

Description

DI-SUGAR-C™ is a continuously working unit for the production of sugar solutions based on the cold dissolving procedure.

After the start of the process, water of a temperature of $>20^{\circ}\text{C}$ is conveyed into the dissolving tank. As soon as the preset water quantity is reached, granulated sugar starts being conveyed into the dissolving tank. The capacity of the conveyor (e.g. screw conveyor) is adapted by a variable frequency drive.

At the same time water of a temperature of $>20^{\circ}\text{C}$ is carried into the dissolving tank in the desired ratio.

Combined with a special mixing nozzle, the centrifugal pump generates heavy turbulences in the dissolving tank, thus enabling a quick dissolution of the sugar crystals in the water.

The liquid or the already dissolved part of the suspension can be passed through the separating screen.

At the outlet of the unit the density is measured, the Brix-value is calculated and the desired Brix-value is set by the addition of finely dosed water. If after all the setpoint cannot be reached, the system will change automatically to circulation and the Brix-value will be corrected.

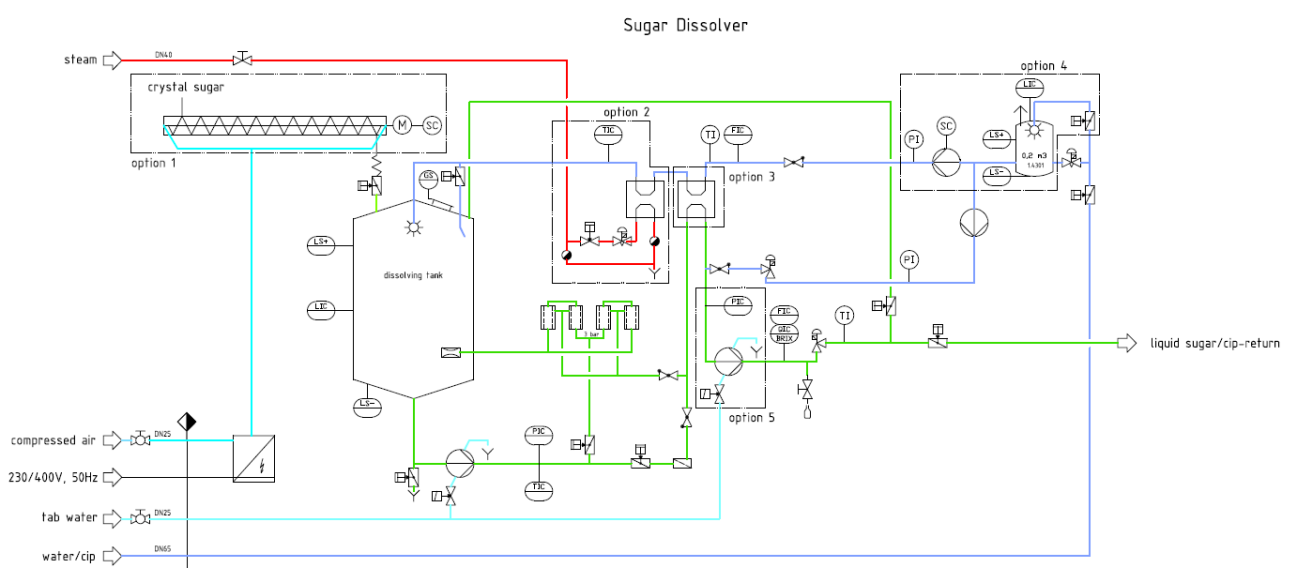
So it is made sure that only sugar solution according to the specification will leave the unit.

The unit can be automatically controlled via the level in the target tank.

Features

- Fully automatic, self-optimizing process
- Highly effective dissolving procedure
- Low operation costs
- High-quality, low-maintenance components
- Factory-tested unit
- Flow rates from 5,000 up to 30,000 l/h (higher flow rate on request)

Flow diagram (example)



DI-SUGAR-C™ is available with the following options:

1. Frequency-controlled conveyor for granulated sugar
2. Heating equipment for dissolving water
3. Regeneration for heat recovery
4. Water supply unit
5. Transfer pump

Technical data

Materials	1.4301/EPDM other materials on request						
Dimensions	Qmax.	Length*	Width*	Height*		Installed power*	Weight approx.*
	l/h	mm	mm	mm	DN	kW	kg
	5,000	3,000	1,600	2,200	40	9	800
	10,000	3,600	1,600	2,200	50	15	1,000
	15,000	3,800	1,800	2,200	65	18	1,200
	20,000	3,800	1,800	2,200	65	20	1,300
	30,000	4,200	2,100	2,200	80	32	1,600
*without options							
Granulated sugar	Refined sugar EC I/II	Screw conveyor, variable			Option 1		
		Rotary dosing valve, variable			Option 1		
Nominal flow rate	5,000 l/h...30,000 l/h	Flow range 50-100% of the nominal flow rate					
Concentration	60° Brix up to 65° Brix	± 0.1°Brix					
Water	Beverage water quality	Temperature > 20° - 35°C* *depending on flow rate and concentration			Option 2		
		Pressure 2 - 5 bar, fluctuation range ± 0.5 bar			Option 4		
Sugar solution	Output	Temperature > 18° - 32°C* *depending on flow rate and concentration			Option 3		
		Pressure 1 bar			Option 5		

Example: Cold dissolver 20,000 l/h

Installation directly below a sugar silo with all options

