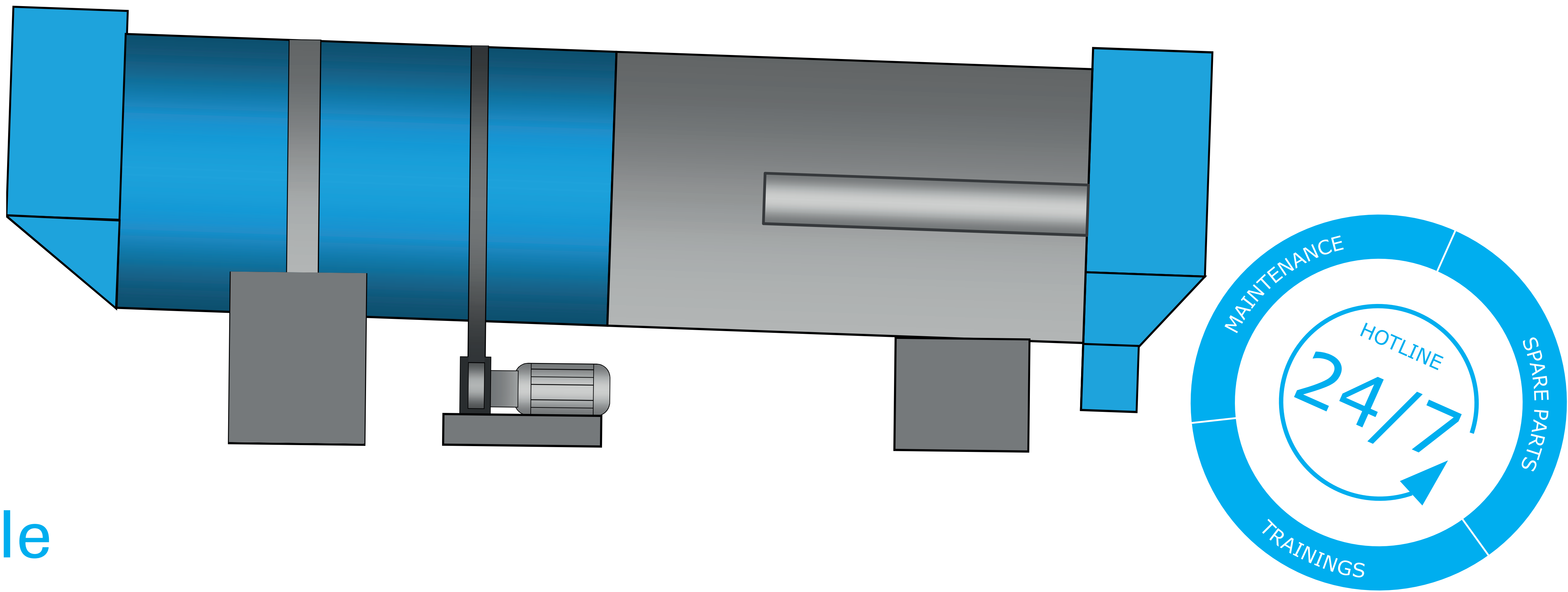
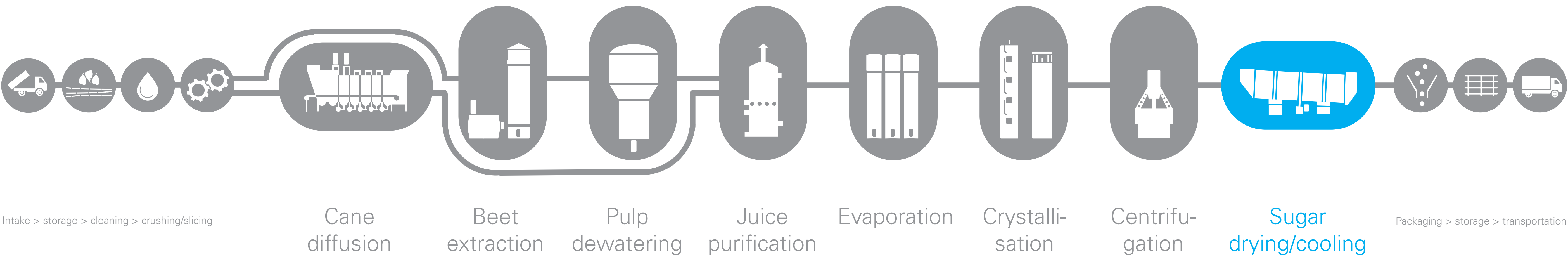


# Drum dryer and cooler



## Principle of operation

The drying of sugar crystals ultimately aims to bring about also crystallisation of the syrup that sticks to the crystal surfaces, to prevent the formation of lumps later. The best way of achieving this is through use of the countercurrent principle in a drum dryer, where conditioned air flows first dry and then cool the sugar.

A central pipe improves drying efficiency in the front third of the dryer, which permits cooling in the back part of the drum. With the countercurrent principle, the cooling air is heated by the specific heat of the crystals, reducing the steam requirement. In addition, the sugar is dried at a moderate temperature of about 60°C, which prevents a “skinning” effect (trapped moisture). With a suitable configuration, drum dryers and coolers alone can cool sugar to the final temperature. To achieve a higher drying capacity, they can be combined with a fluidised-bed cooler.

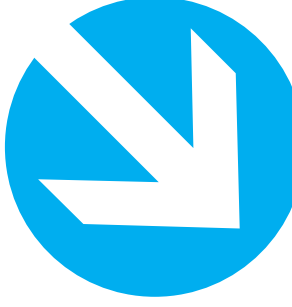
## Benefits



**Efficiency**  
The geometry of lifting blades is optimised to ensure an even distribution of the sugar across the whole drum cross-section.



**Trapped water in crystals**  
Prevention of “skinning” effects with gentle drying using the countercurrent principle.



**Steam consumption**  
With the countercurrent principle for hot and cold air using the central pipe, the specific heat of the sugar crystals is used for efficient drying, reducing the energy requirement.

up to **170 t** THROUGHPUT PER HOUR.

## Technical data

Throughput[t/h]	25 to 170
Diameter [mm]	2,000 to 4,000
Total length [mm]	9,000 to 17,000
Total height [mm]	3,200 to 6,500

## Reference extract

Customer	Year	Country	Length [m]	Throughput [t/h]	Diameter [m]
Haisum / Yinmore	2016	China	13	130	4.0
Hilsboro	2014	USA	11.0	90	3.6
PT Duta (Wilmar)	2014	Indonesia	11.0	60	3.6
Etihad	2013	Iraq	11.0	80	3.6
Angren Shakar	2012	Uzbekistan	10.0	45	3.2

## More information



<https://www.bma-worldwide.com/sugar-drying/sugar-drying-and-cooling-plants.html>



**Sales** sales@bma-de.com  
**Automation** sales@bma-automation.com  
**After sales** after-sales@bma-de.com



Dryers technews range  
Technical survey  
Drier advertisement