSep DHRR can be designed to solely take care of dissolved hydrocarbons from oily water /wastewater stream, after WyunaSep Hydrocyclone system to further reduce the dissolved hydrocarbons from waste water. WyunaSep DHRR produces a high quality effluent that consistently and comfortably meets discharge consent

Able to tolerate far higher variations in flow and water quality than conventional methods, the DHRR reactor (a Suspended Carrier Biofilm Process) allows microbes to grow as biofilm on the surface of the freely moving carriers. The Carrier elements are designed with a large surface area and a structure that is optimized to protect the biofilm from abrasion. By allowing a large amount of biomass inside, the reactor size can be kept to a minimum, making large savings on civils costs.



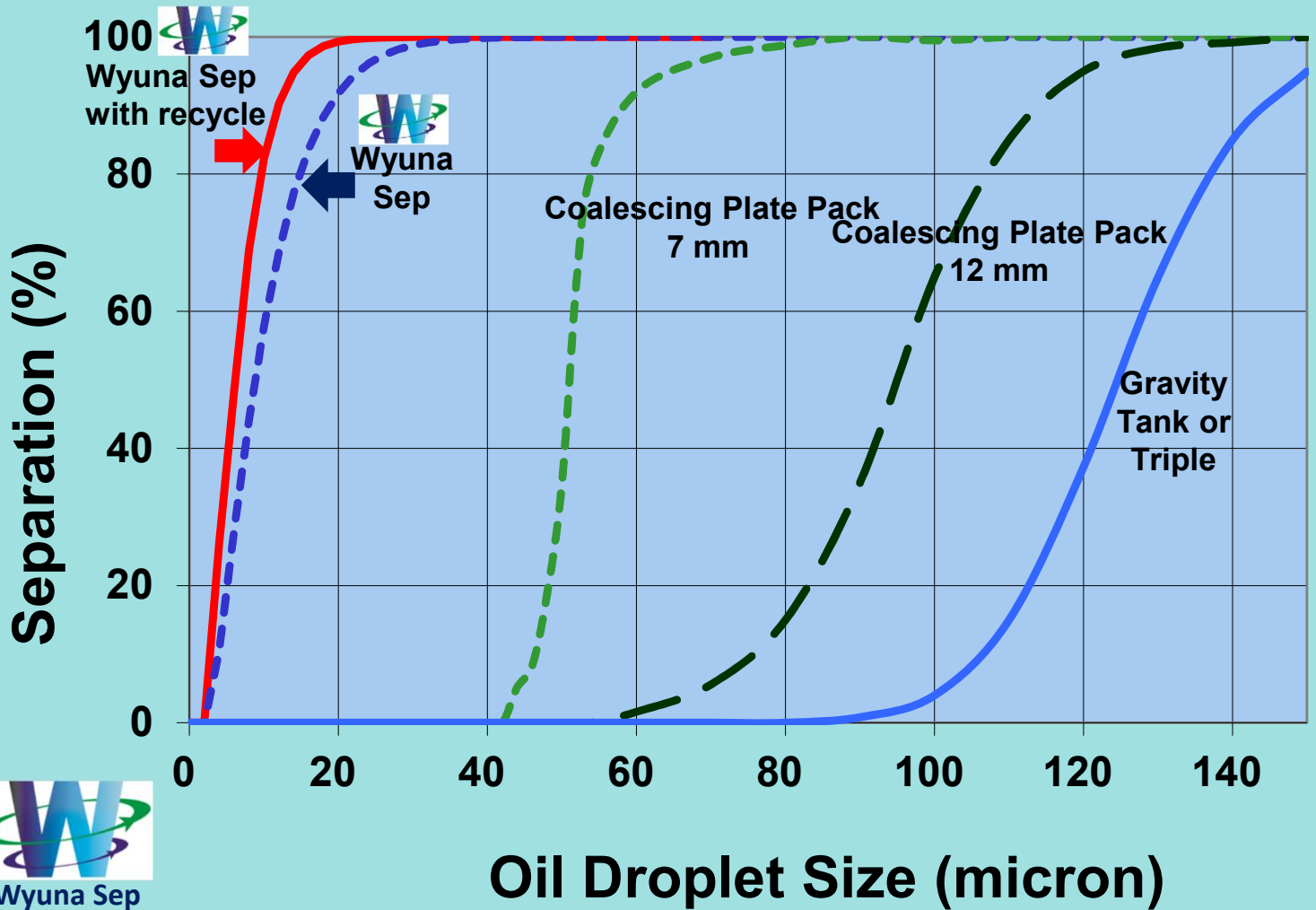
DHRR
Basin

BIO-CARRIERS



- OPTIONAL COMPONENTS:
- * High/High pneumatic control box
 - * Galvanised bund
 - * High Oil Kit
 - * V/lon Kit
 - * Waste Oil Tank

OIL SEPARATOR PERFORMANCE



SUPERIOR SUPPORT. IT'S ALL PART OF THE PROCESS.

Our engineering support is recognized throughout the process industry for exceptional technical competence and responsive customer service. So you can count on us for expert technical and customer support to keep your operation flowing smoothly.

INDUSTRIAL – STRENGTH DEPENDABILITY

WyunaSep hydrocyclones have proven themselves for reliable operation time and again. Our hydrocyclone technology is the standard in many industries – a testament to the durability and dependability of our equipment even in the most demanding process environments.

PUT US TO THE TEST *“The proof of the product is in the performance”*

That's why WyunaSep engineers offer multi-level testing in both on and off site settings.

We invite you to put us to the test in your process operation for details on our test program, call - +91 9879011436 +61 433 753 252

And for more information on any WyunaSep separation solution for dairies, call your WyunaSep representative or visit our web site at - www.wyunasep.com

Australia

Wyuna Separation Technology Pty Ltd
 1/47, severn St, Box hill north
 Vic toria – 3129 – Australia
 Tel : +61 433 753 252

INDIA

Wyuna Separation Technology Pty Ltd
 c/o –Yamini Services – Ahmedabad-India
 Tel : +91 98790 11436
 E-mail : info@yamini.services.com



Please visit us : www.wyunasep.com Enquiry : info@wyunasep.com