



## **GEA HB Craft Brew Series**

“Plug & Brew” Centrifuges for Small and Mid-sized Breweries



## No Limits for New Beers

There has never been a better time for making beers. All around the world brewers are turning craft beers into spectacular success stories. Beginning in the US, the craft beer trend has now gone global and it keeps getting more popular. How about your beer? GEA has tools developed specifically for craft brewers.



Whether your operation is just getting started or on the way to expansion, you can benefit from the HB Craft Brew centrifuge from GEA. This versatile line of equipment has a variety of applications in the brewery. Each application benefits the brewery by improving the consistency of the product, minimizing product losses, accelerating production time and, ultimately, increasing profitability. In fact, the payback for this equipment has proven to quickly justify the investment.

A good example of the return that can be expected from this equipment is found in the amount of salable beer that can be recovered from tank bottoms. Tank bottom volumes, including yeast and dry hops contains 50 - 80% recoverable beer. Use of the HB Craft Brew centrifuge provides the brewery with a flexible solution to process their volumes and increase yield. Further, because the yeast and dry hop solids are now concentrated, they can be sold. And wastewater disposal costs are also significantly reduced.



## Make More Beer®

A large volume of perfectly brewed beer is lost in the process when cellaring-off dry hop solids, surplus yeast and trub. It's all money going down the drain. But with a GEA HB Craft Brew centrifuge system, you can extract the maximum amount of beer from each brew.



Did you know fermentation tank bottoms contain up to 80% perfectly brewed beer? And even more product can be recovered from the unclarified hot trub. Why throw it away when you can sell it instead? Get a simple-to-install GEA HB Craft Brew Series centrifuge skid and you can keep all that beer in the brewing process.

### Greater yield from the same resources

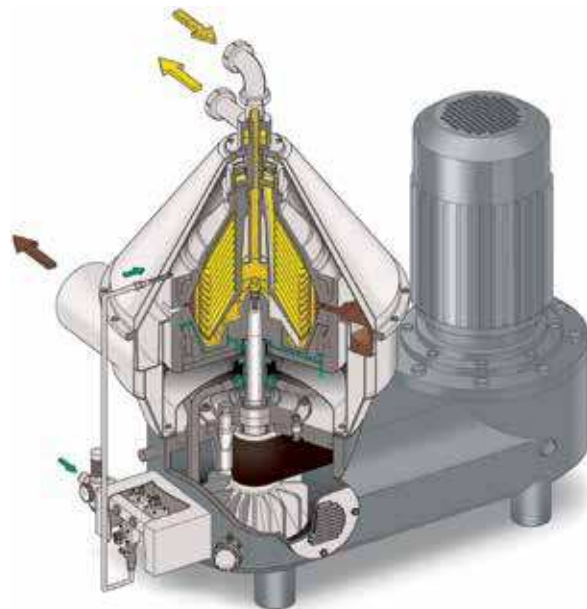
- 5 to 10% more beer from the same amount of raw ingredients (depending on beer recipe and brewing process)
- Same amount of beer brewed with decisively reduced effort (less energy and hours of work)
- Multi-purpose applications in the brewing process take your business to the next level!

### Separation is the secret

The g-force in a rotating centrifuge achieves all these benefits for you. It separates the solids – wort trub, hops, proteins, yeast, tank bottom residue – from the valuable liquid product, before and after fermentation. The result: You make more beer.

#### The centrifuge does it

The mixture to be separated (e.g., hot wort, beer, tank bottoms) enters the rotating centrifuge bowl via a centrally positioned inlet pipe. A distributor guides the mixture into the separation area made up of a stack of conically arranged disks – with a combined surface equivalent to 80 football fields. Since solids are of a higher density, they are forced towards the bottoms of the disk surface and on to the outer solids chamber where they are discharged. The remaining liquid in the disk stack is caught by a centripetal pump and moved to the outlet pipe at the top of the centrifuge.



## Cuts Down Brewing Time

It takes time to make a great beer. But you can optimize the brewing process significantly by using the HB Craft Brew system for all clarification steps. Centrifugation multiplies the clarifying power of natural gravity, thus saving production time and allowing a faster route to market. For this and many other reasons GEA separator skids mean a fast return on investment!



### With or without kieselguhr

GEA HB Craft Brew Series centrifuge skids offer an ideal alternative to kieselguhr filtration. They achieve consistent clarity and taste of the beer, ensuring reproducible product quality from batch to batch. The disk stack in contact with the product is made of inert stainless steel, thus no unwanted flavors are released into the brew. The beer displays its full taste, with all the natural properties of high-quality ingredients left intact.

### Be faster on the market

GEA HB systems for craft brewers optimize the brewing process time significantly without any loss of quality. Each batch moves through faster for better utilization of equipment. You are always ready for a new brew with another attractive recipe so that you can roll out beer without having to wait.

### No limits to your flexibility

Traditional settling processes in craft breweries are time consuming and lead to high losses. Depending on recipes and ingredients, this can take weeks. With a centrifuge you can shorten that time by about one third. No matter the size of your brewery, there's no further limit to your flexibility and speed in marketing beers.



## Plug & Brew – the All-In-One Solution

### CLARIFICATION OF HOT WORT

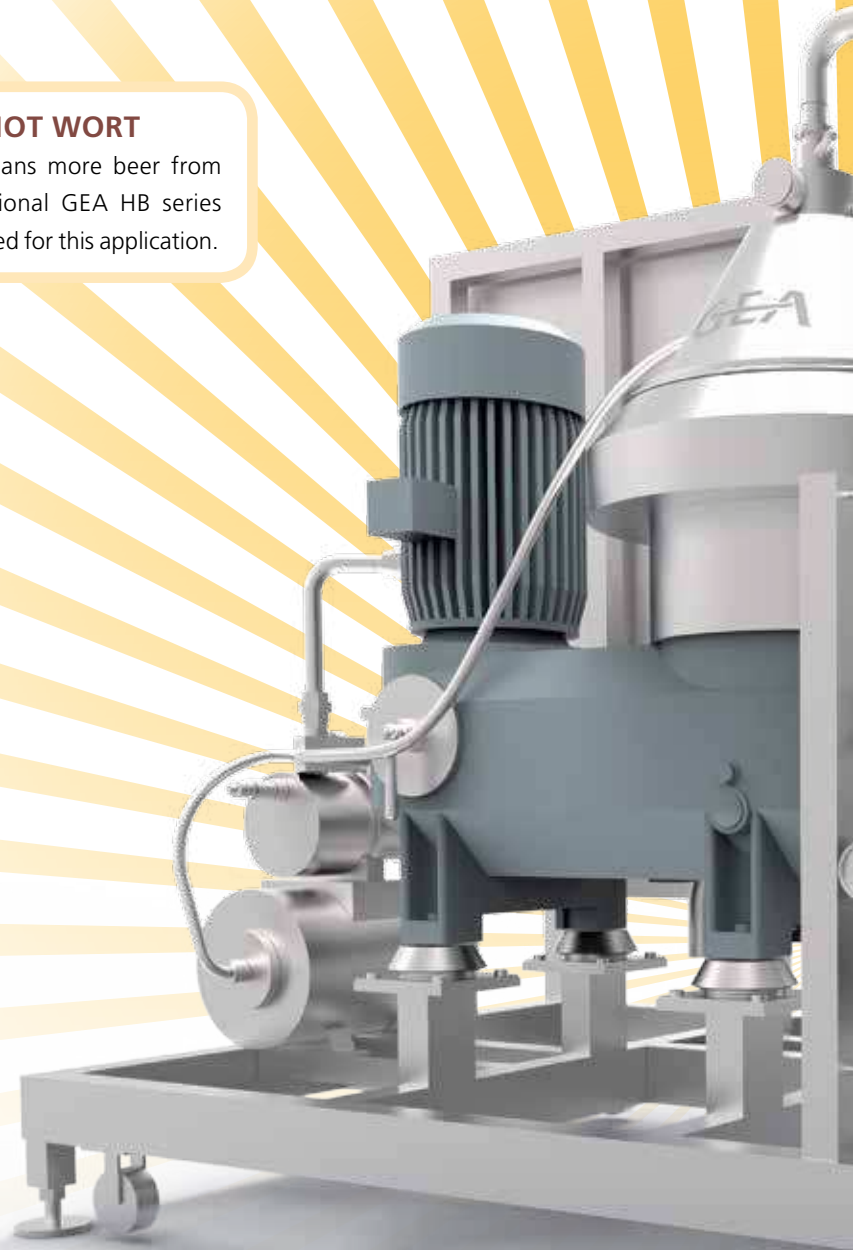
Clarifying the hot wort means more beer from one brew. The multi-functional GEA HB series centrifuge system is configured for this application.

### PROCESSING OF TANK BOTTOMS FOR BEER RECOVERY

Tank bottoms contain up to 80% of perfectly brewed beer that you can simply recover and sell. Again, the multi-functional GEA HB series centrifuge system is configured for this application.

### FINAL BEER CLARIFICATION

Replaces or supports kieselguhr filtration (depending on the type of beer to be produced) with maximum efficiency and flexibility.





### **GREEN BEER CLARIFICATION**

Removal of yeast and coarse solids after fermentation to reduce losses in tank bottoms with maximum quality.

### **TURBIDITY ADJUSTMENT**

Adjust the centrifuge, e.g., when producing cloudy beer, to leave just the right turbidity for the beer experience you want to create, automatically.

### **CLARIFICATION OF BEERS WITH ADDED FLAVORS/STABILIZERS**

Make your beer with exactly the ingredients you require in exactly the amounts you want. Dry hop without beer losses.

### **PROCESSING OF BEER WITH AUTOMATIC YEAST DOSING**

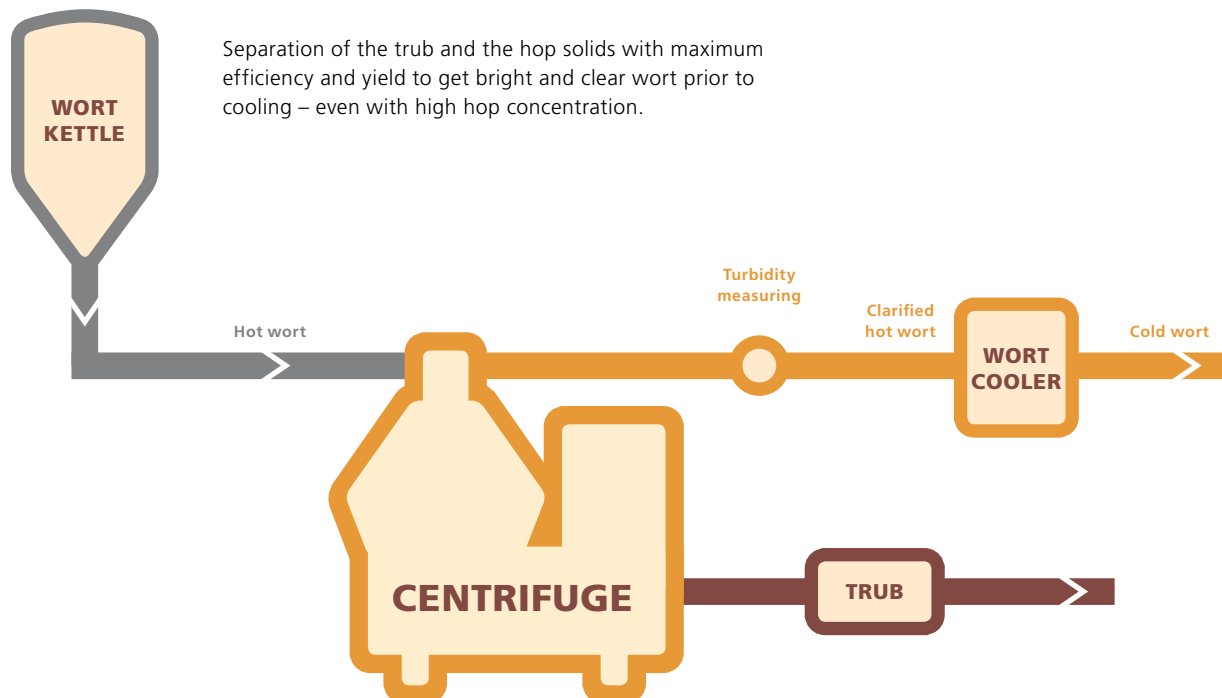
Process surplus yeast with your beer at will and control the result in the subsequent centrifugation stage so your beer turns out just right with every brew.



## Benefit from Numerous Applications With One Installation

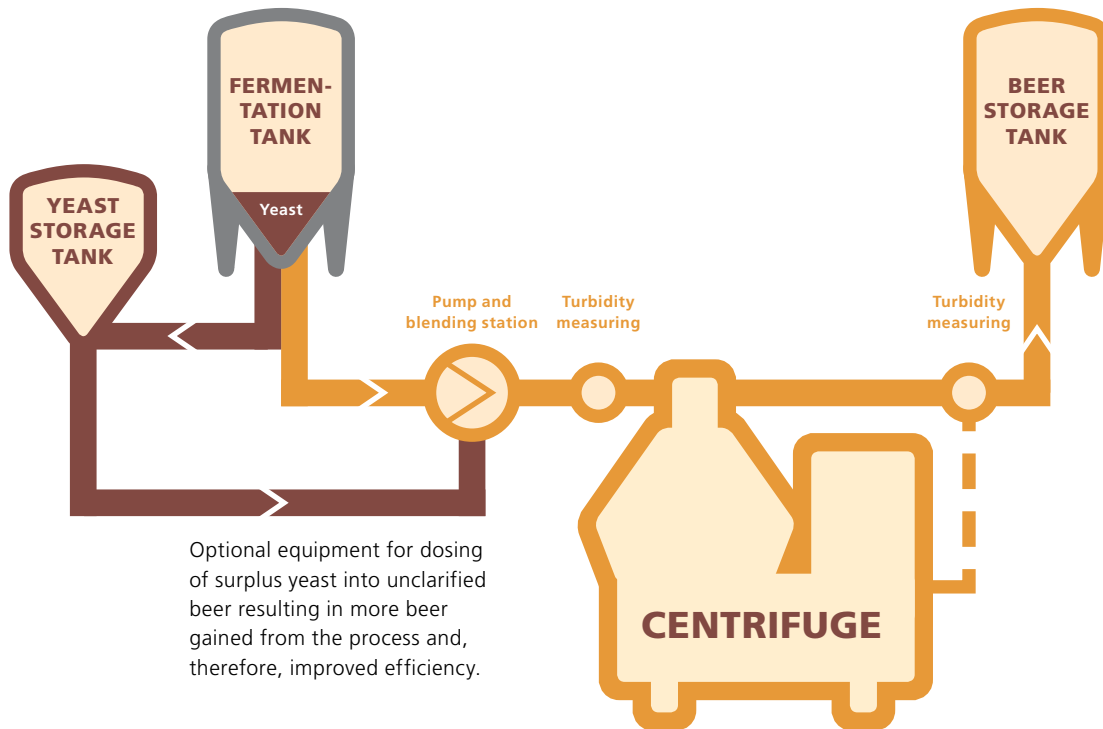
GEA's special HB Craft Brew Series systems cover, among many other applications, three central processes, with a minimum footprint and minor adjustment. For that reason they are the ideal solution for smaller and medium-sized brewers with great visions for the future. Each application and its benefits have been thoroughly tested in cooperation with leading craft breweries, for maximum "plug & brew" convenience!

### Wort Clarification

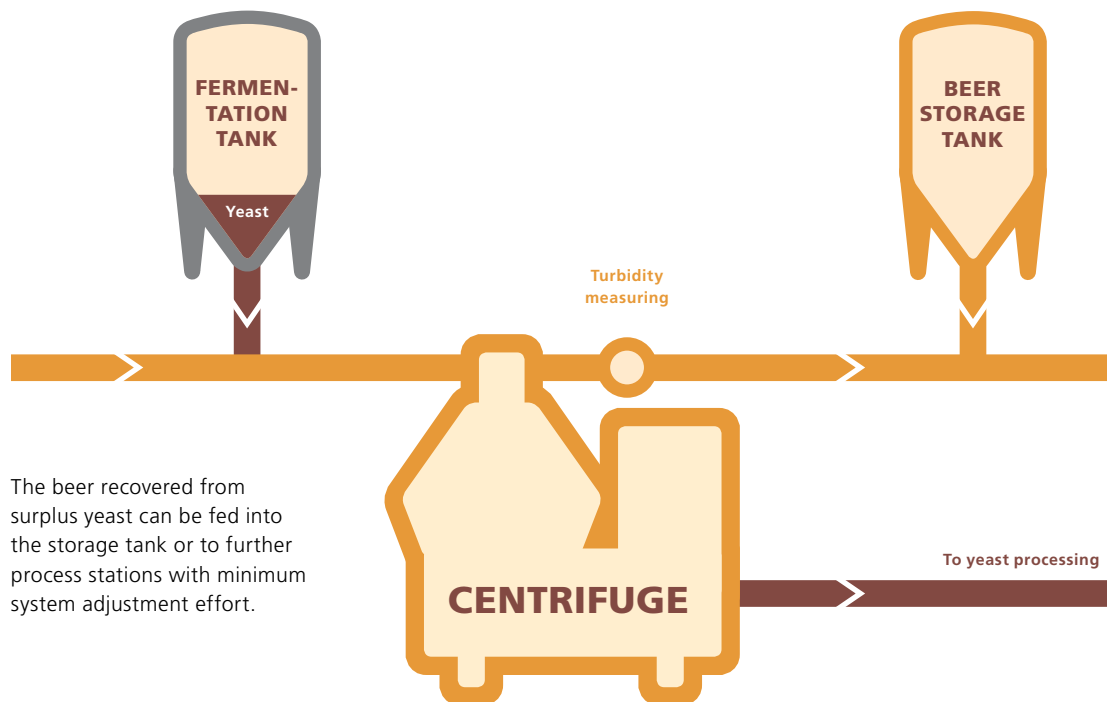




## Green Beer Clarification with added Surplus Yeast/ Flavors/Stabilizers



## Beer Recovery from Tank Bottoms



Our specialists are ready to provide extensive advice regarding the efficient integration of your machine.

## Four Sizes – for Every Brewery

GEA HB Series centrifuge skids are available in four sizes. Each is equipped with state-of-the-art technology in every detail, based on 120 years of GEA centrifuge and brewhouse expertise and is ready for you when it is received. Centrifuge models are also available as un-skidded machines.

### Superior technology



Plug & brew  
ready-to-start kits



Minimized oxygen  
pick-up



Gentle product  
handling



Automatic Cleaning-  
in-Place (CIP)



Fast and precise  
ejections



The GEA HB series centrifuge skids are equipped with the patented **hydry®** ejection system.

### Superior efficiency



More beer from  
every brew



Faster brewing / more  
batches in a timeline



One skid –  
multiple applications

The solids ejected with this system are concentrated to a maximum for more beer from each brew.

To prevent oxygen pick-up, all machines are equipped with maintenance-free hydrohermetic sealing.

GEA always ensures highly gentle handling of products with our hydrosoft feed system.

All skids come with a simple-to-operate **control module**.

Each fully automated, stand-alone GEA HB series skid is ready for instant integration into your existing piping matrix.

### HB0125 “plug & brew” skid

| Capacity                    |                             |
|-----------------------------|-----------------------------|
| Beer clarification/recovery | up to 20 hl/h               |
| Wort clarification          | up to 10 hl/h               |
| Dimensions (H/W/D)          | 1500 mm × 1150 mm × 1650 mm |
| Motor                       | 5.5 kW                      |



### HB025 “plug & brew” skid

| Capacity                    |                             |
|-----------------------------|-----------------------------|
| Beer clarification/recovery | up to 50 hl/h               |
| Wort clarification          | up to 25 hl/h               |
| Dimensions (H/W/D)          | 1500 mm × 1150 mm × 1650 mm |
| Motor                       | 7.5 kW                      |



### HB05 “plug & brew” skid

| Capacity                    |                             |
|-----------------------------|-----------------------------|
| Beer clarification/recovery | up to 100 hl/h              |
| Wort clarification          | up to 60 hl/h               |
| Dimensions (H/W/D)          | 1950 mm × 1400 mm × 2050 mm |
| Motor                       | 15 kW                       |



### HB1-S “plug & brew” skid

| Capacity                    |                             |
|-----------------------------|-----------------------------|
| Beer clarification/recovery | up to 190 hl/h              |
| Wort clarification          | up to 160 hl/h              |
| Dimensions (H/W/D)          | 1950 mm × 1400 mm × 2450 mm |
| Motor                       | 22 kW                       |



### Utilities

Pressurized air 6 bar | CO<sub>2</sub> > 1 bar | water > 1 bar

Capacities subject to solids load in the feed to the centrifuge.

All centrifuge models are also available as separate machines. Other sizes available upon request.