СИСТЕМЫ ДИСТИЛЛЯЦИИ И ФЕРМЕНТАЦИИ DISUGAR

Технические характеристики

Data Sheet DI-SUGAR-H™

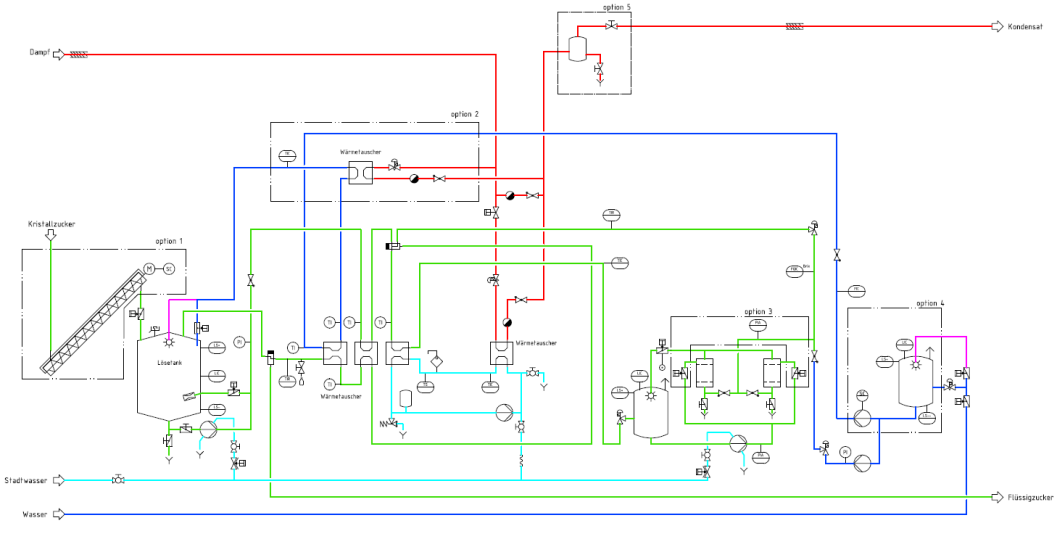
Description

DI-SUGAR-H™ is a continuously working dissolving unit for the production of sugar solutions from granulated sugar and water based on the hot dissolving procedure.
After the start of the process, water 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 is carried through the cooler into the dissolving tank in the desired ratio.
Combines with a special mixing nozzle, the pump generates heavy turbulences in the dissolving tank, thus enabling a quick dissolution of the sugar crystals in the water.
A part of the circulated solution gets through the exchanger to the heater where it is heated up to the pasteurizing temperature and then filtered. The pressure drop at the filter can be monitored by a manometer before and after the filter. The Brix value of the solution is determined after the filter and automatically set to the desired Brix value by the aid of the fine dosing process. The sugar solution is then cooled down in the exchanger and in the cooler.
The heat retention zone is designed so that the desired heat retention time can be obtained.
Unless the setpoints for Brix value and temperature are within the admissible deviations, the unit will be automatically switched to circulation until the setpoints will have been reached again.
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)



Data Sheet DI-SUGAR-H™

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

1. Frequency-controlled conveyor for granulated sugar
2. Heating equipment for dissolving water
3. Automatic filter control
4. Water supply unit
5. Condensate return pipe

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	4,000	2,200	2,200	40	22 KW	4,000
10,000	4,500	3,000	2,200	50	28 KW	4,600
15,000	5,000	3,000	2,200	65	32 KW	5,200
20,000	5,000	3,000	2,200	65	37 KW	5,800
30,000	5,500	3,200	2,200	80	45 KW	6,800

*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 t> 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 t> 18° - 32°C* *depending on flow rate and concentration	Option 3
		Pressure 1 bar	Option 5

Data Sheet DI-SUGAR-H™

Example: DI-SUGAR-H™

Flow rate 15,000 l/h at 65°Brix

Data Sheet DI-SUGAR-T™

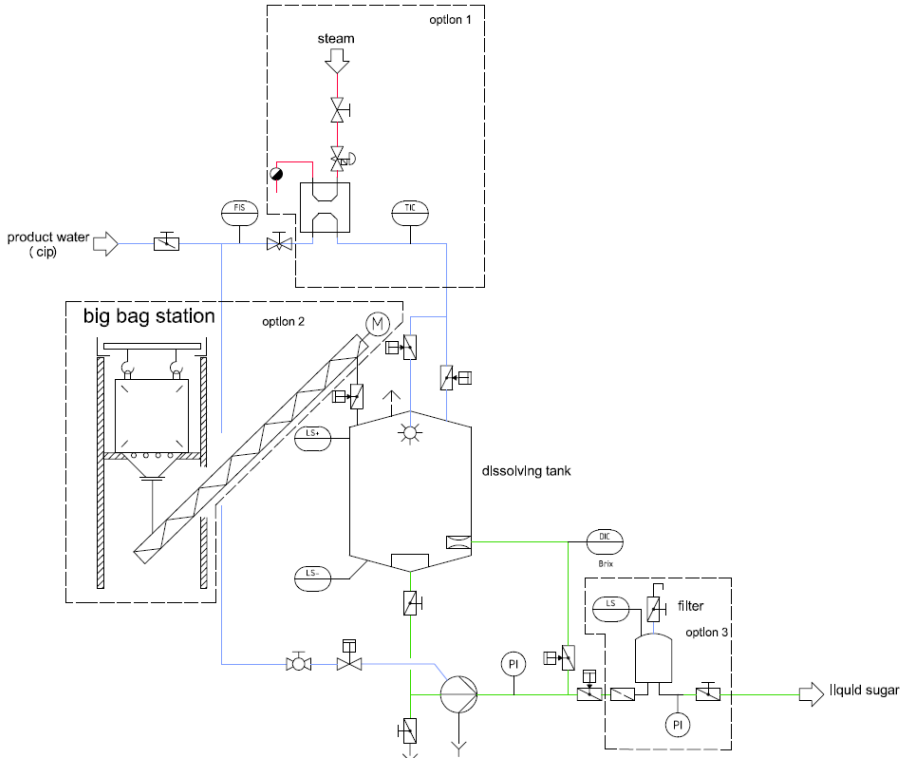
Description

DI-SUGAR-T™ is a unit for the production of sugar solutions using the batch procedure.
The size of the dissolving tank depends on the possibilities for adding granulated sugar.
Large-capacity dissolvers are sufficiently dimensioned to empty a complete silo truck.
If BigBags or bags are processed, the tank size will be adapted to the feeding possibilities of granulated sugar or the desired quantity of liquid sugar.
After the start of the process, water is carried into the dissolving tank.
As soon as the preset water quantity is reached, granulated sugar starts being conveyed (e.g. by a screw conveyor) into the dissolving tank. During the sugar addition, a dosed quantity of water goes on being added through the spray head for bonding the sugar dust.
Combined with a special mixing nozzle, the pump generates heavy turbulences in the dissolving tank, thus enabling a quick dissolution of the sugar crystals in the water.
The total water quantity is calculated so that at the end of the dissolving process the Brix value will be about 1°Bx higher than the setpoint.
The Brix value is calculated from the density and the temperature and the sugar solution is set to the desired value by the addition of finely dosed water.

Features

- Fully automatic process
- Highly effective dissolving procedure
- Low operation costs
- High-quality, low-maintenance components
- Factory-tested unit
- Flow rates from 2,500 up to 6,000 l/h / 10,000 l/h (large-capacity dissolver)(higher flow rate on request)

Flow diagram (example)



Data Sheet DI-SUGAR-T™

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

1. BigBag and/or bag feeding station
2. Heating equipment for dissolving water
3. Filter unit
   Further options are possible

Technical data

Materials	1.4301/EPDM other materials on request

Dimensions

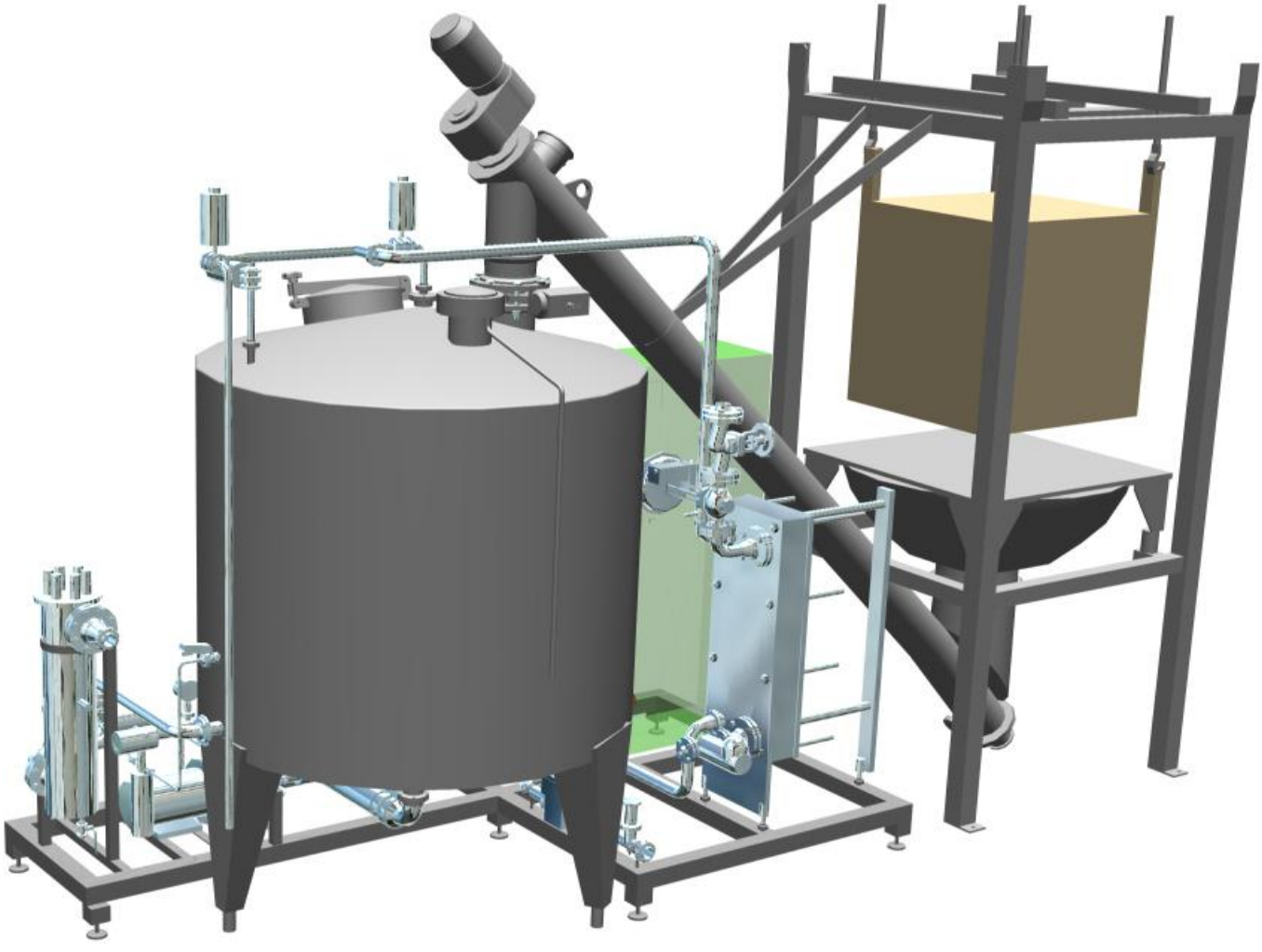
Qmax. l/h	Length* mm	Width* mm	Height* mm	DN	Installed power* kW	Weight approx.* kg
2,500	3,000	1,600	2,400	40	8	800
4,500	3,600	1,600	4,000	50	12	1,000
6,000	3,800	1,800	4,800	65	20	1,200
Large-capacity dissolver						
10,000	3,200**	3,000	7,500**	80	32	1,600
	*without options		** in horizontal position L=H/H=L			

Granulated sugar	Refined sugar EC I/II Temperature t> 20°C	BigBag feeding station	Option 1
		Sack feeding station	Option 1
Nominal flow rate	2,500 l/h….10,000 l/h		
Concentration	60° Brix up to 65° Brix	± 0.1°Brix	
Water	Beverage water quality	Temperature t> 20° - 35°C* *depending on flow rate and concentration	Option 2
		Pressure 2 - 3 bar, fluctuation range ± 0.5 bar	
Sugar solution	Output, unfiltered	Temperature t> 18° - 32°C* *depending on flow rate and concentration	Option 3
		Pressure 2 bar	

Data Sheet DI-SUGAR-T™

Example: Sugar dissolver 4,000 l/h DI-SUGAR-T™

with heating equipment for dissolving water, BigBag station and UV treatment



Data Sheet DI-SUGAR-C™

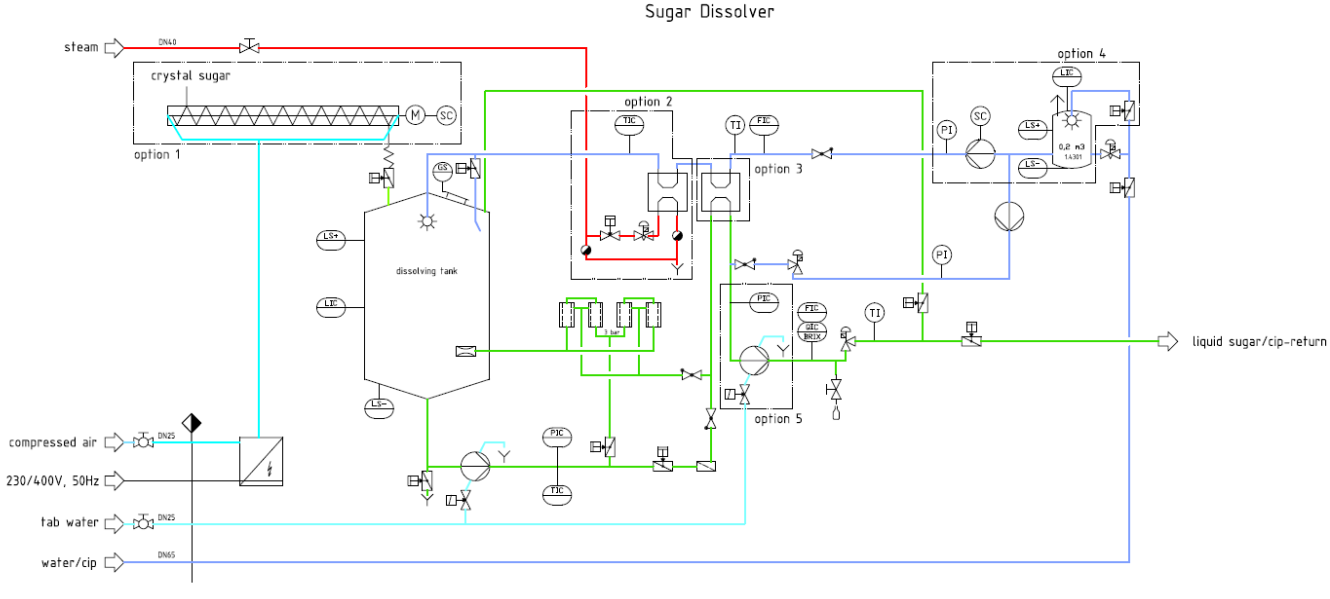
Description

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°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°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)



Data Sheet DI-SUGAR-C™

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. l/h	Length* mm	Width* mm	Height* mm	DN	Installed power* kW	Weight approx.* 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 t> 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 t> 18° - 32°C* *depending on flow rate and concentration	Option 3
		Pressure 1 bar	Option 5

Data Sheet DI-SUGAR-C™

Example: Cold dissolver 20,000 l/h

Installation directly below a sugar silo with all options

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