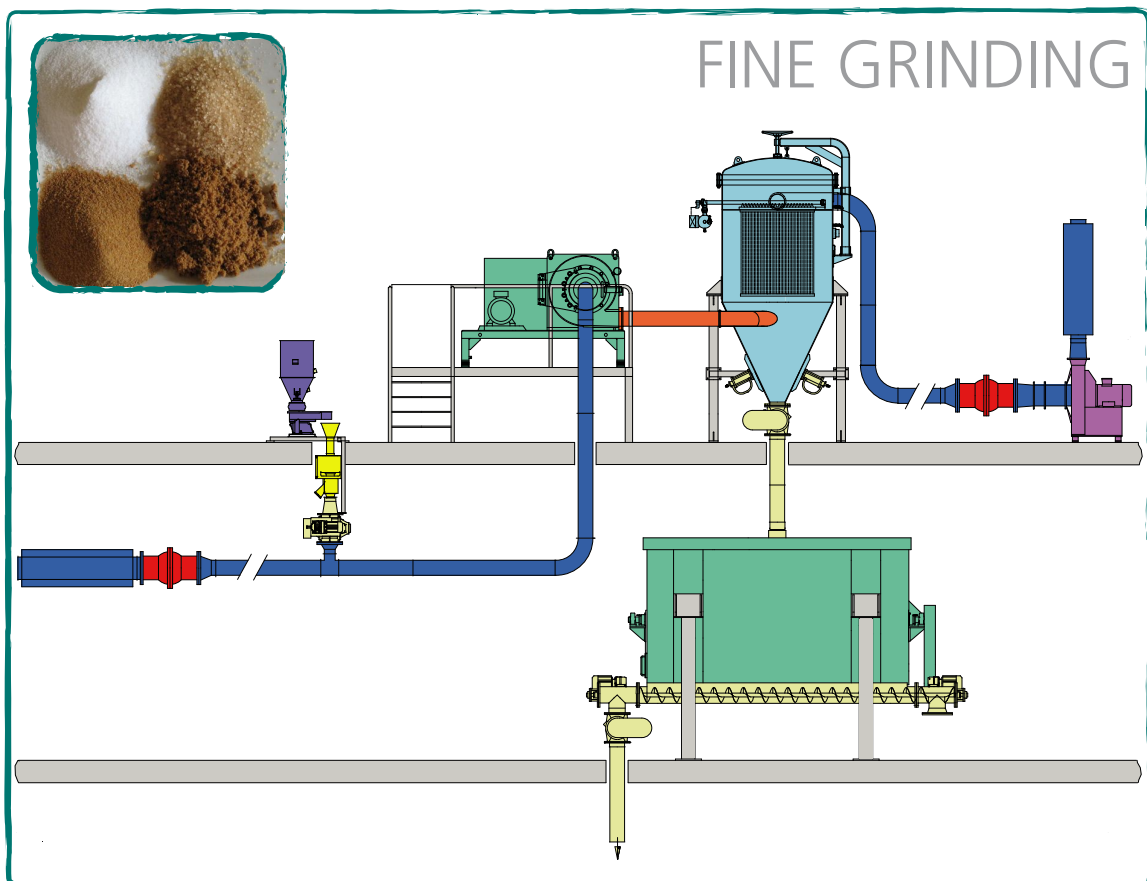


Sugar Processing Technology by NETZSCH-CONDUX

Sugar is a crystalline, water soluble, often sweet tasting carbohydrate belonging to a group of mono- and oligosaccharides.

The word "sugar" encompasses more than the general term. Three different groups make up the class of carbohydrates. The substance we generally refer to as "sugar" is sucrose, which is a combination of glucose and fructose. The empirical formula for household sugar (sucrose) is $C_{12}H_{22}O_{11}$. Its energy content is 16,8 kJ per gram, with a density of 1,6 g/cm³.



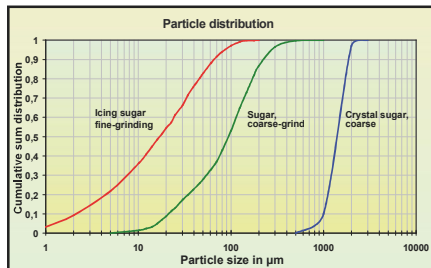
High quality equipment is only one part of successful material processing. NETZSCH-CONDUX finds the optimum process conditions for every material, investigating all grinding parameters such as fineness, temperature und capacity to provide the highest quality product with the lowest possible energy consumption, assuring maximum profits for our customers.

NETZSCH

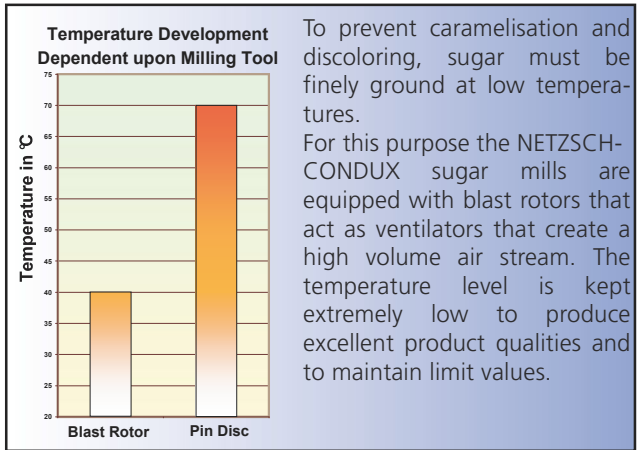
Sugar is a versatile raw material used to manufacture chocolate, jams, ice cream, beverages or bakery products such as cookies.

For many applications, sugar is finely ground to increase the rate of solubility or simply for the decoration of tasty desserts.

Various particle sizes are required, depending upon the designated application. The CONDUX Universal Mill, type CUM, can easily produce a diversity of finenesses through the limitless adjustment of the rotational speed of its blast rotor and the use of various screen inserts.



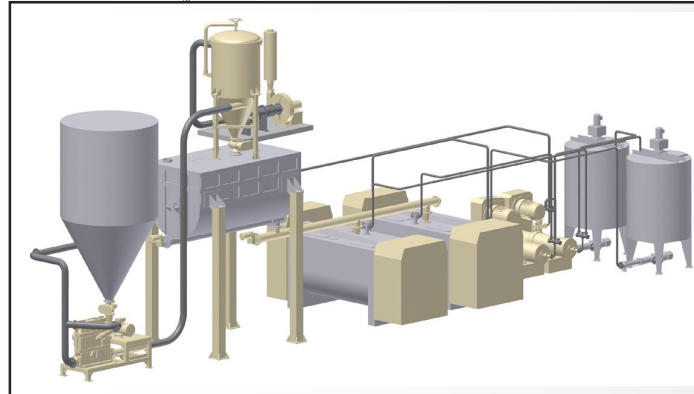
A result of fine-grinding are ultra-fine particles that can cause a dust explosion when a source of ignition is present. For this reason our plants are designed in accordance with the regulations of your respective country - in Europe this is ATEX 94/9/EG.



To prevent caramelisation and discoloring, sugar must be finely ground at low temperatures. For this purpose the NETZSCH-CONDUX sugar mills are equipped with blast rotors that act as ventilators that create a high volume air stream. The temperature level is kept extremely low to produce excellent product qualities and to maintain limit values.

Model CUM	150	250	300	450	680	900	1250	1600
Capacity factor	0.38	0.7	1	2	4	6.5	11.3	17.2
Capacity [to/h]* approx.	0.3-0.53	0.48-0.84	0.8-1.4	1.6-2.8	3.2-5.6	5.2-9.1	9.8-15.4	13.7-24.0
Maximum drive capacity [kW]	4	11	18.5	37	75	110	200	315
Maximum rotation [min ⁻¹]*	12000	9000	7350	4600	3100	2500	1680	1350
Nominal air volume [m ³ /h]*	570	1050	1490	2960	5970	9610	16800	25560

* with blast rotor ** d₉₀ 75-200 µm



Sugar is one of the main ingredients of recipes for chocolate, couverture, compounds and fillings. NETZSCH offers complete production plants for these products, from the fine-grinding of the sugar, including the necessary re-crystallisation, to the final chocolate (example: NETZSCH CHOCO EASY®). Your benefit: A complete production line from a single source!